

Adda247

**MINI BOOK FOR
SSC CGL
TIER-I EXAM 2023**

MATHS | ENGLISH | REASONING | GA



Content

English Language

- Error Detection
- Fillers
- Sentence Improvement
- Para Jumbles
- Voice
- Narration
- Cloze Test
- Reading Comprehension
- Antonyms
- Synonyms
- Idioms & Phrases
- One Word Substitution
- Spelling Error

Reasoning Ability

- Analogy
- Coding-Decoding
- Blood Relation
- Figure Counting
- Dice & Cube
- Dictionary
- Word Sequence
- Word Formation
- Embedded Figure
- Mathematical Operation
- Number & Letter Series
- Odd One Out
- Ranking
- Paper Cutting
- Distance & Direction
- Syllogism
- Venn Diagram
- Mirror Image
- Clock
- Calendar



Mathematical Ability

- Number System
- HCF & LCM
- Simplification
- Percentage
- Ratio & Proportion
- SI & CI
- Profit, Loss & Discount
- Average
- Data Interpretation
- Partnership
- Mixture & Alligation
- Speed, Time & Distance
- Boat & Stream
- Time & Work
- Pipes & Cisterns
- Mensuration
- Algebra
- Trigonometry
- Height & Distance
- Geometry



General Awareness

- Indian History
- Indian Polity
- Geography
- Indian Economy
- Physics
- Chemistry
- Biology
- Static GK

MINI BOOK For SSC CGL Tier-I Exam 2023

ENGLISH LANGUAGE

Directions (1-10): In these questions some of the sentences have errors and some have none. Find out which part of a sentence has an error and indicate it corresponding to the appropriate letter. If there is no error, indicate corresponding to the last option.

Q1. We have been knowing each other since we were children.

- (a) We have been knowing
- (b) each other since
- (c) we were children.
- (d) No error

Q2. Having found a piece of cheese, two cats went to a dog to divide it among them.

- (a) Having found a piece of cheese
- (b) two cats went to a dog
- (c) to divide it among them.
- (d) No error

Q3. Most of my friends heard the earthquake but I was totally unaware of it.

- (a) Most of my friends
- (b) heard the earthquake
- (c) but I was totally unaware of it.
- (d) No error

Q4. The new device aims at eliminating the risk of short circuiting?

- (a) The new device
- (b) aims at eliminating
- (c) the risk of short-circuiting?
- (d) No error

Q5. Knowledge and wisdom makes an individual truly complete and self assured.

- (a) Knowledge and wisdom makes
- (b) an individual truly complete
- (c) and self-assured.
- (d) No error

Q6. The river has overflown its banks.

- (a) The river
- (b) has overflown
- (c) its banks.
- (d) No error

Q7. The police is investigating for the recent happening in the area.

- (a) The police is investigating
- (b) for the recent happening
- (c) in the area.
- (d) No error

Q8. This happened just exactly five years ago

- (a) This happened
- (b) just exactly
- (c) five years ago.
- (d) No error

Q9. Ask her to call me when she will come back.

- (a) Ask her to call me
- (b) when she
- (c) will come back.
- (d) No error

Q10. Though the police tried all sorts of methods to illicit information from the public they remained silent.

- (a) Though the police tried all sorts of methods to illicit
- (b) information from the public
- (c) they remained silent.
- (d) No error

Directions (11-20): In these questions some of the sentences have errors and some have none. Find out which part of a sentence has an error and indicate it corresponding to the appropriate letter. If there is no error, indicate corresponding to the last option.

Q11. While a lot of users were unable to send and receive messages, others complaint that they failed to log in to WhatsApp Web.

- (a) While a lot of users were
- (b) others complaint that
- (c) unable to send and receive messages
- (d) No Error

Q12. We should all learn to seek happiness by limiting our desires rather than attempted to satisfy them.

- (a) We should all learn
- (b) to seek happiness by limiting
- (c) rather than attempted to satisfy them.
- (d) No error

Q13. Two hours are a too short time to get to know someone.

- (a) Two hours
- (b) are a too
- (c) short time
- (d) to know someone.

Q14. Neither the employees nor the boss was at work.

- (a) Neither the employees
- (b) nor the boss
- (c) was at work.
- (d) No error

Q15. She keeps her followers entertained by regular posts and stories.

- (a) She keeps her followers
- (b) entertained by
- (c) No error
- (d) regular posts and stories.

Q16. She is senior than me.

- (a) She is
- (b) No error
- (c) senior than
- (d) me.

Q17. She availed herself the opportunity to get a free tuition class.

- (a) She availed herself the
- (b) opportunity to get
- (c) a free tuition class.
- (d) No error

Q18. Farmer unions are meeting with the government to discuss about the

Farm laws.

- (a) No error
- (b) Farmer unions are
- (c) meeting with government
- (d) to discuss about the

Q19. They reached a river that had overflow its banks.

- (a) They reached
- (b) overflow its banks.
- (c) a river that had
- (d) No error

Q20. Of the two books the former is tougher.

- (a) Of the two
- (b) books
- (c) is tougher.
- (d) the former

Directions (21-30): Fill in the blanks with the most appropriate option.

Q21. Trust in a leader allows organizations and communities to _____, while the absence of trust can cause fragmentation, conflict and even war.

- (a) Survive
- (b) Flourish
- (c) Combat
- (d) Integrate

Q22. Education is an important _____ that plays a huge role in the modern, industrialized world.

- (a) Blueprint
- (b) Scheme
- (c) Technique
- (d) Aspect

Q23. With modern technology, people have become _____ as most of the facilities are available at the click of a button.

- (a) Lazier
- (b) Cautious
- (c) Responsible
- (d) Smartest

Q24. The Financial Action Task Force (FATF) on Thursday retained Pakistan on its "Grey list" till June after concluding that Islamabad failed to _____ its strategically important deficiencies.

- (a) Withhold
- (b) Command
- (c) Address
- (d) Utilise

Q25. A spring festival of Hindus, Ram Navami is celebrated to mark the birthday of Lord Rama, _____ is considered the seventh avatar of Lord Vishnu.

- (a) Whom
- (b) Which
- (c) Who
- (d) That

Q26. Chief Justice of India S A Bobde _____ office on April 23 after completing a tenure lasting 17 months.

- (a) Demitted
- (b) Reassumed
- (c) Joined
- (d) Entitled

Q27. Despite knowing the health threats, many people _____ to quit the habit of smoking.

- (a) Manage
- (b) Struggle
- (c) Prepare
- (d) Oppose

Q28. Offering girls with education is a _____ step in developing future generations of healthy, educated, and empowering girls.

- (a) Outstanding
- (b) Influential
- (c) Trivial
- (d) Primary

Q29. The animal rights movement and legal jurisprudence _____ that cruelty is characterised by unacceptably high animal suffering.

- (a) State
- (b) Censor
- (c) Claims
- (d) Lauded

Q30. The CM _____ to migrant workers to not leave the city, stressing that the restrictions will be lifted as soon as possible.

- (a) Appalled
- (b) Alleged
- (c) Negotiated
- (d) Appealed

Directions (31-40): Select the most appropriate word to fill in the blank.

Q31. UK opposition leader demands Boris Govt to sanction telegram for _____ extremists.

- (a) Harboring
- (b) Debunking
- (c) Witnessing
- (d) Yielding

Q32. The Egyptians were one of the first _____ to believe in an afterlife.

- (a) Administration
- (b) Conversations
- (c) Civilizations
- (d) Impressions

Q33. Tipu Sultan's historian Kate Brittlebank has _____ this painting on the cover page of her biography, Tiger: The Life of Tipu Sultan.

- (a) Incorporated
- (b) Observed
- (c) Noted
- (d) Designed

Q34. While the information is somewhere in your long-term memory, you are not able to actually _____ and remember it.

- (a) Grind
- (b) Identify
- (c) Understand
- (d) Retrieve

Q35. The deal ended after a series of _____ disputes.

- (a) Surplus
- (b) Rancorous
- (c) Meagre
- (d) Funny

Q36. The first Islamic conquests of India _____ in the eleventh century, with the capture of Lahore, in 1021.

- (a) Developed
- (b) Happened
- (c) Dismantled
- (d) Created

Q37. Mayank was _____ by colleagues for leaking the confidential information to the rival company.

- (a) Criticized
- (b) Reproach
- (c) Dissented
- (d) Warned

Q38. The jury doubted the _____ of the witness.

- (a) Creativity
- (b) Possibility
- (c) Existence
- (d) Veracity

Q39. Owing to the close _____ of the architect and the builder, the construction of Alakkukuzhi rehabilitation project much ahead of schedule.

- (a) Incorporation
- (b) Cooperation
- (c) Generation
- (d) Negotiation

Q40. In the June-September quarter, Apple's iPhone sales in India _____ 20 lakhs for the first time.

- (a) Scraped
- (b) Seized
- (c) Shrugged
- (d) Surpassed

Directions (41-50): Improve the bracketed part of the sentence.

Q41. She did not like to have coffee (nor I did).

- (a) neither I liked it
- (b) nor did I
- (c) nor I like it
- (d) No improvement

Q42. Taj Mahal is (a worth seeing monument) in Agra.

- (a) a monument to see its worth
- (b) a monument worth seeing
- (c) one of worth seeing monuments
- (d) No improvement

Q43. I had (not only helped her by) giving hints but also with providing him links.

- (a) helped not only to her by.
- (b) helped her not only by
- (c) not only helped her
- (d) No improvement

Q44. We (has finished) our lunch half an hour ago.

- (a) finished
- (b) will have finished
- (c) had finished
- (d) No improvement

Q45. A small makeshift stage (was construct) with a red curtain for a backdrop.

- (a) are constructed
- (b) was constructed
- (c) were constructed
- (d) No improvement

Q46. Take out your binoculars and (will see) the Andromeda galaxy.

- (a) see
- (b) saw
- (c) seeing
- (d) No improvement

Q47. I (am always wondered) what it would be like to be inside a chocolate factory.

- (a) have always wonder
- (b) have always wondering
- (c) have always wondered
- (d) No improvement

Q48. They loaded their ships with spices and silks and (returns) with the summer monsoon.

- (a) returned
- (b) return
- (c) returning
- (d) No improvement

Q49. I had (a few) eggs in the fridge, so we need to go to the market to buy them.

- (a) a little
- (b) few
- (c) little
- (d) No improvement

Q50. My brother is indifferent (about) whatever I say.

- (a) in
- (b) of
- (c) to
- (d) No improvement

Directions (51-60): Identify the best way to improve the bold part of the given sentence. If there is no improvement required, select 'No improvement'.

Q51. Ajay paid close attention to the man sitting **besides** him.

- (a) Beside to
- (b) Besides of
- (c) No improvement
- (d) Beside

Q52. No sooner had his mom heard the news **when she fainted**.

- (a) That she fainted
- (b) Than she fainted
- (c) And she fainted
- (d) No improvement

Q53. Sleeping, resting and **fluids** are the best ways to get cured soon.

- (a) And drinking fluids
- (b) And that drinking fluids
- (c) Which drank fluids
- (d) No improvement

Q54. People were silent **witness for the murder**.

- (a) Witness of the murder.
- (b) Witness in the murder.
- (c) Witness to the murder.
- (d) No improvement

Q55. The abolition of triple talak was a **gregarious** act.

- (a) Humane
- (b) No improvement
- (c) Clever
- (d) Cheerful

Q56. Though the minister promised to support orphans and vulnerable children, he **backed up** at the last minute.

- (a) Backed in
- (b) Backed out
- (c) Backed about
- (d) No improvement

Q57. The actor was **directed** to take complete rest by his physician.

- (a) No improvement
- (b) Informed
- (c) Adjourned
- (d) Advised

Q58. It rained **accidentally** all day, spoiling all our plans of vacation.

- (a) Steadily
- (b) Immediately
- (c) Incessantly
- (d) No improvement

Q59. **Although** Vijay Mallya flew to London is still a mystery for everyone.

- (a) How
- (b) While
- (c) Since
- (d) No improvement

Q60. Queen Elizabeth II became the **longest**-reigning British monarch on 9 September 2015.

- (a) Largest
- (b) Wisest
- (c) Greatest
- (d) No improvement

Directions (61-70): Rearrange the parts of the sentence in correct order.

Q61. Do not be anxious about

P-thanksgiving, present your requests to God
Q-and petition, with
R-anything, but in every situation, by prayer

- (a) PRQ
- (b) PQR
- (c) QRP
- (d) RQP

Q62. The truth about these P-communities is that
Q-they deserve to die
R-dysfunctional, downscale
(a) PQR
(b) QPR
(c) RPQ
(d) RQP

Q63. You fail to
P what someone is born,
Q recognize that it matters not
R but what they grow to be!
(a) QPR
(b) PRQ
(c) RPQ
(d) QRP

Q64. The wide world is all
P-cannot forever fence it out
Q-about you: you can fence
R-yourselves in, but you
(a) PRQ
(b) QRP
(c) RQP
(d) RPQ

Q65. Today, however, when one in four rural Indians
P-in identifying the poor are far greater
Q-is poor, our chances of being wrong
R-and one in six urban Indians
(a) PRQ
(b) RQP
(c) QRP
(d) QRP

Q66. In that case,
P-put together the best gender-just
Q-practices from all Personal Laws
R-a Uniform Civil Code would simply
(a) RPQ
(b) QRP
(c) RQP
(d) PQR

Q67. Williamson shoveled scorn on
P-the low-income white Republican voters who,
Q-were most responsible for the rise of Trump
R-as he saw it,
(a) PRQ
(b) RQP
(c) QPR
(d) QRP

Q68. Amartya Sen lays claim
P-to a history of writing
Q-some of the finest research papers
R-that have been published
(a) QRP
(b) PQR
(c) RQP
(d) QPR

Q69. His exact date of birth is not known
P-but it is believed that he was born in
Q- late May and later on he decided to celebrate May 29 as his
birthday,
R- as this was the date he climbed Everest
(a) PRQ
(b) PQR
(c) QRP
(d) RPQ

Q70. Today, less privileged white
P- Americans are considered to be
Q- and pathologists predominates
R- in crisis, and the language of sociologists
(a) PRQ
(b) QPR
(c) RPQ
(d) QRP

Directions (71-80): The questions below consist of a set of labeled sentences. Out of the four options given, select the most logical order of the sentences to form a coherent paragraph.

Q71. (P) Served as one of the sub-themes of the cultural nationalistic reassertion.
(Q) Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homeopathy (AYUSH),
(R) In the early 20th century against the imperialistic British reign.
(S) Revival of the Indian systems of medicine, which comprises.
(a) PRSQ
(b) SQPR
(c) QPSR
(d) SQRP

Q72. (P) Citing its negative effects on “farmers, MSMEs and the dairy sector”.
(Q) Seven years after India joined negotiations for the 16-nation.
(R) Prime Minister NarendraModi announced on Monday that India was dropping out of the agreement,
(S) ASEAN (Association for South East Asian Nations)-led RCEP (Regional Comprehensive Economic Partnership) or Free Trade Agreement,
(a) PQSR
(b) SRPQ
(c) SQPR
(d) QSRP

Q73. (R) In a bid to save Delhi from air pollution, the Supreme Court on Monday said.

(P) It would hold the entire State administrative and police mechanisms of Punjab, Haryana and Uttar Pradesh —

(S) From the Chief Secretary to the local policeman — responsible.

(Q) If even one instance of stubble burning occurred in the future.

- (a) QPRS
- (b) PSQR
- (c) RPSQ
- (d) RQPS

Q74. (P) The majority of fires are reported from Kaithal, Kurukshetra, Karnal and.

(Q) Yamuna Nagar districts — better known as the “rice bowl” of Haryana.

(R) The region comprising Jhajjar, Sonapat, Panipat, and Jind districts,

(S) Mostly growing basmati varieties, account for only 20-30% of stubble burning incidents;

- (a) RSPQ
- (b) QSRP
- (c) RQPS
- (d) PRQS

Q75. (P) Caretaker CM Swaroop Singh on Monday arrived in New Delhi.

(Q) Related to government formation were also on the agenda.

(R) To ask for more relief for the flood-hit districts, but issues.

(S) To meet with Union Home Minister Kaivalya, ostensibly.

- (a) PQRS
- (b) SRQP
- (c) QRPS
- (d) PSRQ

Q76. (P) The complaints by the injured officers, and that strict action be taken.

(Q) The protesters demanded that the suspension and transfer of police officers.

(R) They also demanded that cases be registered against the lawyers based on.

(S) Ordered by the High Court following the clash be revoked.

- (a) RPQS
- (b) RSQP
- (c) QSRP
- (d) QPRS

Q77. (P) Commerce Minister Piyush Goyal said on Tuesday.

(Q) Is final for now, but if the other countries agree to India's demands,

(R) The decision not to join the Regional Comprehensive Economic Partnership (RCEP).

(S) Negotiations and talks are possible in the future,

- (a) RPQS
- (b) QPRS
- (c) RSPQ
- (d) RQSP

Q78. (P) After days of suspense over reaching out to the Shiv Sena.

(S) For formation of the next government in Maharashtra, the.

(Q) BJP on Tuesday said it was ready to negotiate as soon as.

(R) Its pre-poll ally sent its proposal.

- (a) PRSQ
- (b) PSQR
- (c) QRPS
- (d) QSRP

Q79. (S) A slowing of aggregate demand growth.

(Q) Can take more than one form.

(R) In the textbook view it is part of the investment cycle,

(P) And deficit spending can take the economy out of it.

- (a) SQRP
- (b) RPSQ
- (c) SPRQ
- (d) RQSP

Q80. (P) India's withdrawal from the Regional Comprehensive Economic Partnership (RCEP).

(Q) Is a major victory for the farmer's organisations, trade unions,

(R) Associations of small and medium industrial producers and civil society groups,

(S) Which had organised widespread agitations against the free trade agreement.

- (a) PSRQ
- (b) QPSR
- (c) PQSR
- (d) PQRS

Directions (81-90): In the following questions, a sentence has been given in Active or Passive Voice. Out of the four alternatives suggested, select the one which best expresses the same sentence in Passive or Active Voice.

Q81. Mrs. Vaijanthi teaches us literature.

- (a) We have been taught literature by Mrs. Vaijanthi.
- (b) Literature is being taught by Mrs. Vaijanthi to us.
- (c) Literature is being taught to us by Mrs. Vaijanthi.
- (d) Literature is taught by Mrs. Vaijanthi to us.

Q82. I saw the master conducting the orchestra.

- (a) I saw that the orchestra was being conducted by the master.
- (b) I saw the orchestra being conducted by the master.
- (c) The master was seen conducting the orchestra.
- (d) The master was conducting the orchestra and I saw that.

Q83. Dark clouds have overcast the evening sky.

- (a) By the dark clouds the evening sky was overcast.
- (b) The evening sky has been overcast by the dark clouds.
- (c) Dark clouds over casted the evening sky.
- (d) The sky of the evening was over casted by dark clouds.

Q84. The Marathas surrendered their fort to the Mughals after the war.

- (a) After the war, the Marathas had to surrender their fort to the Mughals.
- (b) The Mughals after the war took the fort surrendered by the Marathas.
- (c) Their fort was surrendered by the Marathas to the Mughals after the war.
- (d) The Marathas after the war surrendered their fort to the Mughals.

Q85. Do you intimidate your younger brothers?

- (a) Were your younger brothers being intimidated by you?
- (b) Are your younger brothers intimidated by you?
- (c) Have your younger brothers being intimidated by you?
- (d) Are your younger brothers being intimidated by you?

Q86. Someone gave the old man a push.

- (a) The old man got a push from someone.
- (b) Somebody had given a push to the old man.
- (c) The old man was being pushed by someone.
- (d) A push was given to the old man.

Q87. Have the car stolen!

- (a) Steal the car.
- (b) You should have the stolen car.
- (c) Get someone to steal the car.
- (d) They have stolen the car.

Q88. Sunny was driving the car so fast that it slipped at the turn.

- (a) Sunny slipped at the turn as he was driving the car so fast.
- (b) So fast was Sunny driving the car that it slipped at the turn.
- (c) The car was being driven by Sunny so fast that it slipped at the turn.
- (d) The car slipped at the turn as Sunny was driving it so fast.

Q89. Mother filled dark filtered coffee in the cup.

- (a) The cup was filled with dark filtered coffee by mother.
- (b) Mother filled in the cup coffee which was dark and filtered.
- (c) The cup was being filled by mother with dark filtered coffee.
- (d) The filtered coffee which was dark was filled into the cup by mother.

Q90. Abhinav Bindra won the gold medal at the 2008 Beijing Olympic Games.

- (a) Gold medal was won by Abhinav Bindra at the 2008 Beijing Olympic Games.
- (b) In 2008 at the Beijing Olympics games Abhinav Bindra had won the gold medal.
- (c) At the 2008 Beijing Olympics Games Abhinav Bindra won the gold medal.
- (d) Abhinav Bindra must have won at the Beijing Olympics Games which were conducted in 2008.

Directions (91-100): In the following questions, a sentence has been given in active or passive voice. Out of the four alternatives suggested, select the one that best expresses the same sentence in passive or active voice and mark your answer accordingly.

Q91. On 20th July 1969, an estimated 652 million people watched the live global broadcast of the Apollo 11 Moon landing.

- (a) The live global broadcast of the Apollo 11 Moon landing was watched by an estimated 652 million people on 20th July 1969.
- (b) The live global broadcast of the Apollo 11 Moon landing has been watched by an estimated 652 million people on 20th July 1969.
- (c) The live global broadcast of the Apollo 11 Moon landing had watched by an estimated 652 million people on 20th July 1969.
- (d) The live global broadcast of the Apollo 11 Moon landing could have been watched by an estimated 652 million people on 20th July 1969.

Q92. Forest fires cause horrific damage to the planet.

- (a) Horrific damage to the planet was caused by forest fires.
- (b) Horrific damage to the planet could have been caused by forest fires.
- (c) Horrific damage to the planet is caused by forest fires.
- (d) Horrific damage to the planet is being caused by forest fires.

Q93. Small businesses and self-employed people are hit by the pandemic.

- (a) The pandemic hit small businesses and self-employed people.
- (b) The pandemic hits small businesses and self-employed people.
- (c) The pandemic has hit small businesses and self-employed people.
- (d) The pandemic had hit small businesses and self-employed people.

Q94. India and Japan have signed a key agreement for reciprocal provision of supplies and services between their defence forces.

- (a) A key agreement for reciprocal provision of supplies and services between their defence forces had been signed by India and Japan.
- (b) A key agreement for reciprocal provision of supplies and services between their defence forces was signed by India and Japan.
- (c) A key agreement for reciprocal provision of supplies and services between their defence forces must have been signed by India and Japan.
- (d) A key agreement for reciprocal provision of supplies and services between their defence forces has been signed by India and Japan.

Q95. The tourist guide is giving the instructions to the visitors.

- (a) The instructions were being given to the visitors by the tourist guide.
- (b) The instructions were given to the visitors by the tourist guide.
- (c) The instructions are being given to the visitors by the tourist guide.
- (d) The instructions have been given to the visitors by the tourist guide.

Q96. India extends ban on scheduled international flights till September-end.

- (a) Ban on scheduled international flights was extended by India till September-end.
- (b) Ban on scheduled international flights is extended by India till September-end.
- (c) Ban on scheduled international flights must be extended by India till September-end.
- (d) Ban on scheduled international flights has been extended by India till September-end.

Q97. Who has not completed the home-work yet?

- (a) By whom had the home-work not been completed yet?
- (b) By whom has the home-work not been completed yet?
- (c) The home-work was not being completed by whom yet.
- (d) By whom is the home-work had not completed yet?

Q98. Business tycoon Ratan Tata has praised the Odisha Government's latest infrastructure plan.

- (a) The Odisha Government's latest infrastructure plan has been praised by business tycoon Ratan Tata.
- (b) The Odisha Government's latest infrastructure plan had been praised by business tycoon Ratan Tata.
- (c) The Odisha Government's latest infrastructure plan was praised by business tycoon Ratan Tata.
- (d) The Odisha Government's latest infrastructure plan has to be praised by business tycoon Ratan Tata.

Q99. Throw the garbage in the dustbin.

- (a) You must throw the garbage in the dustbin.
- (b) The garbage was thrown in the dustbin.
- (c) Let the garbage be thrown in the dustbin.
- (d) Let the garbage in the dustbin be thrown.

Q100. Industrialist Anand Mahindra donates Rs.4 lakh to the needy in Mumbai.

- (a) Rs.4 lakh was donated to the needy in Mumbai by Industrialist Anand Mahindra.
- (b) Rs.4 lakh is being donated to the needy in Mumbai by Industrialist Anand Mahindra.
- (c) Rs.4 lakh has been donated to the needy in Mumbai by Industrialist Anand Mahindra.
- (d) Rs.4 lakh is donated to the needy in Mumbai by Industrialist Anand Mahindra.

Directions (101-110): In the following questions, a sentence has been given in Direct or Indirect speech. Out of the four alternatives suggested, select the one which best expresses the same sentence in Indirect or Direct speech.

Q101. The owner said to his tenants, "Clean the room."

- (a) The owner ordered his tenants that they must clean the room.
- (b) The owner told his tenants that they could clean the room.
- (c) The owner ordered his tenants to clean the room.
- (d) The owner asked his tenants if they could clean the room.

Q102. The boss said to Nitin, "Congratulations! Wish you success in life."

- (a) The boss told Nitin that he will succeed in life.
- (b) The boss congratulated Nitin and said wish you success in life.
- (c) The boss wished congratulations and success in life to Nitin.
- (d) The boss congratulated Nitin and wished him success in life.

Q103. Ramesh said to his friends, "If I come to know anything regarding the fees structure, I will inform you."

- (a) Ramesh told his friends that if he came to know anything regarding the fees structure, he would inform them.
- (b) Ramesh told his friends that if he must come to know anything regarding the fees structure, he might have informed them.
- (c) Ramesh told his friends that if he comes to know anything regarding the fees structure, he will inform them.
- (d) Ramesh told his friends that he should come to know anything regarding the fees structure, he would have informed him.

Q104. Ananya said, "My grandfather took tablets."

- (a) Ananya said that her grandfather has taken tablets.
- (b) Ananya said that her grandfather was taking tablets.
- (c) Ananya said that her grandfather had been taking tablets.
- (d) Ananya said that her grandfather had taken tablets.

Q105. Ajay said to his uncle, "I might get a flight tomorrow."

- (a) Ajay told his uncle that he could get a flight that day.
- (b) Ajay told his uncle that he would get a flight the next day.
- (c) Ajay told his uncle that he might get a flight the next day.
- (d) Ajay told his uncle that he will get a flight the day before.

Q106. He said, "My parents take a walk every day."

- (a) He said that his parents took a walk every day.
- (b) He said that his parents might be taking a walk every day.
- (c) He said that his parents were taking a walk every day.
- (d) He advised that his parents should take a walk every day.

Q107. She said, "I am going to see my son tonight."

- (a) She said that she is going to see his son tonight.
- (b) She said that she was going to see his son that night.
- (c) She said that she should be going to see his son that night.
- (d) She said that she may be going to see his son that night.

Q108. He said, "It will have been raining since morning."

- (a) He said that it would be raining since morning.
- (b) He said that it have been rained since morning.
- (c) He said that it would have been raining since morning.
- (d) He said that it will have been raining since morning.

Q109. The shopkeeper said to me, "I will not give you this medicine without prescription."

- (a) The shopkeeper told me that he would not give me this medicine without prescription.
- (b) The shopkeeper informed me that he will not give me this medicine without prescription.
- (c) The shopkeeper enquired if he could not give me this medicine without prescription.
- (d) The shopkeeper demanded that he would not give me this medicine without prescription.

Q110. His mom said, "He has completed his degree"

- (a) His mom said that he has completed his degree.
- (b) His mom said that he could have completed his degree.
- (c) His mom said that he had completed his degree.
- (d) His mom said that he should have completed his degree.

Directions (111-120): In the following questions, a sentence has been given in Direct or Indirect speech. Out of the four alternatives suggested, select the one which best expresses the same sentence in Indirect or Direct speech.

Q111. Mahatma Gandhi once said, "The future of India lies in its villages."

- (a) Mahatma Gandhi once said that the future of India lies in its villages.
- (b) Mahatma Gandhi once said that the future of India lied in their villages.
- (c) Mahatma Gandhi once said that the future of India must be lied in its villages.
- (d) Mahatma Gandhi once said that the villages lie in the future of India.

Q112. She said to me, "Will you listen to me?"

- (a) She asked me whether I will listen to her.
- (b) She asked me if I would listen to her.
- (c) She told me that I would listen to her.
- (d) She asked me if I will be listening to her.

Q113. Narmada said, "I am reading an interesting novel."

- (a) Narmada said that she is reading an interesting novel.
- (b) Narmada said that she was reading an interesting novel.
- (c) Narmada said that she must be reading an interesting novel.
- (d) Narmada said that she would read an interesting novel.

Q114. Raju said, "I've been working here since I was 17."

- (a) Raju said that he has been working here since he was 17.
- (b) Raju said that he had worked there since he was 17.
- (c) Raju said that he might have been working there since he was 17.
- (d) Raju said that he had been working there since he was 17.

Q115. She said to Vijay, "Don't forget to bring my notes."

- (a) She reminded Vijay to bring her notes.
- (b) She requested Vijay to bring her notes.
- (c) She ordered Vijay to bring her notes.
- (d) She asked Vijay if he could bring her notes.

Q116. She told me, "We aren't going to school."

- (a) She told me that they aren't going to school.
- (b) She told me that they may not be going to school.
- (c) She told me that they weren't going to school.
- (d) She told me that they will not be going to school.

Q117. Varun said, "I visited my grandparents for the weekend."

- (a) Varun said that he had visited his grandparents for the weekend.
- (b) Varun said that he had been visiting his grandparents for the weekend.
- (c) Varun said that he has visited his grandparents for the weekend.
- (d) Varun said that he might be visiting his grandparents for the weekend.

Q118. Rajat said to his friend, "Shreya could sing when she was three."

- (a) Rajat told his friend that Shreya would sing when she was three.
- (b) Rajat told his friend that Shreya was singing when she was three.
- (c) Rajat told his friend that Shreya could sing when she was three.
- (d) Rajat told his friend that Shreya has been singing when she was three.

Q119. The teacher said, "The moon takes 28 days to revolve around the Earth."

- (a) The teacher said that the moon took 28 days to revolve around the Earth.
- (b) The teacher said that the moon takes 28 days to revolve around the Earth.
- (c) The teacher said that the moon will take 28 days to revolve around the Earth.
- (d) The teacher said that the moon might be taking 28 days to revolve around the Earth.

Q120. Teacher said to Nita, "You have committed a mistake here."

- (a) Teacher told Nita that she had committed a mistake here.
- (b) Teacher asked Nita that she had committed a mistake here.
- (c) Teacher told Nita that she has committed a mistake there.
- (d) Teacher told Nita that she had committed a mistake there.

Directions (121-125): In the following passage, some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives.

Investigation into the 1984 riot cases has been severely _____ by the fact that large sections of the police _____ with the rioters, who included Congress functionaries and supporters. The slow judicial process was made even more _____ by manipulated investigation and _____ prosecution. This is just one instance of how influential men have managed to _____ the law.

Q121. Investigation into the 1984 riot cases has been severely _____ by the fact

- (a) emended
- (b) hampered
- (c) extricated
- (d) spurred

Q122. Fact that large sections of the police _____ with the rioters, who included Congress functionaries and supporters.

- (a) framed
- (b) precluded
- (c) connived
- (d) combat

Q123. The slow judicial process was made even more _____ by manipulated investigation

- (a) excruciating
- (b) clement
- (c) moderated
- (d) conspicuous

Q124. And _____ prosecution. This is just one instance of how influential

- (a) elegant
- (b) impromptu
- (c) influential
- (d) shoddy

Q125. Men have managed to _____ the law.

- (a) confront
- (b) evade
- (c) diminish
- (d) deduce

Directions (126-130): In the following passage, some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives.

The last decade has been _____ for management education and development. When the economies of most western countries were _____ in the early 1980's there were _____ cuts both in corporate training and in higher education. During the boom years of the mid 1980's there were some _____ in both areas. In the early 1990's industrialized countries were in the _____ of another severe recession and a critical retrenchment was to be reasonably expected throughout the training world.

Q126. The last decade has been _____ for management education and development.

- (a) inexplicable
- (b) paradoxical
- (c) parochial
- (d) pugnacious

Q127. When the economies of most western countries were _____ in the early 1980's

- (a) gearing
- (b) escalating
- (c) faltering
- (d) soaring

Q128. there were _____ cuts both in corporate training and in higher education.

- (a) judicious
- (b) rebellious
- (c) deep
- (d) severe

Q129. During the boom years of the mid 1980's there were some _____ in both areas.

- (a) reactions
- (b) slashing
- (c) pro-activity
- (d) curiosity

Q130. In the early 1990's industrialized countries were in the _____ of another severe recession

- (a) area
- (b) grip
- (c) context
- (d) mood

Directions (131-135): In the following passage, some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives.

The language problem is not solved by deciding the medium of instruction in the educational institutes. The problem of (1) _____ between state government still (2) _____. At present, each state government is (3) _____ the process of (4) _____ the (5) _____ language as the medium

Q131. Select the most appropriate option for blank no. 1

- (a) Information
- (b) Communication
- (c) Talks
- (d) Decision

Q132. Select the most appropriate option for blank no. 2

- (a) Stays
- (b) Remains
- (c) Vanishes
- (d) Rests

Q133. Select the most appropriate option for blank no. 3

- (a) Away
- (b) With
- (c) Into
- (d) In

Q134. Select the most appropriate option for blank no. 4

- (a) Taking
- (b) Imposing
- (c) Adopting
- (d) Adapting

Q135. Select the most appropriate option for blank no. 5

- (a) Mother
- (b) Regional
- (c) Other regional
- (d) English

Directions (136-140): In the following passage, some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives.

A farmer looking for a source of water for his farm _____ (1) a well from his neighbour. The neighbour was cunning, though, and refused to let the farmer take water from the well. On asking why, he replied, "I sold the well to you, not the water", and walked away. The _____ (2) farmer didn't know what to do. So, he went to Birbal, a clever man and one of the nine courtiers of Emperor Akbar, for a _____ (3).

The emperor called the farmer and his neighbour and asked why the man was not letting the farmer draw water from the well. The cunning man said the same thing again, "I sold the well, not the water. So, he cannot take my water".

To this, Birbal replied, "All that sounds fine to me. But if you have sold the water and the water is yours, then you have no business keeping your water in his well. Remove the water or use it all up _____ (4). If not, the water will belong to the owner of the well". Realizing that he's been tricked and taught his lesson, the man _____ (5) and left.

Q136. Select the most appropriate option for blank no. 1

- (a) Bought
- (b) Offered
- (c) Purchased
- (d) Utilized

Q137. Select the most appropriate option for blank no. 2

- (a) Aggressive
- (b) Distraught
- (c) Opportune
- (d) Joyful

Q138. Select the most appropriate option for blank no. 3

- (a) Solution
- (b) Conclusion
- (c) Miracle
- (d) Resolution

Q139. Select the most appropriate option for blank no. 4

- (a) Permanently
- (b) Freely
- (c) Completely
- (d) Immediately

Q140. Select the most appropriate option for blank no. 5

- (a) Confessed
- (b) Enlightened
- (c) Apologized
- (d) Punished

Directions (141-150): Read the passage carefully and choose the best answer to each question out of the four alternatives.

Since September, at least 25 people have died and thousands have been made homeless. Every state and territory in Australia has experienced fires this summer. But the biggest fires burn along stretches of the eastern and southern coast, where most of the population lives. This includes areas around Sydney and Adelaide. More than 6.3 million hectares (63,000 sq km or 15.6 million acres) have been burned so far – one hectare is roughly the size of a sports field. To put that in perspective, around 800,000 hectares were engulfed in a bush fire in 2018 in California. Australia has always experienced bushfires – it has a "fire season". But this year they are a lot worse than normal. Fires are usually caused by lightning strikes or accidentally by a spark – but some fires are also started deliberately. This year, a natural weather phenomenon known as the 'Indian Ocean Dipole' has meant a hot, dry spell across the country. This year, Australia twice set a new temperature record: an average maximum of 41.9°C was recorded on 18 December. That comes on top of a long period of drought. Scientists have long warned that this hotter, drier climate will contribute to fires becoming more frequent and more intense. The more extreme weather patterns and higher temperatures increase the risk of bushfires and allow them to spread faster and wider. Fire fighters are spraying water and fire retardant from planes and helicopters as well as from the ground. But fighting bushfires is extremely difficult and often authorities have to focus on just stopping the spread, rather than putting the fire out. The spread can for instance be best contained by digging earth boundaries to stop the flames from spreading. The priority is saving lives. Professional fire fighters are the first in line to battle the flames, but they are outnumbered by the thousands of volunteers. Three of them have died. There's also help coming from abroad: the US, Canada and New Zealand have sent firefighters to help. Australia's police, military and navy are involved in rescue and evacuation efforts. While people can flee the fires and are being evacuated, if need be, the flames are devastating wildlife in the affected areas. One study

estimated that half a billion animals have died in New South Wales alone. Zookeepers take animals home to save them from fire, but the fires don't only kill animals directly, they also destroy the habitat, leaving the survivors vulnerable even when the fires have gone. So, the true scale of loss isn't yet clear. Experts say more than 100,000 cows and sheep may also have been lost, which is devastating for farmers. Each state runs its own emergency operation, but Prime Minister Scott Morrison has promised better funding for fire-fighting and payouts for volunteer firefighters, and an additional A\$2billion (\$ 1.4 billion; £ 1 billion) for the recovery. But the national government has come under strong criticism from its opponents that it has not been doing enough against climate change. The country is one of the world's biggest per capita greenhouse gas emitters but under international agreements it has committed itself to reduction targets.

Q141. "Authorities have to focus on just stopping the spread, rather than putting the fire out." This means that the authorities:

- (a) want only to slow down the spread of fire
- (b) do not want to put the fires out
- (c) want to stop the fires from spreading first and then put them out
- (d) want to put out the fires once and for all

Q142. What is the long-lasting damage that the bush fires have caused to the wildlife in Australia?

- (a) The fires have not only killed animals directly, but also destroyed their habitat.
- (b) Many animals in the zoos have been killed.
- (c) Half a billion animals have died in New South Wales alone.
- (d) More than 100,000 cows and sheep may have been lost.

Q143. Which of the following countries has NOT sent help for firefighting?

- (a) China
- (b) The US
- (c) Canada
- (d) New Zealand

Q144. "Some fires are also started deliberately". 'Deliberately' here means:

- (a) inadvertently
- (b) accidentally
- (c) unknowingly
- (d) purposely

Q145. The passage is mainly about:

- (a) Australia's struggle with bush fires
- (b) how the bushfires occur in Australia
- (c) the government's role in dealing with the bushfire
- (d) the loss of wildlife due to bushfires

Q146. It can be inferred from the passage that this year's fire in Australia is mostly a result of:

- (a) a lightning strike
- (b) an accidental spark in the jungle
- (c) a result of an extraordinarily hot and dry spell
- (d) a deliberate attempt to put the forests on fire

Q147. Which statement is NOT true according to the passage?

- (a) Zookeepers take animals home to save them from fire.
- (b) The volunteers outnumber the professional fire fighters in Australia.
- (c) Around 800,000 hectares have been destroyed due to a bushfire in Australia.
- (d) Australia is one of the world's biggest per capita greenhouse gas emitters.

Q148. The opposition in Australia is criticizing the government for:

- (a) not fighting the bush fires
- (b) not allocating enough funds for firefighting
- (c) not doing enough against the climate change
- (d) not giving enough compensation to the deceased

Q149. The spread of fire can be contained effectively by:

- (a) digging earth boundaries
- (b) spraying fire retardant from the ground
- (c) spraying fire retardant from the air
- (d) spraying the forests with water

Q150. Where did the biggest fires burn in Australia?

- (a) Along the western and southern coasts
- (b) Along the eastern and northern coasts
- (c) Along the western and northern coasts
- (d) Along the eastern and southern coasts

Directions (151-155): In this section you have one short passage. After each passage, you will find some items based on the passage. First, read a passage and answer the items based on it. You are required to select your answers based on the contents of the passage and opinion of the author only.

Over-population is the most pressing of India's numerous and multi-faceted problems. In fact, it has caused equally complex problems such as poverty, under-nourishment, unemployment and excessive fragmentation of land. Indisputably, this country has been facing a population explosion of crisis dimensions. It has largely diluted the fruits of the remarkable economic progress that the nation has made during the last four decades or so. The entire battle against poverty is thwarted by the rapid increase in the population. The tragedy is that while over-population accentuates poverty, the country's stark poverty itself is in many areas a major cause of over-population.

Q151. What is the irony behind the over-population of India?
(a) Over-population gives birth to poverty, which (poverty) itself is the cause of over-population
(b) Under nourishment and unemployment are outcomes of flawed economic progress
(c) Fragmentation of land is leading to over-population
(d) Fruits of the remarkable economic progress are trickling down to the poor

Q152. What is the general tone of the passage?
(a) funny or humorous
(b) sombre
(c) didactic
(d) tragic

Q153. What in the author's view severely affects the economic growth of our country?
(a) poverty
(b) illiteracy
(c) over-population
(d) None of the above

Q154. What, according to the author, is the biggest reason behind over-population?
(a) under-nourishment
(b) unemployment
(c) excessive fragmentation of land
(d) poverty

Q155. "It has largely **diluted** the fruits of the remarkable economic progress". Find antonym of the bold word.
(a) coalesced
(b) compounded
(c) cheapened
(d) consolidated

Directions (156-160): In this section you have few short passages. After each passage, you will find some items based on the passage. First, read a passage and answer the items based on it. You are required to select your answers based on the contents of the passage and opinion of the author only.

To eat and not be eaten — that's the imperative of a caterpillar's existence. The leaf roller reduces its risks of being picked off by predators by silking together a temporary shelter in which to feed and rest. Adopting a different line of defense, the jelly slug extrudes a sticky translucent coating that may foul the mouth-parts of marauding ants. For its part, the aquatic larva, by its watery element, fashions a portable hideout from fragments of aquatic leaves. Cutting a serpentine trail as it feeds on tender young leaves, the minute citrus leaf miner spends its entire larval life inside its host plant, thus keeping its appetizing body safely under wraps.

Q156. Which varieties of caterpillars 'build' shelters to protect themselves?
(a) Leaf roller and aquatic larva
(b) Leaf roller and jelly slug
(c) Jelly slug and aquatic larva
(d) Jelly slug and citrus leaf miner

Q157. Which one of the following caterpillars produces a sticky covering?
(a) Leaf roller
(b) Jelly slug
(c) Aquatic larva
(d) Citrus leaf miner

Q158. Which one of the following pairs of words in the passage describes enemies of the caterpillar?
(a) Serpentine and host
(b) Predator and marauding
(c) Serpentine and marauding
(d) Predator and host

Q159. Which one of the following makes itself unpalatable?
(a) Leaf roller
(b) Jelly slug
(c) Aquatic larva
(d) Leaf miner

Q160. The main idea of the passage is that caterpillars
(a) like to eat a lot
(b) have to protect themselves while feeding
(c) are good to eat
(d) are not good to eat

Directions (161-170): Select the option which means the opposite of the given word.

Q161. Vibrant
(a) Drab
(b) Gaudy
(c) Jazzy
(d) Vivid

Q162. Deep-Seated
(a) Chronic
(b) Temporary
(c) Inbred
(d) Subconscious

Q163. Humdrum
(a) Tedious
(b) Trite
(c) Drab
(d) Fascinating

Q164. Celibate
(a) Chaste
(b) Virtuous
(c) Promiscuous
(d) Continent

Q165. Ingestion

- (a) Gulp
- (b) Slug
- (c) Excrete
- (d) Chug

Q166. Horrify

- (a) Affright
- (b) Petrify
- (c) Appall
- (d) Soothe

Q167. Sacred

- (a) Pious
- (b) Hallowed
- (c) Divine
- (d) Profane

Q168. Outlandish

- (a) Droll
- (b) Kinky
- (c) Common
- (d) Grotesque

Q169. Coalesce

- (a) Separate
- (b) Adhere
- (c) Cleave
- (d) Amalgamate

Q170. Loiter

- (a) Lag
- (b) Hasten
- (c) Amble
- (d) Loll

Directions (171-180): In the following questions, out of the four alternatives, choose the word which is opposite in meaning to the given word and click the button corresponding to it.

Q171. AMBUSHED

- (a) lurk
- (b) waylay
- (c) camouflage
- (d) exposed

Q172. GRIM

- (a) severe
- (b) harsh
- (c) pleasant
- (d) gloomy

Q173. COSSET

- (a) ignore
- (b) close
- (c) caress
- (d) fondle

Q174. HOLLOW

- (a) alveolate
- (b) cleft
- (c) cavernous
- (d) solid

Q175. BEHEST

- (a) bidding
- (b) behalf
- (c) reply
- (d) request

Q176. PERPLEX

- (a) untangle
- (b) bewilder
- (c) confused
- (d) muddle

Q177. SANGUINE

- (a) hopeful
- (b) optimistic
- (c) despondent
- (d) wholesome

Q178. MERE

- (a) unadorned
- (b) immense
- (c) sheer
- (d) blunt

Q179. UNCANNY

- (a) fantastic
- (b) ordinary
- (c) logical
- (d) wise

Q180. REVEL

- (a) gloom
- (b) spree
- (c) bacchanal
- (d) debauch

Directions (181-190): Choose among the following that best expresses the meaning of the given word.

Q181. BUCOLIC

- (a) Urban
- (b) Metropolitan
- (c) Rustic
- (d) Citified

Q182. RAVINE

- (a) Lucid
- (b) Patent
- (c) Abyss
- (d) Palpable

Q183. KNACKERED

- (a) Fatigued
- (b) Spirited
- (c) Inspired
- (d) Intact

Q184. GORGE

- (a) Nibble
- (b) Starve
- (c) Impress
- (d) Gobble

Q185. SPLAY

- (a) Defile
- (b) Jade
- (c) Fray
- (d) Spread

Q186. PRE-EMPT

- (a) Damage
- (b) Forestall
- (c) Lurk
- (d) Promote

Q187. TARRY

- (a) Stampede
- (b) Scud
- (c) Trail
- (d) Hasten

Q188. ZAP

- (a) Bear
- (b) Create
- (c) Begin
- (d) Destroy

Q189. SMUG

- (a) Modest
- (b) Demure
- (c) Overweening
- (d) Meek

Q190. DOLE

- (a) Nonchalance
- (b) Gist
- (c) Allowance
- (d) Intent

Directions (191-200): Choose among the following that best expresses the meaning of the given word.

Q191. RADIANCE

- (a) Depth
- (b) Dryness
- (c) Sparkle
- (d) Redness

Q192. RECAPITULATION

- (a) Summary
- (b) Movement
- (c) Prominence
- (d) Readiness

Q193. WARY

- (a) Rash
- (b) Inattentive
- (c) Lax
- (d) Alert

Q194. RECEDE

- (a) Increase
- (b) Intensify
- (c) Waver
- (d) Wane

Q195. ACCURATE

- (a) Real
- (b) Sincere
- (c) Precise
- (d) Genuine

Q196. DEDICATION

- (a) Contentment
- (b) Trepidation
- (c) Determination
- (d) Commitment

Q197. DISCERN

- (a) Regulate
- (b) Analyze
- (c) Control
- (d) Discriminate

Q198. CONTAMINATING

- (a) Investing
- (b) Polluting
- (c) Containing
- (d) Encompassing

Q199. REPLACED

- (a) Removed
- (b) Moved
- (c) Instituted
- (d) Substituted

Q200. STIMULATION

- (a) Enthusiasm
- (b) Indolence
- (c) Provocation
- (d) Eagerness

Directions (201-210): In the following questions four alternatives are given for idioms or phrases in a row. Choose the one that best expresses the meaning of the given idiom or phrase.

Q201. Touch and go

- (a) To waste
- (b) Dangerous and Uncertain
- (c) Conduct Secretly
- (d) Pleasant and Certain

Q202. Be hand and foot

- (a) In all possible ways; by all means
- (b) To be lazy to move your hands and feet
- (c) To fall between two great difficulties
- (d) In disorder

Q203. To set at naught

- (a) To like
- (b) To ruin
- (c) To admire
- (d) To be agree

Q204. In the black

- (a) In a financially profitable condition
- (b) In extreme difficulty
- (c) In the absence of money
- (d) To be unsuccessful

Q205. Gray matter

- (a) Kindness
- (b) Intelligence
- (c) Cruelty
- (d) Weakness

Q206. All Thumps

- (a) To give your best
- (b) Awkward and clumsy especially with one's hands
- (c) To examine thoroughly
- (d) To stop some activity, to stop working and go home

Q207. Be in the swim

- (a) To keep oneself informed and up-to-date
- (b) To refuse to do what someone else wants
- (c) To pursue a line of thought or course of action that is misguided
- (d) Someone who is completely crazy

Q208. Feather brained

- (a) To show that you do not support something
- (b) Silly or often forgetting things
- (c) To be over excited
- (d) To take a balanced diet

Q209. Hear it on grapevine

- (a) To hear stories regularly
- (b) To listen news carefully
- (c) To hear rumors about something or someone
- (d) To continue to listen songs

Q210. Between the cup and the lips

- (a) On the point of achievement
- (b) By any means
- (c) Straight talks
- (d) To take on a task that is way too big

Directions (211-220): In the following questions four alternatives are given for idioms or phrases in a row. Choose the one that best expresses the meaning of the given idiom or phrase.

Q211. A cold-blooded murder

- (a) An intentional /premeditated murder
- (b) To go on a vacation
- (c) To murder all members of a family
- (d) To murder with no weapon

Q212. Put the best foot forward

- (a) Get into
- (b) Start impressively
- (c) To give a sign of distress trouble
- (d) Oppressively

Q213. Pay lip service to

- (a) To make every possible effort
- (b) Fight fiercely
- (c) Pretend to express loyalty or support
- (d) Very close

Q214. Stick one's neck out

- (a) To take a risk
- (b) Completely
- (c) To be cringe
- (d) To be violent

Q215. Bear the palm

- (a) To bear pain
- (b) Be victorious
- (c) To lose the game
- (d) To control anger

Q216. Tread upon other's toe

- (a) To annoy somebody
- (b) To kill somebody
- (c) Hurt one's feelings
- (d) To praise somebody

Q217. Cock of the walk

- (a) One who is the most stupid in a group
- (b) One who dominates a group or situation
- (c) One who enjoys the walk
- (d) An additional achievement

Q218. From the horse's mouth

- (a) From a reliable source
- (b) From an illegal source
- (c) From a costly source
- (d) From an unreliable source

Q219. A black ox

- (a) To be lucky
- (b) To have an ox
- (c) Misfortune
- (d) To misbehave

Q220. Fool's errand

- (a) Useless undertaking
- (b) A fool's house
- (c) Literary person
- (d) Intense Dislike

Directions (221-230): In the following questions, out of the four alternatives choose the one which can be substituted for the given words or sentence.

Q221. A person who advocates complete political and social change

- (a) fanatic
- (b) hero
- (c) radical
- (d) leader

Q222. A person who has an unnatural anxiety about one's own health typically involving imagined symptoms of illness.

- (a) nymphomaniac
- (b) hypochondriac
- (c) neurotic
- (d) psychotic

Q223. A harsh chaotic mixture of sounds

- (a) consonance
- (b) dissonance
- (c) cacophony
- (d) euphony

Q224. The hard remains of a prehistoric animal or plant that are found inside a rock.

- (a) fossil
- (b) ruins
- (c) relics
- (d) vestiges

Q225. To show or state that someone or something is not guilty of something

- (a) escape
- (b) pardon
- (c) charge
- (d) vindicate

Q226. The science and art of growing fruits, vegetables, flowers, or ornamental plants

- (a) agriculture
- (b) horticulture
- (c) viniculture
- (d) sericulture

Q227. A company or person that makes or sells sweets or chocolate

- (a) confectioner
- (b) vendor
- (c) chef
- (d) wholesaler

Q228. To teach a person to accept a set of beliefs uncritically

- (a) drill
- (b) to instill
- (c) indoctrinate
- (d) convince

Q229. A tangled mass in something such as hair or wool

- (a) knot
- (b) vortex
- (c) snot
- (d) whorl

Q230. Relating to or characteristic of hell or the underworld

- (a) exemplary
- (b) admirable
- (c) elysium
- (d) infernal

Directions (231-240): In the following questions, out of the four alternatives choose the one which can be substituted for the given words or sentence.

Q231. To break up into small parts as the result of impact or decay

- (a) disintegrate
- (b) disharmony
- (c) disinherit
- (d) denigrate

Q232. To be indecisive

- (a) vex
- (b) dither
- (c) tiff
- (d) stew

Q233. Very rude or coarse; vulgar.

- (a) gross
- (b) adipose
- (c) porcine
- (d) corpulent

Q234. To stop doing something; cease or abstain.

- (a) to endure
- (b) to desist
- (c) to persevere
- (d) to dismay

Q235. Causing a burning sensation like that of hot liquid on the skin

- (a) piping
- (b) igneous
- (c) frosty
- (d) scalding

Q236. An organization set up to provide help and raise money for those in need.

- (a) conglomerate
- (b) donation
- (c) charity
- (d) dole

Q237. To lift or haul something heavy with great effort.

- (a) heave
- (b) shrimp
- (c) wimp
- (d) runt

Q238. A conclusion or agreement done or reached decisively and with authority.

- (a) precise
- (b) definitive
- (c) reliable
- (d) specific

Q239. A political leader who seeks support by appealing to popular desires and prejudices rather than by using rational argument.

- (a) rebel
- (b) radical
- (c) demagogue
- (d) anarchistic

Q240. The action of repeating something aloud from memory.

- (a) paraphrase
- (b) rendition
- (c) erudition
- (d) recitation

Q241. In the following question, four words are given, out of which only one word is correctly spelt. Find the correctly spelt word.

- (a) entirty
- (b) gratious
- (c) discern
- (d) contestent

Q242. In the following question, four words are given, out of which only one word is correctly spelt. Find the correctly spelt word.

- (a) scenary
- (b) granery
- (c) visionary
- (d) luminery

Q243. In the following question, four words are given, out of which only one word is correctly spelt. Find the correctly spelt word.

- (a) installasion
- (b) installation
- (c) instalation
- (d) installetion

Q244. In the following question, four words are given, out of which only one word is incorrectly spelt. Find the incorrectly spelt word.

- (a) monotonous
- (b) mundane
- (c) moribund
- (d) marcurial

Q245. In the following question, four words are given, out of which only one word is incorrectly spelt. Find the incorrectly spelt word.

- (a) narcissism
- (b) parachute
- (c) infructuous
- (d) calmination

Q246. In the following question, four words are given, out of which only one word is incorrectly spelt. Find the incorrectly spelt word.

- (a) somneloquism
- (b) somnambulism
- (c) hallucination
- (d) obsession

Q247. In the following question, four words are given, out of which only one word is incorrectly spelt. Find the incorrectly spelt word.

- (a) prediction
- (b) resistaince
- (c) photomontage
- (d) phylum

Q248. In the following question, four words are given, out of which only one word is incorrectly spelt. Find the incorrectly spelt word.

- (a) physique
- (b) quizzical
- (c) collaborator
- (d) quotidiean

Q249. In the following question, four words are given, out of which only one word is incorrectly spelt. Find the incorrectly spelt word.

- (a) interogative
- (b) retaliation
- (c) staggered
- (d) tercentenary

Q250. In the following question, four words are given, out of which only one word is incorrectly spelt. Find the incorrectly spelt word.

- (a) mediteranean
- (b) miscellaneous
- (c) municipality
- (d) missionary

Directions (251 - 260): In the following questions, four words are given out of which only one is incorrectly spelt. Find that INCORRECTLY spelt word.

Q251.

- (a) Immersed
- (b) Enthusiastic
- (c) Assumption
- (d) Empathetic

Q252.

- (a) Prioritize
- (b) Comprehensive
- (c) Impetus
- (d) Rejuvenation

Q253.

- (a) Assertion
- (b) Inevitable
- (c) Recurrent
- (d) Ambivalence

Q254.

- (a) Abyssmal
- (b) Inaugural
- (c) Implication
- (d) Unveiled

Q255.

- (a) Restraint
- (b) Acknowledge

- (c) Redundant
- (d) Conventional

Q256.

- (a) Emerging
- (b) Scenario
- (c) Prolifiration
- (d) Subsequent

Q257.

- (a) Weaponized
- (b) Stringent
- (c) Invasive
- (d) Surveillance

Q258.

- (a) Offensive
- (b) Perpetators
- (c) Exponential
- (d) Patronized

Q259.

- (a) Simultaneously
- (b) Autonomous
- (c) Unprecedented
- (d) Apparatus

Q260.

- (a) Ammendment
- (b) Controversial
- (c) Cinematography
- (d) Ordinance

Solutions

S1. Ans.(a)

Sol. 'Know/have known' will replace 'have been knowing' because verb denoting senses like see, feel, hear, watch, know, etc. are not used in gerund form i.e. V1 + ing.

S2. Ans.(c)

Sol. 'Between' will replace 'among' because 'between' is used for two and 'among' is used for 'more than two'.

S3. Ans.(b)

Sol. 'An earthquake is felt not heard'.

S4. Ans.(c)

Sol. Short circuit (Noun); a failure in an electric circuit. Hence, the risk of 'short circuit' is the right usage.

S5. Ans.(a)

Sol. 'Knowledge and wisdom' is a Plural subject. Hence 'knowledge and wisdom' make is the correct usage. i.e. (Plural form of verb' is correct)

S6. Ans.(b)

Sol. Overflow; Past-Over flowed: to be so full that the contents go over the sides. Hence 'has overflowed' is the right usage.

S7. Ans.(a)

Sol. 'Are' will be replaced by 'is' because Police is a collective noun that takes Plural verb.

S8. Ans.(b)

Sol. Use of 'just' and 'exactly' together is superfluous. Hence, either 'just' or 'exactly' will be used.

S9. Ans.(c)

Sol. 'Comes back' will replace 'will come back'. Will is not used in conditional clauses like If, When, Before, After, As soon as.... Simple Present Tense is used.

S10. Ans.(a)

Sol. 'Elicit' will replace 'illicit'
Elicit (verb) – to get information or a reaction from somebody, often with difficulty.
Illicit (adjective) – not allowed by law, illegal.

S11. Ans.(b)

Sol. The correct answer is option b.

Replace 'Complaint' with 'Complained' to make the sentence grammatically correct.

Complain and complaint are two words that are used to express dissatisfaction or annoyance about something.

complain - It is a verb whereas

complaint - It is a noun.

In the given sentence usage of the verb is appropriate.

S12. Ans.(c)

Sol. The correct answer is option c.

Replace 'attempted' with 'attempting' to make the sentence grammatically correct.

Rather - It is used to talk about preferences.

Rather than - As a preposition, rather than is synonymous with instead of and begins subordinate clauses (clauses that can't stand alone as a sentence) that have a present participle (the -ing form) of a verb serving as a noun (in other words, a gerund).

For example - I would rather spend my time traveling than working.

S13. Ans.(b)

Sol. The correct answer is option b.

Replace 'Are' with 'Is' to make the sentence grammatically correct.

When a plural noun denotes some specific quantity or amount as a whole the verb is generally singular.

S14. Ans.(d)

Sol. The correct answer is option d.

The given sentence is grammatically and contextually correct.

If one of the nouns is singular and the other one is plural, the verb agrees with the noun closer to the verb.

In the given sentence, the noun which is closer to the verb 'Boss' is singular hence, it takes a singular verb 'Was.'

S15. Ans.(b)

Sol. The correct answer is option b.

Replace 'By' with 'with' to make the sentence grammatically correct.

entertain with - To amuse oneself, someone, or something with something.

S16. Ans.(c)

Sol. The correct answer is option b.

Replace 'Than' with 'To' to make the sentence grammatically correct.

Certain words - 'Senior, Superior, Prior, Prefers' takes 'To' and not 'Than.'

For example - Ravi prefers coffee to tea.

S17. Ans.(a)

Sol. The correct answer is option a.

Use 'Of' after 'Herself' to make the sentence grammatically correct.

Avail of - It is an idiom which means, "To make use of, to take advantage of, to utilize an available resource.

For example - They availed themselves of his services.

S18. Ans.(d)

Sol. The correct answer is option d.

Remove 'About' after the verb 'Discuss' to make the sentence grammatically correct.

Discuss - It does not need the preposition "about" before the direct object - in this case, the Farm laws.

Discuss - It means "To talk about something" and "to discuss something" mean the same. Hence, usage of 'About' is redundant.

S19. Ans.(b)

Sol. The correct answer is option b.

Replace 'Overflow' with 'Overflowed' to make the sentence grammatically correct.

The given sentence is in past perfect tense which is used to indicate a past action which is completed before another past action.

Thus, after 'Had' it takes 'V3' form.

S20. Ans.(c)

Sol. The correct answer is option c.

Add 'The' after the adjective 'Tougher' to make the sentence grammatically correct.

When a selection is made out of the two, the definite article 'The' is used before the adjective denoting comparison.

S21. Ans.(b)

Sol. The correct answer is option b.

The word that can be in the blank is, 'Flourish'.

As per the context of the passage the word 'Flourish' fits in properly & hence it is the correct choice.

S22. Ans.(d)

Sol. The correct answer is option d.

The word that can be in the blank is, 'Aspect'.

As per the context of the passage the word 'Aspect' fits in properly & hence it is the correct choice.

S23. Ans.(a)

Sol. The correct answer is option a.

The word that can be in the blank is, 'Lazier'.

As per the context of the passage the word 'Lazier' fits in properly & hence it is the correct choice.

S24. Ans.(c)

Sol. The correct answer is option c.

The word that can be in the blank is, 'Address'.

As per the context of the passage the word 'Address' fits in properly & hence it is the correct choice.

S25. Ans.(c)**Sol.** The correct answer is option c.

The word that can be in the blank is, 'Who'.

As per the context of the passage the word 'Who' fits in properly & hence it is the correct choice.

S26. Ans.(a)**Sol.** The correct answer is option a.

The word that can be in the blank is, 'Demitted'.

As per the context of the passage the word 'Demitted' fits in properly & hence it is the correct choice.

S27. Ans.(b)**Sol.** The correct answer is option b.

The word that can be in the blank is, 'Struggle'.

As per the context of the passage the word 'Struggle' fits in properly & hence it is the correct choice.

S28. Ans.(d)**Sol.** The correct answer is option d.

The word that can be in the blank is, 'Primary'.

As per the context of the passage the word 'Primary' fits in properly & hence it is the correct choice.

S29. Ans.(a)**Sol.** The correct answer is option a.

The word that can be in the blank is, 'State'.

As per the context of the passage the word 'State' fits in properly & hence it is the correct choice.

S30. Ans.(d)**Sol.** The correct answer is option d.

The word that can be in the blank is, 'Appealed'.

As per the context of the passage the word 'Appealed' fits in properly & hence it is the correct choice.

S31. Ans.(a)**Sol.** The correct answer is option a.

The word that can be filled in the blank is, 'Harbouring'.

Harbour- to protect someone or something bad, especially by hiding that person

Debunk - to prove to be false.

Witness - to declare (something) to be true or genuine.

S32. Ans.(c)**Sol.** The correct answer is option c.

The word that can be filled in the blank is, 'Civilizations'.

Civilization - the stage of human social and cultural development and organization that is considered most advanced.

S33. Ans.(a)**Sol.** The correct answer is option a.

The word that can be filled in the blank is, 'Incorporated'.

Incorporate - to include something as part of something.

As per the context of the passage the word 'Incorporated' fits in properly & hence it is the correct choice.

S34. Ans.(d)**Sol.** The correct answer is option d.

The word that can be filled in the blank is, 'Retrieve'.

Retrieve - to get and bring back.

S35. Ans.(b)**Sol.** The correct answer is option b.

The word that can be filled in the blank is, 'Rancorous'.

Rancorous - characterized by bitterness or resentment.

S36. Ans.(b)**Sol.** The correct answer is option b.

The word that can be filled in the blank is, 'Happened'.

Happened - take place; occur.

Developed - to gradually become clearer or more detailed

Dismantled - to destroy the integrity or functioning of

S37. Ans.(a)**Sol.** The correct answer is option a.

The word that can be filled in the blank is, 'Criticized'.

Criticized - to express disapproval of someone or something

Warned - inform someone in advance of a possible danger, problem, or other unpleasant situation.

Dissented - hold or express opinions that are at variance with those commonly or officially held.

Reproach - express to (someone) one's disapproval of or disappointment in their actions.

S38. Ans.(d)**Sol.** The correct answer is option d.

The word that can be filled in the blank is, 'Veracity'.

Credulity - a tendency to be too ready to believe that something is real or true.

Veracity - the quality of being truthful or honest

S39. Ans.(b)**Sol.** The correct answer is option b.

The word that can be filled in the blank is, 'Cooperation'.

Cooperation - the action or process of working together to the same end.

For example - they worked in close cooperation with the British Tourist Authority"

Negotiation - discussion aimed at reaching an agreement.

Incorporation - take in or contain (something) as part of a whole; include.

S40. Ans.(d)**Sol.** The correct answer is option d.

The word that can be filled in the blank is, 'Surpassed'.

Surpassed - exceed; be greater than.

Scraped - abolish or cancel (a plan, policy, or law).

Seized - take hold of suddenly and forcibly.

Shrugged - dismiss something as unimportant.

S41. Ans.(b)**Sol.** "Nor did I" is the appropriate use as inversion takes place after "nor".

S42. Ans.(b)

Sol. 'A monument worth seeing' is the appropriate use. Worth is always followed by a gerund. Articles are used before nouns or noun equivalents which means 'monuments' will come before 'worth seeing'.

S43. Ans.(b)

Sol. We need to write main verb "helped" and its object "her" after helping verb "had" and then "not only" and "but also" should be introduced.

S44. Ans.(a)

Sol. 'Ago' is used with past indefinite tense thus 'finished' should be used instead of "had finished".

S45. Ans.(b)

Sol. "Was constructed" is the correct choice. "Construct" is base form of verb and use of 'was' indicates that we need past participle form of verb 'construct' which is "constructed".

S46. Ans.(a)

Sol. 'See' is the correct choice. The sentence is in the form of simple present tense.

S47. Ans.(c)

Sol. Sentence should be in active and 'I' should take 'have' helping verb with it so that 3rd form of verb can be used accordingly.

S48. Ans.(a)

Sol. 'Returned' is the correct choice as the sentence is in past thus "returned" should be used.

S49. Ans.(b)

Sol. As the context in the statement is "person" is going to the market, so eggs are about to finish, thus "few" should be used which gives the negative meaning.

S50. Ans.(c)

Sol. Indifferent takes "to" preposition with it.

S51. Ans.(d)

Sol. The correct answer is option d.

Replace 'Besides' with 'Beside' to make the sentence grammatically correct.

Beside - It is a preposition which means 'close to' or 'next to.'
Besides - It is also a preposition that means 'In addition to' or 'apart from.'

S52. Ans.(b)

Sol. The correct answer is option b.

Replace 'when she fainted' with 'Than she fainted' to make the sentence grammatically correct.

Conjunction 'No sooner ---- than' is used to denote simultaneous actions.

No sooner is followed by 'Than'.

S53. Ans.(a)

Sol. The correct answer is option a.

Replace 'Fluids' with 'And drinking fluids' to make the sentence grammatically correct.

When we connect two or more clauses or phrases with a coordinating conjunction (for, and, nor, but, or, yet, or so), we use parallel structure.

For Example - My best friend took me to **a dance and a show.**

S54. Ans.(c)

Sol. The correct answer is option c.

Replace 'Witness for the murder' with 'Witness to the murder' to make the sentence grammatically correct.

Be witness to something - it is a phrase which means, 'To see something happen.'

For example- We were witness to the worst period in the club's history.

S55. Ans.(a)

Sol. The correct answer is option a.

Replace 'Gregarious' with 'Humane' to make the sentence grammatically correct.

Humane - marked by compassion, sympathy, or consideration for humans or animals

Gregarious - fond of company; sociable.

S56. Ans.(b)

Sol. The correct answer is option b.

Replace 'backed up' with 'backed out' to make the sentence grammatically correct.

Backed up - To support an idea, plan or person

Backed out - To decide not to do something that you had said you would do.

S57. Ans.(d)

Sol. The correct answer is option d.

Replace 'Directed' with 'Advised' to make the sentence grammatically correct.

Directed- Control the operations of; manage or govern. OR to order someone, especially officially.

For example - The judge directed the defendant to remain silent.

Advised- To give (someone) a recommendation about what should be done: to give advice to.

For example - Her doctor advised her to try a drier climate.

S58. Ans.(c)

Sol. The correct answer is option c.

Replace 'Accidentally' with 'Incessantly' to make the sentence grammatically correct.

Incessantly - without interruption; constantly especially when this is annoying or unpleasant.

S59. Ans.(a)

Sol. The correct answer is option a.

Replace 'Although' with 'How' to make the sentence grammatically correct.

Although- It is used to introduce a subordinate clause which contains a statement which contrasts with the statement in the main clause.

For example - Although he is known to only a few, his reputation among them is very great.

How- (adverb) In what manner or way.

For example - How did you two meet each other?

As per the context of the sentence, usage of 'How' makes the sentence grammatically correct.

S60. Ans.(d)

Sol. The correct answer is option d.

The given sentence is grammatically and contextually correct.

Reign (n) - The period of time when a king or queen rules a country

Hence, usage of the adjective 'Longest' is appropriate.

S61. Ans.(d)

Sol. The correct arrangement is RQP i.e. "Do not be anxious about anything, but in every situation, by prayer and petition, with thanksgiving, present your requests to God". This sentence is a message about finding peace through prayer.

S62. Ans.(c)

Sol. The correct arrangement is RPQ i.e. "The truth about these dysfunctional, downscale communities is that they deserve to die". The sentence criticizes communities that are non-functional and at a low economic level, implying a harsh view of their future.

S63. Ans.(a)

Sol. The correct arrangement is QPR i.e. "You fail to recognize that it matters not what someone is born, but what they grow to be!". This is a powerful statement about the importance of personal development over inherent characteristics.

S64. Ans.(b)

Sol. The correct arrangement is QRP i.e. "The wide world is all about you: you can fence yourselves in, but you cannot forever fence it out". The sentence suggests that no matter how much one tries to isolate oneself, it's impossible to shut out the world forever.

S65. Ans.(b)

Sol. The correct arrangement is RQP i.e. "Today, however, when one in four rural Indians and one in six urban Indians is poor, our chances of being wrong in identifying the poor are far greater". This indicates the high poverty rate in both rural and urban areas of India, suggesting a potential issue with accurately identifying those in need.

S66. Ans.(a)

Sol. The correct arrangement is RPQ i.e. "In that case, a Uniform Civil Code would simply put together the best gender-just practices from all Personal Laws". It suggests the implementation of a common set of laws for everyone, irrespective of their religion or gender.

S67. Ans.(a)

Sol. The correct arrangement is PRQ i.e. "Williamson shoveled scorn on the low-income white Republican voters who, as he saw it, were most responsible for the rise of Trump". It's a criticism aimed at a particular group for their political choice.

S68. Ans.(b)

Sol. The correct arrangement is PQR i.e. "Amartya Sen lays claim to a history of writing some of the finest research papers that have been published". The sentence highlights Amartya Sen's accomplishments in academic writing.

S69. Ans.(b)

Sol. The correct arrangement is PQR i.e. "His exact date of birth is not known, but it is believed that he was born in late May and later on he decided to celebrate May 29 as his birthday, as this was the date he climbed Everest". This sentence revolves around a person's birthday and a significant event on the same date.

S70. Ans.(a)

Sol. The correct arrangement is PRQ i.e. "Today, less privileged white Americans are considered to be in crisis, and the language of sociologists and pathologists predominates". The sentence talks about the current state of less privileged white Americans and how it's a topic of discussion among sociologists and pathologists.

S71. Ans.(b)**S72. Ans.(d)****S73. Ans.(c)****S74. Ans.(a)****S75. Ans.(d)****S76. Ans.(c)****S77. Ans.(d)****S78. Ans.(b)****S79. Ans.(a)****S80. Ans.(d)****S81. Ans.(d)**

Sol. Active Voice: In Active voice the subject is the one doing the action.

Passive Voice: In Passive voice the subject is the recipient of the action.

To convert active voice into passive voice the object becomes the subject and the subject becomes the object. Subject + verb + object \leftrightarrow Object+3rd form of verb + by +Subject.

In Simple Present Tense as presented in the question the structure for changing tense into active/passive is

Subject + is/am/are + V1 + Object \leftrightarrow Object + is/am/are+ V3+ by Subject

For Example- Active- I do not complete the work on time.

Passive- The work is not completed on time by me.

S82. Ans.(b)

Sol. Active Voice: In Active voice the subject is the one doing the action.

Passive Voice: In Passive voice the subject is the recipient of the action.

To convert active voice into passive voice the object becomes the subject and the subject becomes the object. Subject + verb + object \leftrightarrow Object+3rd form of verb + by +Subject.

In Past Continuous Tense as presented in the question the structure for changing tense into active to passive and vice versa is

Subject + was/were + v1+ing+ object \leftrightarrow Object+ was/were +being+V3+ by + subject

For Example- Active- I was not doing the work on time.

Passive- The work was not being done on time by me.

S83. Ans.(b)

Sol. Active Voice: In Active voice the subject is the one doing the action.

Passive Voice: In Passive voice the subject is the recipient of the action.

To convert active voice into passive voice the object becomes the subject and the subject becomes the object. Subject + verb + object \leftrightarrow Object+3rd form of verb + by +Subject.

In Present Perfect Tense as presented in the question the structure for changing tense into active to passive and vice versa is

Subject + has/have+ v3+ object \leftrightarrow Object+ has/have+ been+ V3+ by + subject.

For Example- Active- He has completed a lap.

Passive- A lap has been completed by him.

S84. Ans.(c)

Sol. Active Voice: In Active voice the subject is the one doing the action.

Passive Voice: In Passive voice the subject is the recipient of the action.

To convert active voice into passive voice the object becomes the subject and the subject becomes the object. Subject + verb + object \leftrightarrow Object+3rd form of verb + by +Subject.

In Simple Past Tense as presented in the question the structure for changing tense into active to passive and vice versa is

Subject + V2+ object \leftrightarrow Object+ was/were + V3+ by + subject.

For Example- Active- I did yoga.

Passive- Yoga was done by me.

S85. Ans.(b)

Sol. Active Voice: In Active voice the subject is the one doing the action.

Passive Voice: In Passive voice the subject is the recipient of the action.

To convert active voice into passive voice the object becomes the subject and the subject becomes the object. Subject + verb + object \leftrightarrow Object+3rd form of verb + by +Subject.

In Simple Present Tense as presented in the question the structure for changing tense into active/passive is

Do/Does+ Subject+ V1+Object+? \leftrightarrow Is/am/are + Object+ V3+ by subject +?

For Example- Active- Do you paint cars?

Passive- Are cars painted by you?

S86. Ans.(d)

Sol. Active Voice: In Active voice the subject is the one doing the action.

Passive Voice: In Passive voice the subject is the recipient of the action.

To convert active voice into passive voice the object becomes the subject and the subject becomes the object. Subject + verb + object \leftrightarrow Object+3rd form of verb + by +Subject.

In Simple Past Tense as presented in the question the structure for changing tense into active to passive and vice versa is

Subject + V2+ object \leftrightarrow Object+ was/were + V3+ by + subject.

For Example- Active- I did yoga.

Passive- Yoga was done by me.

S87. Ans.(c)

Sol. Active Voice: In Active voice the subject is the one doing the action.

Passive Voice: In Passive voice the subject is the recipient of the action.

To convert active voice into passive voice the object becomes the subject and the subject becomes the object. Subject + verb + object \leftrightarrow Object+3rd form of verb + by +Subject.

Many times, we notice that who has completed the work is not mentioned in passive voice.

When we change the passive voice into the active voice, we have to mention the subject. But there is no particular rule to selecting the subject. We can use one, someone, people, they, circumstance, and so on as a subject depending on the situation.

If someone gives a command, requests, expresses or desires a wish the sentence is called an Imperative sentence.

“Get someone to steal the car.” is the most appropriate option out of the four.

S88. Ans.(c)

Sol. Active Voice: In Active voice the subject is the one doing the action.

Passive Voice: In Passive voice the subject is the recipient of the action.

To convert active voice into passive voice the object becomes the subject and the subject becomes the object. Subject + verb + object \leftrightarrow Object+3rd form of verb + by +Subject.

In Past Continuous Tense as presented in the question the structure for changing tense into active to passive and vice versa is

Subject + was/were + v1+ing+ object \leftrightarrow Object+ was/were +being+V3+ by + subject

For Example- Active- I was not doing the work on time.

Passive- The work was not being done on time by me.

S89. Ans.(a)

Sol. Active Voice: In Active voice the subject is the one doing the action.

Passive Voice: In Passive voice the subject is the recipient of the action.

To convert active voice into passive voice the object becomes the subject and the subject becomes the object. Subject + verb + object \leftrightarrow Object+3rd form of verb + by +Subject.

In Simple Past Tense as presented in the question the structure for changing tense into active to passive and vice versa is

Subject + V2+ object \leftrightarrow Object+ was/were + V3+ by + subject.

For Example- Active- I did yoga.

Passive- Yoga was done by me.

S90. Ans.(a)

Sol. Active Voice: In Active voice the subject is the one doing the action.

Passive Voice: In Passive voice the subject is the recipient of the action.

To convert active voice into passive voice the object becomes the subject and the subject becomes the object. Subject + verb + object \leftrightarrow Object+3rd form of verb + by +Subject.

In Simple Past Tense as presented in the question the structure for changing tense into active to passive and vice versa is

Subject + V2+ object \leftrightarrow Object+ was/were + V3+ by + subject.

S91. Ans.(a)

Sol. The correct answer is option a.

The given sentence is of 'Active voice'.

The sentence is said to be in active voice when 'Subject' is active & does something.

In the given sentence, the subject is '652 million people' and the subject performs some action related to the subject.

(Watched the live global broadcast of the Apollo 11 Moon landing)

The given sentence is in Past Simple Tense- Subject + V2+ object

Now we have to convert it into passive voice.

Passive voice – If the sentence is in passive form, the subject remains inactive. It does

nothing, but allows something to be done.

In the passive form, the object of the verb in Active voice becomes the subject of the

verb in the Passive voice. 'By' is introduced as now the subject receives the action by the

object.

The structure in passive voice - Object+ was/were V3+ by + subject.

The sentence thus formed is - The live global broadcast of the Apollo 11 Moon landing was watched by an estimated 652 million people on 20th July 1969.

S92. Ans.(c)

Sol. The correct answer is option c.

The given sentence is of 'Active voice'.

The sentence is said to be in active voice when 'Subject' is active & does something.

In the given sentence, the subject is 'Forest fires and the subject perform some action related to the subject.

(Caused Horrific damage to the planet)

The given sentence is in present simple tense - Subject + V1+s/es+ object

Now we have to convert it into passive voice.

Passive voice – If the sentence is in passive form, the subject remains inactive. It does

nothing, but allows something to be done.

In the passive form, the object of the verb in Active voice becomes the subject of the

verb in the Passive voice. 'By' is introduced as now the subject receives the action by the

object.

The structure in passive voice - Object+ is/am/are+ V3+ by + subject.

The sentence thus formed is - Horrific damage to the planet is caused by forest fires.

S93. Ans.(b)

Sol. The correct answer is option b.

The given sentence is of 'Passive voice'.

Passive voice – If the sentence is in passive form, the subject remains inactive. It does

nothing, but allows something to be done.

The given sentence is in present simple tense (passive voice) – Object+ is/am/are+ V3+ by + subject.

The structure in active voice - Subject + V1+s/es+ object

The sentence thus formed is - The pandemic hits small businesses and self-employed people.

S94. Ans.(d)

Sol. The correct answer is option d.

The given sentence is of 'Active voice'.

The sentence is said to be in active voice when 'Subject' is active & does something.

Now we have to convert it into passive voice.

Passive voice – If the sentence is in passive form, the subject remains inactive. It does

nothing, but allows something to be done.

The given sentence is in Present Perfect Tense - Subject + has/have+ v3+ object

The structure in passive voice - Object has/have+ been+ V3+ by + subject

The sentence thus formed is - A key agreement for reciprocal provision of supplies and services between their defence forces has been signed by India and Japan.

S95. Ans.(c)

Sol. The correct answer is option c.

The given sentence is of 'Active voice'.

The sentence is said to be in active voice when 'Subject' is active & does something.

Now we have to convert it into passive voice.

Passive voice – If the sentence is in passive form, the subject remains inactive. It does

nothing, but allows something to be done.

The given sentence is in Present Continuous Tense - Subject + is/am/are+ v1+ ing + object.

The structure in passive voice - Object+ is/am/are+ being+ V3+ by + subject

The sentence thus formed is - The instructions are being given to the visitors by the tourist guide.

S96. Ans.(b)

Sol. The correct answer is option b.

The given sentence is of 'Active voice'.

The sentence is said to be in active voice when 'Subject' is active & does something.

Now we have to convert it into passive voice.

Passive voice – If the sentence is in passive form, the subject remains inactive. It does

nothing, but allows something to be done.

The given sentence is in Present Simple Tense - Subject + V1+s/es+ object.

The structure in passive voice - Object+ is/am/are+ V3+ by + subject

The sentence thus formed is - Ban on scheduled international flights is extended by India till September-end.

S97. Ans.(b)

Sol. The correct answer is option b.

The given sentence is of 'Active voice'.

The sentence is said to be in active voice when 'Subject' is active & does something.

Now we have to convert it into passive voice.

Passive voice – If the sentence is in passive form, the subject remains inactive. It does

nothing, but allows something to be done.

In the given sentence, 'Who' is used as the subject and the objective case of 'Who' is 'Whom'.

The structure in active voice – Who + Verb + Object +?

The structure in passive voice - By whom + be verb + object + 3rd form of verb +?

The sentence thus formed is - By whom has the home-work not been completed yet?

It would start with 'By whom', because who changes to 'whom' in the passive voice.

S98. Ans.(a)

Sol. The correct answer is option a.

The given sentence is of 'Active voice'.

The sentence is said to be in active voice when 'Subject' is active & does something.

Now we have to convert it into passive voice.

Passive voice – If the sentence is in passive form, the subject remains inactive. It does

nothing, but allows something to be done.

The given sentence is in Present Perfect Tense - Subject + has/have+ v3+ object

The structure in passive voice - Object has/have+ been+ V3+ by + subject

The sentence thus formed is - The Odisha Government's latest infrastructure plan has been praised by business tycoon Ratan Tata.

S99. Ans.(c)

Sol. The correct answer is option c.

The given sentence is of 'Active voice'.

The sentence is said to be in active voice when 'Subject' is active & does something.

Now we have to convert it into passive voice.

Passive voice – If the sentence is in passive form, the subject remains inactive. It does

nothing, but allows something to be done.

The given sentence is an imperative sentence. These are the sentences in which we express our feelings and emotions like command, order, advice, and request.

The structure of an imperative sentence in the passive voice - Let + object + be + past participle.

The sentence thus formed is - Let the garbage be thrown in the dustbin.

S100. Ans.(d)

Sol. The correct answer is option d.

The given sentence is of 'Active voice'.

The sentence is said to be in active voice when 'Subject' is active & does something.

Now we have to convert it into passive voice.

Passive voice – If the sentence is in passive form, the subject remains inactive. It does nothing, but allows something to be done.

The given sentence is in present simple tense - Subject + V1+s/es+ object.

The structure in passive voice - Object+ is/am/are+ V3+ by + subject

The sentence thus formed is - Rs 4 lakh is donated to the needy in Mumbai by Industrialist Anand Mahindra.

S101. Ans.(c)

Sol. The correct answer is option c.

The given sentence is of 'Direct Speech'.

The given sentence is an Imperative sentence.

Imperative sentence - Imperative sentences give an order or direct command. These sentences may come in the form of advice, appeal, request, or order.

While changing it into an indirect form, we consider following rules.

Reported Verb – 'Said to' changes to 'Ordered'.

Conjunction – In the Imperative sentence conjunction 'To' is used.

The sentence thus formed is - The owner ordered his tenants to clean the room.

S102. Ans.(d)

Sol. The correct answer is option d.

The given sentence is an Optative sentence. Such sentences which express wish, keen desire, prayer, curse etc., are called Optative sentences.

If Optative sentences contain wish - then we use 'wish/wished' in place of the reporting verb 'say/said to' and we do not use any Conjunction word.

The sentence thus formed is - The boss congratulated Nitin and wished him success in life.

S103. Ans.(a)

Sol. The correct answer is option a.

The given sentence is 'Direct Speech'.

Direct Speech - Reporting the message of the speaker in the exact words as spoken by him.

Indirect Speech - Reporting the message of the speaker in our own words.

The given sentence is an 'Assertive Sentence'.

Sentences that make a statement are called assertive sentences. These sentences may be positive, negative, false, or true statements.

While changing it into an indirect form, we consider following rules.

Reported Verb – 'said to' changes to 'Told'.

Conjunction – In the Assertive sentence conjunction 'That' is used.

Tense – Present Simple Tense (Subject +V1st + Object) into Past simple

(Subject +V2 + Object).

The sentence thus formed is - Ramesh told his friends that if he came to know anything regarding the fees structure, he would inform them.

S104. Ans.(d)

Sol. The correct answer is option d.

The given sentence is 'Indirect Speech'.

Indirect Speech - Reporting the message of the speaker in our own words.

Direct Speech - Reporting the message of the speaker in the exact words as spoken by him.

Tense - Past simple (Subject+V2+Object) changes to Past perfect

(Subject+had+V3+Object).

The sentence thus formed is - Ananya said that her grandfather had taken tablets.

S105. Ans.(c)

Sol. The correct answer is option c.

The given sentence is 'Direct Speech'.

Direct Speech - Reporting the message of the speaker in the exact words as spoken by him.

Indirect Speech - Reporting the message of the speaker in our own words.

Tense – might remain unchanged.

Tomorrow changes to 'The next day.'

The sentence thus formed is - Ajay told his uncle that he might get a flight the next day.

S106. Ans.(a)

Sol. The correct answer is option a.

The given sentence is 'Direct Speech'.

Direct Speech - Reporting the message of the speaker in the exact words as spoken by him.

Indirect Speech - Reporting the message of the speaker in our own words.

Tense - Present simple (Subject +V1st + Object) changes to Past simple

(Subject +V2 + Object)

The sentence thus formed is - He said that his parents took a walk every day.

S107. Ans.(b)

Sol. The correct answer is option b.

The given sentence is 'Direct Speech'.

Direct Speech - Reporting the message of the speaker in the exact words as spoken by him.

Indirect Speech - Reporting the message of the speaker in our own words.

Tense - Present continuous (Subject +is/am/are+V1 +ing+ Object) changes to

Past Continuous (Subject +was/were+V1 +ing+ Object)

'Tonight' changes to that night.

The sentence thus formed is - She said that she was going to see her son that night.

S108. Ans.(c)

Sol. The correct answer is option c.

The given sentence is 'Direct Speech'.

Direct Speech - Reporting the message of the speaker in the exact words as spoken by him.

Indirect Speech - Reporting the message of the speaker in our own words.

Tense - Will have been + 3rd form the verb changes to 'Would have been + 3rd form of the verb.

The sentence thus formed is - He said that it would have been raining since morning.

S109. Ans.(a)

Sol. The correct answer is option a.

The given sentence is 'Direct Speech'.

Direct Speech - Reporting the message of the speaker in the exact words as spoken by him.

Indirect Speech - Reporting the message of the speaker in our own words.

Tense - Future simple (Subject+ will/shall+V1+object) changes to Present Conditional

(Subject+ would+V1+object)

The sentence thus formed is - The shopkeeper told me that he would not give me this medicine without prescription.

S110. Ans.(c)

Sol. The correct answer is option c.

The given sentence is 'Direct Speech'.

Direct Speech - Reporting the message of the speaker in the exact words as spoken by him.

The given sentence is an 'Assertive Sentence'.

Sentences that make a statement are called assertive sentences. These sentences may be positive, negative, false, or true statements.

While changing it into an indirect form, we consider following rules.

Reported Verb - 'Said' remains unchanged.

Conjunction - In the Assertive sentence conjunction 'That' is used.

Tense - Present perfect (Subject + has/have+V3+Object) changes to Past perfect

(Subject+had+V3+Object)

The sentence thus formed is - His mom said that he had completed his degree.

S111. Ans.(a)

Sol. The correct answer is option a.

If the reported sentence deals with a fact or general truth, the tense doesn't change.

The sentence thus formed is - Mahatma Gandhi once said that the future of India lies in its villages.

S112. Ans.(b)

Sol. The correct answer is option b.

The given sentence is of 'Direct Speech'.

Direct Speech - Reporting the message of the speaker in the exact words as spoken by him.

The given sentence is 'Interrogative sentence.'

While changing it into indirect form, we consider following rules.

Reported Verb - 'Said' changes to 'Asked'.

Conjunction - In the Interrogative sentence conjunction 'If/ Whether' is used.

The sentence thus formed is - She asked me if I would listen to her.

S113. Ans.(b)

Sol. The correct answer is option b.

Tense - Present continuous changes to Past continuous tense.

The sentence thus formed is - Narmada said that she was reading an interesting novel.

S114. Ans.(d)

Sol. The correct answer is option d.

Tense - Present perfect continuous changes to Past perfect continuous tense.

The sentence thus formed is - Raju said that he had been working there since he was 17.

S115. Ans.(a)

Sol. The correct answer is option a.

The given sentence is 'Direct Speech'.

Direct Speech - Reporting the message of the speaker in the exact words as spoken by him.

The given sentence is an 'Imperative Sentence'.

Imperative Sentence - Imperative sentences give an order or direct command. These sentences may come in the form of advice, appeal, request, or order.

While changing it into an indirect form, we consider following rules.

Reported Verb - 'Said to' changes to 'Reminded'.

The sentence thus formed is - She reminded Vijay to bring her notes.

S116. Ans.(c)

Sol. The correct answer is option c.

Tense - Present continuous changes to Past continuous.

The sentence thus formed is - She told me that they weren't going to school.

S117. Ans.(a)

Sol. The correct answer is option a.

Tense - simple past changes to past perfect tense.

The sentence thus formed is - Varun said that he had visited his grandparents for the weekend.

S118. Ans.(c)

Sol. The correct answer is option c.

The modal verbs 'Had Better, Could, Would, Used to, Should, Might, Ought to and Mustn't' remain Unchanged.

The sentence thus formed is - Rajat told his friend that Shreya could sing when she was three.

S119. Ans.(b)

Sol. The correct answer is option b.

If the reported sentence deals with a fact or general truth, the tense doesn't change.

The sentence thus formed is - The teacher said that the moon takes 28 days to revolve around the Earth.

S120. Ans.(d)

Sol. The correct answer is option d.

The given sentence is 'Direct Speech'.

Direct Speech - Reporting the message of the speaker in the exact words as spoken by him.

The given sentence is 'Assertive sentence.'

While changing it into an indirect form, we consider following rules.

Reported Verb - 'Said to' changes to 'Told'.

Conjunction - In the Assertive sentence conjunction 'That' is used.

Here' changes to 'There'.

The sentence thus formed is - Teacher told Nita that she had committed a mistake there.

S121. Ans.(b)

Sol. Hamper: to prevent someone doing something easily.

Extricate: free (someone or something) from a constraint or difficulty.

Spur: to encourage an activity or development or make it happen faster.

The other three words except for "hampered" don't fit in the frame of "severely" neither do they fit in the context.

S122. Ans.(c)

Sol. Connive: secretly allow (something immoral, illegal, or harmful) to occur.

Preclude: prevent from happening; make impossible.

The beginning as well as the ending of the passage clearly indicates the connivance of the large sections of Police in the case.

S123. Ans.(a)

Sol. Excruciating: very embarrassing, awkward, or tedious.

The other three words except for "excruciating" have an affirmative meaning which doesn't go well with the unpleasant essence of the passage.

Hence option A is correct.

S124. Ans.(d)

Sol. Shoddy: badly made or done.

Hence option D is the most appropriate choice.

S125. Ans.(b)

Sol. Evade: escape or avoid (someone or something), especially by guile or trickery.

As the investigation has been called 'hampered' in the beginning of the passage thus creating possibilities to escape from the law. Hence only option B fits in the context.

S126. Ans.(b)

Sol. Inexplicable: unable to be explained or accounted for.

Paradoxical: a situation or statement seeming impossible or difficult to understand because it contains two opposite facts or characteristics.

Parochial: having a limited or narrow outlook or scope.

Pugnacious: eager or quick to argue, quarrel, or fight.

Option B is the correct choice in terms of subsequent part of the passage and for its formal usage.

Hence option B fits in the context.

S127. Ans.(c)

Sol. Falter: become weak or less effective.

Option C is the correct usage as the subsequent part of the passage including early 1980's and mid 1980's denotes a difference in earlier and later conditions. Mid 1980's has been called boom years which clearly displays early 1980's poor condition, hence 'faltering' is the correct choice.

Hence Option C fits in the context.

S128. Ans.(d)

Sol. The noun 'cut' which means a reduction in amount/size justifies the usage of adjective 'severe' with it which means (of something bad or undesirable) very great; intense.

Hence Option D fits in the context.

S129. Ans.(a)

Sol. Reaction: something done, felt, or thought in response to a situation or event while Proactivity or proactive behavior by individuals refers to anticipatory, change-oriented and self-initiated behavior in situations.

Moreover 'some' will take a plural noun after it and hence option A fits in the context.

S130. Ans.(b)

Sol. Grip: a firm hold; a tight grasp.

Hence Option B is the correct choice.

S131. Ans.(b)

Sol. Among the given words, 'communication' fits in the blank perfectly. Hence, option (b) is the correct.

S132. Ans.(b)

Sol. Among the given words, 'Remains' fits in the blank correctly. Hence, option (b) is the correct choice.

S133. Ans.(d)

Sol. Among the given words, 'In' fits in the blank correctly. Hence, option (d) is the correct choice.

S134. Ans.(c)

Sol. Among the given words, 'Adopting' fits in the blank correctly. Hence, option (c) is the correct choice.

S135. Ans.(b)

Sol. Among the given words, 'Regional' fits in the blank correctly. Hence, option (b) is the correct choice.

S136. Ans.(a)

Sol. The correct answer is option a.
The word that can be in the blank is, 'Bought'.
As per the context of the passage the word 'Bought' fits in properly & hence it is the correct choice.

S137. Ans.(b)

Sol. The correct answer is option b.
The word that can be in the blank is, 'Distraught'.
As per the context of the passage the word 'Distraught' fits in properly & hence it is the correct choice.

S138. Ans.(a)

Sol. The correct answer is option a.
The word that can be in the blank is, 'Solution'.
As per the context of the passage the word 'Solution' fits in properly & hence it is the correct choice.

S139. Ans.(d)

Sol. The correct answer is option d.
The word that can be in the blank is, 'Immediately'.
As per the context of the passage the word 'Immediately' fits in properly & hence it is the correct choice.

S140. Ans.(c)

Sol. The correct answer is option c.
The word that can be in the blank is, 'Apologized'.
As per the context of the passage the word 'Apologized' fits in properly & hence it is the correct choice.

S141. Ans.(c)

Sol. The correct answer is option c.
Refer to 'But fighting bushfires is extremely difficult and often **authorities have to focus on just stopping the spread, rather than putting the fire out..... The priority is saving lives.**'

S142. Ans.(a)

Sol. The correct answer is option a.
Refer to 'One study estimated that half a billion animals have died in New South Wales alone. Zookeepers take animals home to save them from fire, **but the fires don't only kill animals directly, they also destroy the habitat,** leaving the survivors vulnerable even when the fires have gone.'

S143. Ans.(a)

Sol. The correct answer is option a.
Refer to '**There's also help coming from abroad: the US, Canada and New Zealand have sent firefighters to help.** Australia's police, military and navy are involved in rescue and evacuation efforts.'

S144. Ans.(d)

Sol. The correct answer is option d.
Deliberately - consciously and intentionally; on purpose.
Synonyms -intentionally, knowingly, purposefully, purposely, purposively, willfully.
Antonyms - inadvertently, unconsciously, unintentionally, unknowingly, unwittingly.

S145. Ans.(a)

Sol. The correct answer is option a.
Refer to 'Australia **has always experienced bushfires** – it has a "fire season". **But this year they are a lot worse than normal.** Fires are usually caused by lightning strikes or accidentally by a spark – but some fires are also started deliberately. **This year, a natural weather phenomenon known as the 'Indian Ocean Dipole' has meant a hot, dry spell across the country.'**

S146. Ans.(c)

Sol. The correct answer is option c.
Refer to Australia has always experienced bushfires – it has a "fire season". But this year they are a lot worse than normal. Fires are usually caused by lightning strikes or accidentally by a spark – but some fires are also started deliberately. **This year, a natural weather phenomenon known as the 'Indian Ocean Dipole' has meant a hot, dry spell across the country.'**

S147. Ans.(c)

Sol. The correct answer is option c.
Refer to 'More than 6.3 million hectares (63,000 sq km or 15.6 million acres) have been burned so far – one hectare is roughly the size of a sports field. To put that in perspective, **around 800,000 hectares were engulfed in a bush fire in 2018 in California.'**

S148. Ans.(c)

Sol. The correct answer is option c.
Refer to 'Each state runs its own emergency operation, but Prime Minister Scott Morrison has promised better funding for fire-fighting and payouts **But the national government has come under strong criticism from its opponents that it has not been doing enough against climate change.'**

S149. Ans.(a)

Sol. The correct answer is option a.
Refer to 'Scientists have long warned that this hotter..... **The spread can for instance be best contained by digging earth boundaries to stop the flames from spreading.'**

S150. Ans.(d)

Sol. The correct answer is option d.
Refer to 'Since September, at least 25 people have died and thousands have been made homeless.**But the biggest fires burn along stretches of the eastern and southern coast, where most of the population lives.'**

S151. Ans.(a)

Sol. The irony is that over-population causes complex problems such as poverty, under-nourishment etc. and the entire battle against poverty is thwarted by the rapid increase in the population.

S152. Ans.(b)

Sol. **Sombre** means having or conveying a feeling of deep seriousness and sadness. The author is seriously concerned about complex problems like over-population, poverty etc.

S153. Ans.(c)

Sol. Refer to "Indisputably, this country has been facing a population explosion of crisis dimensions. It has largely diluted the fruits of the remarkable economic progress that the nation has made during the last four decades or so."

S154. Ans.(d)

Sol. Refer to "The tragedy is that while over-population accentuates poverty, the country's stark poverty itself is in many areas a major cause of over-population."

S155. Ans.(d)

Sol. **Dilute** means to make (something) weaker in force, content, or value by modification or the addition of other elements.

Consolidate means to bring together (separate parts) into a single or unified whole; combine: to make solid or firm; solidify; strengthen.

S156. Ans.(a)

Sol. Refer to "The leaf roller reduces its risks of being picked off by predators by silking together a temporary shelter in which to feed and rest."

Also, "For its part, the aquatic larva, by its watery element, fashions a portable hideout from fragments of aquatic leaves."

S157. Ans.(b)

Sol. Refer to "the jelly slug extrudes a sticky translucent coating that may foul the mouth-parts of marauding ants."

S158. Ans.(b)

Sol. According to the passage, the leaf roller protects itself from predators and the jelly slug protects itself from marauding ants. Thus, 'predator and marauding' describe the enemies of the caterpillar. Hence option B is the correct answer.

S159. Ans.(b)

Sol. According to the passage, "... jelly slug extrudes a sticky translucent coating that may foul the mouth-parts of marauding ants." Unpalatable and the expression 'to foul the mouth part' means to make the taste bad. Thus, option B is the correct answer.

S160. Ans.(b)

Sol. The passage explains how different kinds of caterpillars protect themselves from predators while they keep on feeding. Thus, option B best catches the main idea of the passage.

S161. Ans.(a)

Sol. Vibrant means full of energy and life and drab means lacking brightness or interest, drearily dull.

S162. Ans.(b)

Sol. Deep-seated means strongly felt or believed and very difficult to change or get rid of and temporary means lasting for only a limited period of time, not permanent.

S163. Ans.(d)

Sol. Humdrum means lacking excitement or variety, boringly monotonous and fascinating means extremely interesting. Hence options (d) is the correct choice.

S164. Ans.(c)

Sol. Celibate means not having sexual activity, especially because you have made a religious promise not to and promiscuous means having a lot of different sexual partners or sexual relationships, or (of sexual habits) involving a lot of different partners.

S165. Ans.(c)

Sol. Ingestion means the process of taking food, drink, or another substance into the body by swallowing or absorbing it and excrete means (of a living organism or cell) separate and expel as waste (a substance, especially a product of metabolism).

S166. Ans.(d)

Sol. Horrify means fill with horror, shock greatly and soothe means reduce pain or discomfort in (a part of the body).

S167. Ans.(d)

Sol. Sacred means connected with God or a god or dedicated to a religious purpose and so deserving veneration and profane means not relating to that which is sacred or religious, secular.

S168. Ans.(c)

Sol. Outlandish means looking or sounding bizarre or unfamiliar and common means occurring, found, or done often, prevalent.

S169. Ans.(a)

Sol. Coalesce means come together to form one mass or whole. Hence separate is the correct choice.

S170. Ans.(b)

Sol. Loiter means stand or wait around without apparent purpose and hasten means be quick to do something.

S171. Ans.(d)

Sol. Ambushed: to make a surprise attack on someone.

S172. Ans.(c)

Sol. Grim means very serious or gloomy.

S173. Ans.(a)

Sol. Cosset: care for and protect in an overindulgent way.

S174. Ans.(d)

Sol. Hollow: having a hole or empty space inside.
Solid: firm and stable in shape; not liquid or fluid.

S175. Ans.(c)

Sol. "Behest" means an order or command.

S176. Ans.(a)

Sol. "Perplex" means confused.

S177. Ans.(c)

Sol. Sanguine means optimistic or positive, especially in an apparently bad or difficult situation.

S178. Ans.(b)

Sol. Mere is used to emphasize how small or insignificant someone or something is and immense means extremely large or great, especially in scale or degree.

S179. Ans.(b)

Sol. Uncanny means strange or mysterious, especially in an unsettling way.

S180. Ans.(a)

Sol. Revel means enjoy oneself in a lively and noisy way, especially with drinking and dancing and gloom means a state of depression or despondency.

S181. Ans.(c)

Sol. Bucolic: relating to the pleasant aspects of the country side and country life.

Rustic: relating to the country side: rural.

Hence Bucolic and Rustic are synonyms to each other.

S182. Ans.(c)

Sol. Ravine: a deep, narrow gorge with steep sides.

Abyss: a deep or seemingly bottomless chasm.

Hence the correct synonym is 'Abyss'.

S183. Ans.(a)

Sol. Knackered: extremely tired.

Fatigued: tired; wearied.

Hence the correct synonym is 'Fatigued'.

S184. Ans.(d)

Sol. Gorge: eat a large amount greedily; fill oneself with food.

Gobble: eat (something) hurriedly and noisily.

Hence the correct synonym is 'Gobble'.

S185. Ans.(d)

Sol. Splay: to spread wide apart.

Hence the correct synonym is 'Spread'.

S186. Ans.(b)

Sol. Pre-empt: take action in order to prevent (an anticipated event) happening.

Forestall: prevent or obstruct (an anticipated event or action) by taking advance action.

Hence the correct synonym is 'Forestall'.

S187. Ans.(c)

Sol. Tarry: to delay or be tardy in acting or doing.

Trail: walk or move slowly or wearily.

Hence the correct synonym is "Trail".

S188. Ans.(d)

Sol. Zap: destroy or obliterate.

Hence the correct synonym is 'Destroy'.

S189. Ans.(c)

Sol. Smug: having or showing an excessive pride in oneself or one's achievements.

Overweening: too confident or proud.

Hence the correct synonym is 'Overweening'.

S190. Ans.(c)

Sol. Dole: benefit paid by the state to the unemployed.

Allowance: the amount of something that is permitted, especially within a set of regulations or for a specified purpose.

Hence the correct synonym is 'Allowance'.

S181. Ans.(c)

Sol. Radiance: light or heat as emitted or reflected by something.

Sparkle: shine brightly with flashes of light.

S182. Ans.(a)

Sol. Recapitulation: an act or instance of summarizing and restating the main points of something.

S183. Ans.(d)

Sol. Wary: feeling or showing caution about possible dangers or problems.

Lax: not sufficiently strict, severe, or careful.

S184. Ans.(d)

Sol. Recede: go or move back or further away from a previous position.

Waver: move in a quivering way; flicker.

Wane: (of a state or feeling) decrease in vigour or extent; become weaker.

S185. Ans.(c)

Sol. Accurate: (especially of information, measurements, or predictions) correct in all details; exact.

Precise: marked by exactness and accuracy of expression or detail.

S186. Ans.(d)

Sol. Dedication: the quality of being dedicated or committed to a task or purpose.

Trepidation: a feeling of fear or anxiety about something that may happen.

S187. Ans.(d)

Sol. DISCERN: distinguish (someone or something) with difficulty by sight or with the other senses; discriminate.

S188. Ans.(b)

Sol. Contaminating means making (something) impure by exposure to or addition of a poisonous or polluting substance.

S189. Ans.(d)

Sol. Replaced: take the place of; substituted

S190. Ans.(c)

Sol. Stimulation: encouragement of something to make it develop or become more active.

Provocation: action or speech that makes someone angry, especially deliberately.

S201. Ans.(b)

S202. Ans.(a)

S203. Ans.(b)

S204. Ans.(a)

S205. Ans.(b)

S206. Ans.(b)

S207. Ans.(a)

S208. Ans.(b)

S209. Ans.(c)

S210. Ans.(a)

S211. Ans.(a)

S212. Ans.(b)

S213. Ans.(c)

S214. Ans.(a)

S215. Ans.(b)

S216. Ans.(c)

S217. Ans.(b)

S218. Ans.(a)

S219. Ans.(c)

S210. Ans.(a)

S221. Ans.(c)

Sol. Radical is a person who advocates thorough or complete political or social change, or a member of a political party or section of a party pursuing such aims.

S222. Ans.(b)

Sol. Hypochondria is a state in which a person continuously worries about his health without having any reason to do so.

Nymphomaniac means denoting or characteristic of a woman with uncontrollable or excessive sexual desire.

Neurotic means having, caused by, or relating to neurosis.

Psychotic means relating to, denoting, or suffering from a psychosis.

S223. Ans.(c)

Sol. Cacophony is an unpleasant mixture of loud sounds.

Consonance means a combination of notes which are in harmony with each other due to the relationship between their frequencies.

Dissonance means lack of harmony among musical notes.

Euphony means the quality of being pleasing to the ear.

S224. Ans.(a)

Sol. Fossil is the shape of a bone, a shell, or a plant or animal that has been preserved in rock for a very long period.

Ruin means the physical destruction or disintegration of something or the state of disintegrating or being destroyed.

Relic means a part of a deceased holy person's body or belongings kept as an object of reverence.

Vestige is a part or organ of an organism which has become reduced or functionless in the course of evolution.

S225. Ans.(d)

Sol. Vindicate means to prove that what someone said or did was right or true, after other people thought it was wrong.

S226. Ans.(b)

Sol. Horticulture means the art or practice of garden cultivation and management.

Viniculture: the cultivation of grapevines for winemaking.

Sericulture: the production of silk and the rearing of silkworms for this purpose.

S227. Ans.(a)

Sol. A confectioner is a person whose job is making or selling sweets and chocolates.

S228. Ans.(c)

Sol. Indoctrinate: teach (a person or group) to accept a set of beliefs uncritically.

S229. Ans.(a)

Sol. Knot: A knot is a method of fastening or securing linear material such as rope by tying or interweaving.

S230. Ans.(d)

Sol. Infernal: relating to or characteristic of hell or the underworld.

S231. Ans.(a)

Sol. Disintegrate: break up into small parts as the result of impact or decay.

S232. Ans.(b)

Sol. Dither: to be indecisive.

S233. Ans.(a)

Sol. Adipose: (especially of body tissue) used for the storage of fat.

Porcine: of, affecting, or resembling a pig or pigs.

Corpulent: (of a person) fat.

S234. Ans.(b)

Sol. Endure: suffer (something painful or difficult) patiently.

Persevere: continue in a course of action even in the face of difficulty or with little or no indication of success.

Dismay: concern and distress caused by something unexpected.

S235. Ans.(d)

Sol. Igneous: relating to or involving volcanic or plutonic processes.

Scalding: very hot; burning.

S236. Ans.(c)

Sol. Conglomerate: a thing consisting of a number of different and distinct parts or items that are grouped together.

Donation: the action of donating something.

Dole: benefit paid by the state to the unemployed.

S237. Ans.(a)

Sol. Shrimp: a small, physically weak person.

Wimp: a weak and cowardly or unadventurous person.

Runt: a small pig or other animal, especially the smallest in a litter.

S238. Ans.(b)

Sol. Definitive: (of a conclusion or agreement) done or reached decisively and with authority.

S239. Ans.(c)

Sol. Demagogue: rhetorically exploit (an issue) for political purposes in a way calculated to appeal to the desires and prejudices of ordinary people.

S240. Ans.(d)

Sol. Recitation: the action of repeating something aloud from memory.

Erudition: the quality of having or showing great knowledge or learning; scholarship.

Rendition: a performance or interpretation, especially of a dramatic role or piece of music.

S241. Ans.(c)

Sol. Entirety: the whole of something.

Gratuitous: done without good reason; uncalled for.

Discern: recognize or find out.

Contestant: a person who takes part in a contest or competition.

S242. Ans.(c)

Sol. Scenery - the natural features of a landscape considered in terms of their appearance, especially when picturesque.

Granary - a storehouse for threshed grain.

Visionary - thinking about or planning the future with imagination or wisdom.

Luminary - a person who inspires or influences others, especially one prominent in a particular sphere.

S243. Ans.(b)

Sol. Installation - the action of installing someone or something, or the state of being installed.

S244. Ans.(d)

Sol. Mercurial - subject to sudden or unpredictable changes of mood or mind.

S245. Ans.(d)

Sol. Culmination - the highest or climactic point of something, especially as attained after a long time.

S246. Ans.(a)

Sol. Somniloquism - one who talks in his sleep.

S247. Ans.(b)

Sol. Resistance - the refusal to accept or comply with something.

S248. Ans.(d)

Sol. Quotidian - of or occurring every day; daily.

S249. Ans.(a)

Sol. Interrogative - having the force of a question.

S250. Ans.(a)

Sol. Mediterranean- of or characteristic of the Mediterranean Sea, the countries bordering it, or their inhabitants.

S251. Ans.(a)

Sol. The correct answer is option a.

The correct spelling is 'Immersed'.

Remaining words are spelt correctly.

S252. Ans.(d)

Sol. The correct answer is option d.

The correct spelling is 'Rejuvenation'.

Remaining words are spelt correctly.

S253. Ans.(b)

Sol. The correct answer is option b.

The correct spelling is 'Inevitable'.

Remaining words are spelt correctly.

S254. Ans.(a)

Sol. The correct answer is option a.

The correct spelling is 'Abysmal'.

Remaining words are spelt correctly.

S255. Ans.(c)

Sol. The correct answer is option c.
The correct spelling is 'Redundant'.
Remaining words are spelt correctly.

S256. Ans.(c)

Sol. The correct answer is option c.
The correct spelling is 'Proliferation'.
Remaining words are spelt correctly.

S257. Ans.(d)

Sol. The correct answer is option d.
The correct spelling is 'Surveillance'.
Remaining words are spelt correctly.

S258. Ans.(b)

Sol. The correct answer is option b.
The correct spelling is 'Perpetrators'.
Remaining words are spelt correctly.

S259. Ans.(c)

Sol. The correct answer is option c.
The correct spelling is 'Unprecedented'.
Remaining words are spelt correctly.

S260. Ans.(a)

Sol. The correct answer is option a.
The correct spelling is 'Amendment'.
Remaining words are spelt correctly.



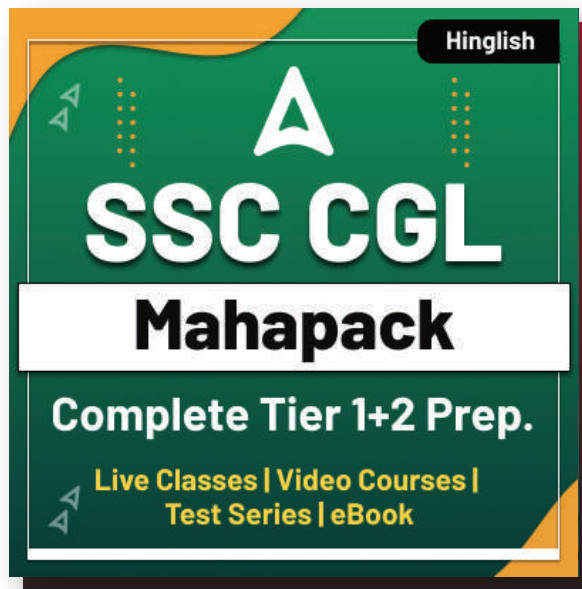
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Reasoning Ability

Q1. Choose the set of numbers that is similar to the following set.

- (8, 28, 6)
- (a) (12, 48, 14)
- (b) (17, 70, 13)
- (c) (5, 26, 9)
- (d) (3, 20, 7)

Q2. Select the set in which the numbers are related in the same way as are the numbers of the following set.

- (8, 15, 9)
- (a) (5, 17, 11)
- (b) (4, 16, 12)
- (c) (7, 13, 14)
- (d) (9, 12, 15)

Q3. Select the set in which the numbers are related in the same way as are the numbers of the following set.

- (3, 16, 5)
- (a) (9, 35, 11)
- (b) (7, 32, 9)
- (c) (11, 45, 14)
- (d) (5, 26, 9)

Q4. Select the set in which the numbers are related in the same way as are the numbers of the following set.

- (11, 16, 20)
- (a) (9, 14, 19)
- (b) (15, 20, 24)
- (c) (17, 23, 26)
- (d) (21, 26, 32)

Q5. Select the set in which the numbers are related in the same way as are the numbers of the following set.

- (17, 12, 7)
- (a) (42, 34, 27)
- (b) (23, 32, 39)
- (c) (15, 19, 23)
- (d) (39, 28, 19)

Q6. Select the set in which the numbers are related in the same way as are the numbers of the following set.

- (5, 24, 7)
- (a) (8, 80, 12)
- (b) (10, 71, 13)
- (c) (9, 63, 14)
- (d) (6, 75, 11)

Q7. Select the letter-cluster that is related to the third letter-cluster in the same way that the second letter-cluster is related to the first letter-cluster.

AFKP : BGLQ :: GLQV : ?

- (a) HMRW
- (b) HNRW
- (c) HKRW
- (d) HMPW

Q8. 'Heart' is related to 'Circulation' in the same way as 'Kidney' is related to '_____'.
(a) Reproduction
(b) Respiration
(c) Energy Production
(d) Excretion

Q9. Select the option that is related to the third number in the same way as the second number is related to the first number.

- 19 : 400 :: 24 : _____
- (a) 652
 - (b) 566
 - (c) 676
 - (d) 625

Q10. Select the word-pair in which the two words are related in the same way as the two words in the following word-pair.

- School : Student :: _____ : _____
- (a) Hospital : Patient
 - (b) Hotel : Chef
 - (c) Court : Judge
 - (d) College : Teacher

Q11. In a code language, SEDATIVE is coded as ATDESEVI. How would PERSONAL be coded in that language?

- (a) OSREPLAN
- (b) SOPERLAN
- (c) SOREPLAN
- (d) SOERPANL

Q12. 'Room' is coded as 'Ceiling' in a certain language. In that language 'Mouth' will be coded as:

- (a) Throat
- (b) Lip
- (c) Palate
- (d) Teeth

Q13. In a code language if VERY is written as UDQX, then in the same language how will you write the word URGENT?

- (a) TMSQFD
- (b) MSQTFD
- (c) QFDTMS
- (d) TQFDMS

Q14. In a code language, STROKE is written as FLPSUT. How would BRIGHT be written in the same code language?

- (a) UIHJSC
- (b) CSJHIU
- (c) SGFHQA
- (d) UJHHCS

Q15. If SMOKE is coded as 81643 and PRANK is coded as 72954, how would you code ROSE?

- (a) 2682
- (b) 3276
- (c) 9238
- (d) 2683

Q16. If CLEAN is coded as 1415123 and BLOW is coded as 2315122, then how will JOKE be coded as ?

- (a) 4111612
- (b) 5121611
- (c) 5111510
- (d) 1011155

Q17. In a code language, REGULAR is written as GERTRAL. How will BROTHER be written as in that language?

- (a) ORBSREH
- (b) ROBSERH
- (c) ORBUREH
- (d) ORBEHTS

Q18. If the word ANGEL is coded as BOHFM, then what will be the third alphabet in the code for the word SAVAGE?

- (a) B
- (b) U
- (c) W
- (d) X

Q19. If HEAD is coded as 37 and BANK is coded as 57, then how will KITE be coded as?

- (a) 87
- (b) 91
- (c) 69
- (d) 76

Q20. In a code language, PASTEUR is coded as TPRUASE. How would SEVENTY be coded in that language?

- (a) ENVETYS
- (b) NSYTEVN
- (c) ESYETNV
- (d) ESYTEVN

Q21. P is brother of A and B. S is A's Mother. T is P's father. Which of the following statement can 'not be definitely true'?

- (a) T is A's father.
- (b) S is P's mother.
- (c) P is S's son.
- (d) A is T's son.

Q22. A introduces B saying, "He is the husband of the granddaughter of the father of my father." How B is related to A?

- (a) Brother
- (b) Brother-in-law
- (c) Son
- (d) Son-in-law

Q23. A is father of C and D is son of B. E is brother of A. If C is sister of D how is B related to E ?

- (a) Sister - in - law
- (b) Sister
- (c) Brother
- (d) Brother - in - law

Q24. Daya has a brother Anil. Daya is the son of Chandra. Bimal is Chandra's father. In terms of relationship, what is Anil of Bimal?

- (a) Son
- (b) Grandson
- (c) Brother
- (d) Grandfather

Q25. 'P+Q', means 'P is the sister of Q'

'P-Q', means 'P is the daughter of Q'

'P×Q', means 'P is the brother of Q'

'P÷Q', means 'P is the husband of Q'

If $A+B \times C - D \div E + F \times G$, then how is F related to A?

- (a) Maternal Uncle
- (b) Maternal Aunt
- (c) Paternal Uncle
- (d) Paternal Aunt

Q26. 'M+N' means 'M is the daughter of N'

'M-N' means 'M is the brother of N'

'M×N' means 'M is the mother of N'

'M÷N' means 'M is the son of N'

If $Q - R \div P + S \times T$, then how is Q related to S?

- (a) Maternal Grandfather
- (b) Grandson
- (c) Grand daughter
- (d) Paternal Grandfather

Q27. Dev introduced a boy as the son of the only daughter of the father of his maternal uncle. The boy is Dev's _____

- (a) Brother
- (b) Son
- (c) Uncle
- (d) Son-in-law

Q28. Priyank is Akshay's brother, Sonia is Saksham's Sister, Akshay is Sonia's son. How is Priyank related to Sonia?

- (a) Nephew
- (b) Father
- (c) Son
- (d) Brother

Q29. Pointing to a lady in the photograph Amit said, "She is the mother of the only grandson of my mother". How is the lady related to Amit?

- (a) Mother
- (b) Daughter
- (c) Niece
- (d) Wife

Q30. A + B means 'A is the mother of B'

A - B means 'A is the father of B'

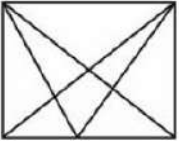
A × B means 'A is the sister of B'

A ÷ B means 'A is the daughter of B'

If $P + R \times T - Q \div S + U$, then how is S related to T?

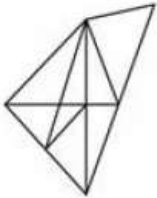
- (a) Daughter
- (b) Mother
- (c) Sister
- (d) Wife

Q31. How many triangles are there in the given figure?



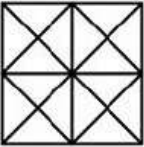
- (a) 21
- (b) 23
- (c) 20
- (d) 22

Q32. How many triangles are there in the given figure?



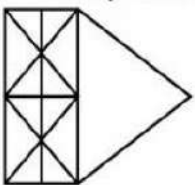
- (a) 22
- (b) 21
- (c) 20
- (d) 19

Q33. Find the total number of square in the figure.



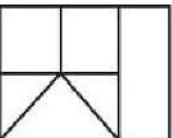
- (a) 6
- (b) 12
- (c) 8
- (d) 10

Q34. How many maximum triangles are there in the given figure?



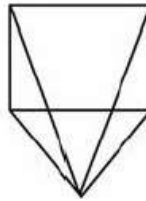
- (a) 30
- (b) 31
- (c) 29
- (d) 27

Q35. How many quadrilaterals are there in the given figure?



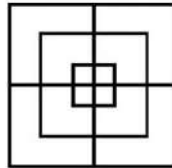
- (a) 12
- (b) 11
- (c) 10
- (d) 9

Q36. How many triangles are there in the given figure?



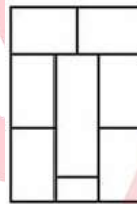
- (a) 8
- (b) 9
- (c) 10
- (d) 11

Q37. How many maximum square are there in the given figure?



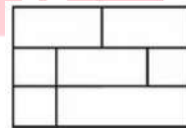
- (a) 12
- (b) 15
- (c) 18
- (d) 8

Q38. How many quadrilaterals are there in the given figure?



- (a) 15
- (b) 16
- (c) 14
- (d) 17

Q39. How many quadrilaterals are there in the given figure?



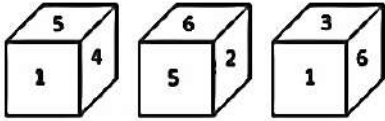
- (a) 18
- (b) 17
- (c) 16
- (d) 15

Q40. How many quadrilaterals are there in the given figure?



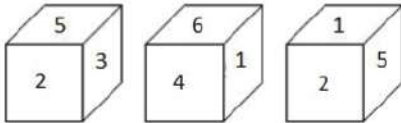
- (a) 15
- (b) 14
- (c) 16
- (d) 13

Q41. Three different positions of a dice are shown below. Which number appears on the face opposite number 3?



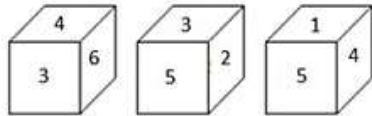
- (a) 5
- (b) 6
- (c) 2
- (d) 4

Q42. Three different positions of a dice are shown below. Which number appears on the face opposite the number 4?



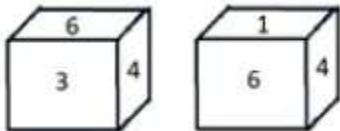
- (a) 3
- (b) 2
- (c) 6
- (d) 5

Q43. Three different positions of a dice are shown below. Which number appears on the face opposite the number 6?



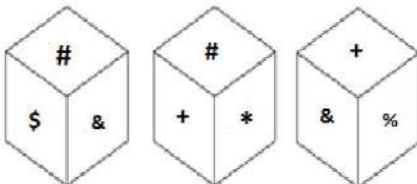
- (a) 1
- (b) 2
- (c) 4
- (d) 5

Q44. Two different positions of a dice are shown below. Which number appears on the face opposite the number '1'?



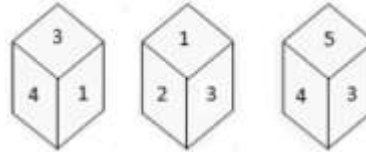
- (a) 2
- (b) 4
- (c) 3
- (d) 5

Q45. Three different positions of the same dice are shown below. Which symbol is on the face opposite the face showing '*'?



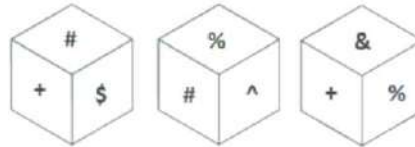
- (a) &
- (b) +
- (c) %
- (d) #

Q46. The different positions of the same dice are shown. Which number will be on the face opposite to the one having 2?



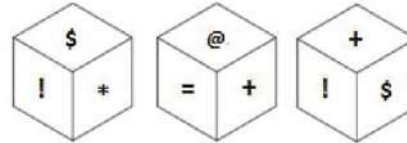
- (a) 4
- (b) 5
- (c) 3
- (d) 6

Q47. Three different positions of the same dice are shown. Which symbol will be on the face opposite to the one having '&'?



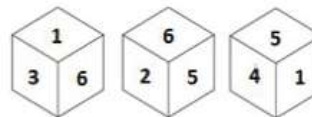
- (a) #
- (b) +
- (c) \$
- (d) ^

Q48. Three different positions of the same dice are shown. Which symbol will be on the face opposite to the one having '*'?



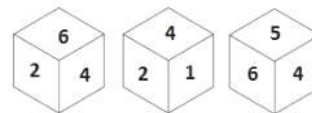
- (a) \$
- (b) !
- (c) +
- (d) @

Q49. The different positions of the same dice are shown. Which number will be on the face opposite to the one having 4?



- (a) 1
- (b) 3
- (c) 6
- (d) 2

Q50. Three different positions of the same dice are shown. Which number is on the face opposite the face showing '5'?



- (a) 1
- (b) 3
- (c) 2
- (d) 6

Q51. Arrange the following words in the order as they would appear in English dictionary.

1. Denote
 2. Destiny
 3. Diagonal
 4. Demand
 5. Density
- (a) 1, 4, 1, 2, 5, 3
(b) 4, 1, 5, 2, 3
(c) 3, 4, 3, 2, 1, 5
(d) 4, 3, 5, 1, 4, 2

Q52. Arrange the given words in the sequence in which they occur in the dictionary.

1. Guard
 2. Grottesque
 3. Guarantee
 4. Gladiator
 5. Glamorous
- (a) 45231
(b) 45312
(c) 45321
(d) 54231

Q53. Arrange the following words as per the dictionary.

1. Metrology
 2. Membership
 3. Mentorship
 4. Mention
 5. Movement
- (a) 2, 4, 3, 1, 5
(b) 5, 2, 1, 3, 4
(c) 4, 3, 5, 1, 2
(d) 5, 1, 2, 3, 4

Q54. Select the correct option that indicates the arrangement of the given words in the order in which they appear in an English dictionary.

1. Majestic
 2. Magistrate
 3. Mingle
 4. Marinization
 5. Masculism
- (a) 2, 5, 1, 2, 3
(b) 5, 3, 2, 1, 4
(c) 1, 2, 3, 5, 4
(d) 2, 1, 4, 5, 3

Q55. Arrange the given words in the sequence in which they occur in the dictionary.

1. Pragmatic
 2. Protect
 3. Pastel
 4. Postal
 5. Pebble
- (a) 43521
(b) 35412
(c) 34512
(d) 43512

Q56. Select the correct option that indicates the arrangement of the given words in the order in which they appear in an English dictionary.

1. Cluster
 2. Class
 3. Classmate
 4. Cleaning
 5. Click
- (a) 2,3,4,5,1
(b) 3,2,4,1,5
(c) 2,3,5,1,4
(d) 3,2,5,1,4

Q57. Select the correct option that indicates that arrangement of the given words in the order in which they appear in an English dictionary.

1. Combiner
 2. Combination
 3. Cruciate
 4. Crude
 5. Curlew
- (a) 5, 2, 4, 3, 1
(b) 1, 5, 4, 3, 2
(c) 2, 1, 5, 3, 4
(d) 2, 1, 3, 4, 5

Q58. Select the correct option that indicates the arrangement of the given words in the order in which they appear in an English dictionary.

1. Mass
 2. Master
 3. Market
 4. Mistake
 5. Month
 6. Margin
- (a) 6, 5, 4, 2, 1, 3
(b) 6, 3, 1, 2, 4, 5
(c) 5, 6, 4, 3, 1, 2
(d) 6, 4, 5, 3, 2, 1

Q59. Arrange the following words as per order in the dictionary.

1. Pick
 2. Pith
 3. Pile
 4. Perk
 5. pour
- (a) 4,1,2,3,5
(b) 4,1,3,2,5
(c) 4,3,2,1,5
(d) 5,4,3,2,1

Q60. Select the correct option that indicates the arrangement of the given words in the order in which they appear in an English dictionary.

1. Appeal
 2. Appearance
 3. Apprehend
 4. Appellant
 5. Apprentice
- (a) 5, 4, 3, 2, 1
(b) 4, 5, 2, 3, 1
(c) 2, 4, 5, 1, 3
(d) 1, 2, 4, 3, 5

Q61. Select the correct alternative to indicate the arrangement of the following words in a logical and meaningful order.

1. Diagnosis
 2. Recovery
 3. Pain
 4. Treatment
 5. Hospital
- (a) 3, 5, 4, 1, 2
(b) 5, 3, 1, 4, 2
(c) 3, 5, 1, 4, 2
(d) 5, 1, 4, 1, 2

Q62. Select the correct alternative to indicate the arrangement of the following words in a logical and meaningful order

1. Injury
 2. Recovery
 3. Accident
 4. Showroom
 5. Drive
 6. Car
- (a) 4, 6, 5, 3, 1, 2
(b) 6, 4, 3, 5, 1, 2
(c) 4, 6, 5, 3, 2, 1
(d) 5, 6, 3, 2, 1, 4

Q63. Select the correct alternative to indicate the arrangement of the following words in a logical and meaningful order.

1. Treatment
 2. Diagnosis
 3. Doctor
 4. Discharge
 5. Bill
- (a) 3, 2, 1, 5, 4
(b) 4, 5, 3, 2, 1
(c) 3, 2, 5, 1, 4
(d) 2, 3, 1, 4, 5

Q64. Select the correct alternative to indicate the arrangement of the following words in a logical and meaningful order.

1. Cloud
 2. Shelter
 3. Monsoon
 4. Rain
 5. Flood
 6. Relief
- (a) 4, 1, 2, 5, 2, 6
(b) 3, 1, 4, 5, 2, 6
(c) 1, 3, 4, 5, 6, 2
(d) 3, 1, 4, 2, 5, 6

Q65. Select the correct alternative to indicate the arrangement of the following words in a logical and meaningful order.

1. Tree
 2. Seed
 3. Flower
 4. Fruit
 5. Plant
- (a) 2, 5, 1, 3, 4
(b) 1, 3, 5, 2, 4
(c) 4, 2, 1, 3, 5
(d) 3, 1, 5, 2, 4

Q66. Select the correct alternative to indicate the arrangement of the following words in a logical and meaningful order.

- (1) Judgment
 - (2) Arrest
 - (3) Prison
 - (4) Court
 - (5) Crime
 - (6) Punishment
- (a) 5, 2, 4, 1, 6, 3
(b) 5, 2, 3, 4, 1, 6
(c) 5, 4, 2, 1, 6, 3
(d) 3, 6, 4, 1, 2, 5

Q67. Select the correct alternative to indicate the arrangement of the following words in a logical and meaningful order.

1. Ornaments
 2. Gold
 3. Goldsmith
 4. Jewelry shop
 5. Bride
- (a) 4, 2, 5, 3, 1
(b) 2, 5, 4, 3, 1
(c) 2, 4, 5, 1, 3
(d) 2, 3, 1, 4, 5

Q68. Select the correct alternative to indicate the arrangement of the following words in a logical and meaningful order.

1. Chapter
2. Word
3. Letter
4. Phrase
5. Paragraph
6. Sentence

- (a) 3, 2, 4, 6, 5, 1
(b) 2, 3, 4, 1, 6, 5
(c) 3, 2, 6, 4, 5, 1
(d) 3, 2, 4, 6, 1, 5

Q69. Select the correct alternative to indicate the arrangement of the following words in a logical and meaningful order.

1. Karnataka
2. Bengaluru
3. Asia
4. India
5. World

- (a) 1,5,4,3,2
(b) 2,3,4,1,5
(c) 3,4,2,1,5
(d) 2,1,4,3,5

Q70. Select the correct alternative to indicate the arrangement of the following words in a logical and meaningful order.

1. State
2. Street
3. House number
4. City
5. Country

- (a) 3, 2, 4, 1, 5
(b) 3, 4, 2, 1, 5
(c) 2, 3, 4, 5, 1
(d) 1, 5, 4, 3, 2

Q71. In the following question, from the given alternative words, select the word which cannot be formed using the letters of the given word.

INDEPENDENCE

- (a) PEND
(b) DEN
(c) PEN
(d) INR

Q72. In the following question, from the given alternative words, select the word which cannot be formed using the letters of the given word.

TRANSPORTATION

- (a) PART
(b) STOP
(c) SPOONS
(d) TRAIN

Q73. In the following question, from the given alternative words, select the word which cannot be formed using the letters of the given word.

REVOLUTIONARY

- (a) LOVE
(b) RAIL
(c) TOYS
(d) REVOLT

Q74. In the following question, from the given alternative words, select the word which cannot be formed using the letters of the given word.

TECHNOLOGY

- (a) ELMO
(b) TEN
(c) HOT
(d) TECH

Q75. In the following question, from the given alternative words, select the word which cannot be formed using the letters of the given word.

ENVIRONMENTAL

- (a) VENT
(b) MINT
(c) VIBLET
(d) INNER

Q76. In the following question, from the given alternative words, select the word which cannot be formed using the letters of the given word.

ELECTROMAGNETIC

- (a) ELECTRIC
(b) MAGNET
(c) MAGNETIC
(d) TELEDROM

Q77. In the following question, from the given alternative words, select the word which cannot be formed using the letters of the given word.

DEMONSTRATION

- (a) MONSTER
(b) STONES
(c) NATION
(d) MODERN

Q78. In the following question, from the given alternative words, select the word which cannot be formed using the letters of the given word.

HYPOTHESIS

- (a) SHRIMP
(b) STOP
(c) HOPE
(d) THESIS

Q79. In the following question, from the given alternative words, select the word which cannot be formed using the letters of the given word.

COMPREHENSIVE

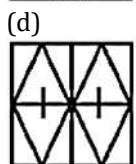
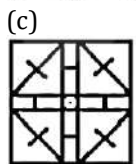
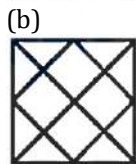
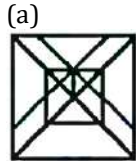
- (a) REIN
- (b) PROMISE
- (c) SPERM
- (d) EMPEROR

Q80. In the following question, from the given alternative words, select the word which cannot be formed using the letters of the given word.

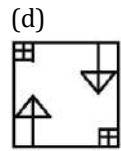
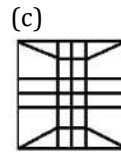
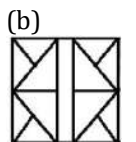
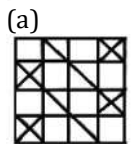
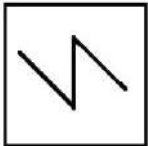
DISCIPLINARY

- (a) CLIP
- (b) DISC
- (c) PLAN
- (d) DEITY

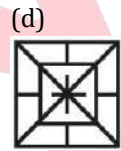
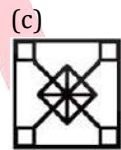
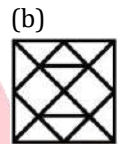
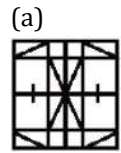
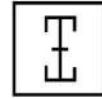
Q81. Select the figure in which the given figure is embedded.



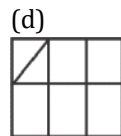
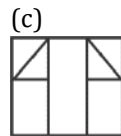
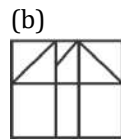
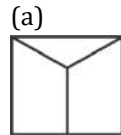
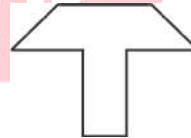
Q82. Select the figure in which in given figure is embedded.



Q83. Select the figure in which the given figure is embedded.



Q84. Select the option in which the given figure is embedded (rotation is NOT allowed).



Q89. Select the figure in which the given figure is embedded.
(Rotation is not allowed).



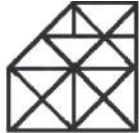
(a)



(b)



(c)



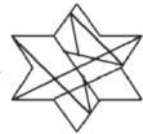
(d)



Q90. Select the figure in which the given figure is embedded.
(Rotation is not allowed)



(a)



(b)



(c)



(d)



Q91. Which two signs should be interchanged in the following equation to make it correct?

$$24 - 12 \div 4 + 8 \times 2 = 11$$

- (a) + and \times
- (b) - and \div
- (c) + and -
- (d) + and \div

Q92. Which two signs should be interchanged in the following equation to make it correct?

$$8 \times 2 + 5 - 16 \div 4 = 14$$

- (a) \times and -
- (b) \times and +
- (c) \div and \times
- (d) \div and +

Q93. Which two signs should be interchanged to make the given equation correct?

$$16 + 3 - 5 \times 2 \div 4 = 9$$

- (a) \div and +
- (b) \times and -
- (c) \div and \times
- (d) \times and +

Q94. If

+ denotes -

- denotes *

* denotes /

/ denotes +

Then what will be the value of

$$25 - 2/10 * 5 + 2 = ?$$

- (a) 10
- (b) 26
- (c) 58
- (d) 50

Q95. Which two signs should be interchanged in the following equation to make it correct?

$$24 \div 8 - 5 \times 5 + 3 = 13$$

- (a) \times and -
- (b) \times and +
- (c) \div and \times
- (d) \div and +

Q96. Which two signs should be interchanged to make the given equation correct?

$$12 \times 8 \div 36 + 3 - 6 = 102$$

- (a) \times and +
- (b) + and -
- (c) \div and \times
- (d) \div and +

Q97. Which two signs should be interchanged to make the given equation correct?

$$27 \div 3 - 18 + 3 \times 2 = 18$$

- (a) + and \div
- (b) + and -
- (c) \times and +
- (d) \div and \times

Q98. Which two signs should be interchanged to make the following equation correct?

$$4 \times 5 - 24 \div 12 + 8 = 14$$

- (a) + and \div
- (b) \div and \times
- (c) + and -
- (d) \times and +

Q99. Which two signs should be interchanged to make the following equation correct?

$$24 \div 12 - 6 \times 6 + 2 = 18$$

- (a) + and \div
- (b) \div and \times
- (c) + and -
- (d) \times and +

Q100. Which two signs should be interchanged to make the following equation correct?

$$18 + 24 - 6 \times 6 \div 3 = 39$$

- (a) \div and +
- (b) + and -
- (c) \div and -
- (d) \times and +

Q101. Select the letter cluster that will come next in the following series.

DOP, FPN, HQL, JRJ, ?

- (a) LSH
- (b) LSI
- (c) KSH
- (d) KTI

Q102. Which numbers will replace the question mark (?) in the following series.

15, 43, 83, 137, 207, ?

- (a) 297
- (b) 295
- (c) 292
- (d) 294

Q103. Which number will replace the question mark (?) in the following series?

7, 11, ?, 31, 47

- (a) 29
- (b) 55
- (c) 5
- (d) 19

Q104. Select the term that will come next in the following series.

FBA, IGE, LLI, OQM, ?

- (a) RVQ
- (b) QVQ
- (c) RVP
- (d) RUP

Q105. Select the number that will come next in the following series.

2, 6, 14, 30, 62, ?

- (a) 122
- (b) 98
- (c) 134
- (d) 126

Q106. Which number will replace the question mark (?) in the following series?

4, 16, 36, 64, 100, 144, 196, ?

- (a) 256
- (b) 284
- (c) 225
- (d) 246

Q107. Select the letter cluster that will come next in the following series.

LVD, OTF, RRH, ?, XNL

- (a) UQI
- (b) TPJ
- (c) TQJ
- (d) UPJ

Q108. Which number will replace the question mark (?) in the following series?

16, 18, 21, 26, 33, ?

- (a) 46
- (b) 44
- (c) 45
- (d) 43

Q109. Which number will replace the question mark (?) in the following series?

20, 10, 10, 15, 30, ?

- (a) 45
- (b) 90
- (c) 60
- (d) 75

Q110. Which number will replace the question mark (?) in the following series ?

3, 7, 16, 35, ?, 153

- (a) 84
- (b) 74
- (c) 78
- (d) 63

Q111. Three of the following four letter-clusters are alike in a certain way and one is different. Pick the odd one out.

- (a) DGMJ
- (b) PSZV
- (c) SVBY
- (d) KNTQ

Q112. Three of the following four words are alike in a certain way and one is different. Pick the odd one out.

- (a) Shirt
- (b) Sandals
- (c) Slippers
- (d) Shoes

Q113. Three of the following four numbers are alike in a certain way and one is different. Pick the number that is different from the rest.

- (a) 99
- (b) 97
- (c) 89
- (d) 83

Q114. Three of the following four words are alike in a certain way and one is different. Pick the odd one out.

- (a) Nib
- (b) Pitch
- (c) Rink
- (d) Arena

Q115. Three of the following four letter-clusters are alike in a certain way and one is different.

Pick the odd one out.

- (a) OQTX
- (b) EGJN
- (c) IKNQ
- (d) ACFJ

Q116. Three of the following four numbers are alike in a certain way and one is different. Pick the number that is different from the rest.

- (a) 313
- (b) 323
- (c) 353
- (d) 373

Q117. Three of the following four words are alike in a certain way and one is different. Pick the odd word out.

- (a) Political Science
- (b) Biology
- (c) History
- (d) Sociology

Q118. Three of the following four letter-clusters are alike in a certain way and one is different.

Pick the odd one out.

- (a) XBFJ
- (b) HLPT
- (c) DHLP
- (d) CGKQ

Q119. Three of the following four numbers are alike in a certain way and one is different. Pick the number that is different from the rest.

- (a) 65
- (b) 170
- (c) 195
- (d) 50

Q120. Three of the following four words are alike in a certain way and one is different. Pick the odd word out.

- (a) Photocopier
- (b) Microwave
- (c) Scanner
- (d) Printer

Q121. There are five students (P, Q, R, S and T) in a class having different weights. More than two student's weight is less than S. P is heavier than at least two students. P is not heaviest among all. Only one student is between Q and P. Q is not weakest or heaviest among all. If R's weight is smallest, then find how many students are heavier than T?

- (a) One
- (b) Two
- (c) Three
- (d) Four

Q122. There are seven students (O, M, N, F, D, V and E) score different marks in an examination. Only four students marks between O and M. M is not scoring lowest marks. Two students are scoring between M and D. Only V scores more than M. At least two students are scoring between E and V. N's marks is more than only O. How many students scores between D and V?

- (a) One
- (b) Two
- (c) Three
- (d) Four

Q123. There are five students in a class. Each one obtains different marks in an exam. R obtain less mark than only two students. S obtains more marks than U but less than that of V. If U did not obtain minimum marks, then find how many students obtain more than Z?

- (a) One
- (b) Two
- (c) Three
- (d) Four

Q124. There are five persons (P, Q, R, S and T) in a room having different height. T is shorter than only Q. S is taller than only one person. T is taller than P and R. Who is shortest among all?

- (a) P
- (b) R
- (c) S
- (d) Either P or R

Q125. Among five children (U, V, W, X and Y), each of them has different number of books. X has more books than only three children. U has more than W and less than Y. V does not have the maximum number of books. Y does not have fewer books than X. V has more books than U. How many persons have less books than U?

- (a) One
- (b) Two
- (c) Three
- (d) Four

Q126. In a group of five people (A, B, C, S and T) arranged according to their heights in increasing order. Only two people are between A and B. B's height is more than T. The height of S is more than C and less than A. How many students are between B and S?

- (a) One
- (b) Two
- (c) Three
- (d) Four

Q127. In a row of girls, Kritika is sixth from the right end and Somya is eleventh from the left end. If they interchange their positions, Kritika becomes ninth from the right end. How many girls are there in the row?

- (a) 18
- (b) 19
- (c) 17
- (d) 15

Q128. Shanu ranks eighth from the top and fifty-two second position from the bottom in a class. How many students are there in the class?

- (a) 52
- (b) 54
- (c) 57
- (d) 59

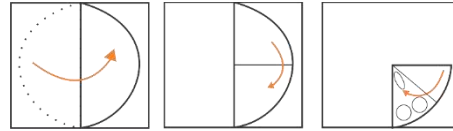
Q129. Some boys are sitting in a row. Q is sitting fifteenth from the left end and R is nineteenth from the right end. If there are five boys between R and Q, then how many boys are there in the row?

- (a) 35
- (b) 37
- (c) 39
- (d) 32

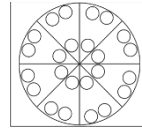
Q130. There are 47 people in a row. Shruti is 25th from the right end and Srishti is 31th from the left end. Find the total number of people sitting between shruti and Srishti.

- (a) 5
- (b) 7
- (c) 9
- (d) 2

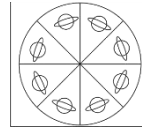
Q131. A paper is folded and cut as shown in the following figures. How will it appear when unfolded?



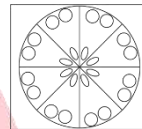
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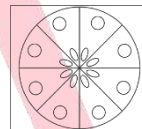
(b)



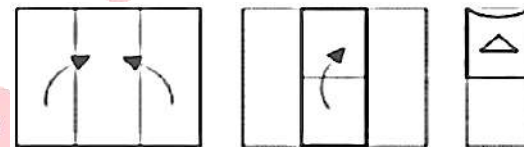
(c)



(d)



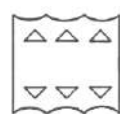
Q132. A paper is folded and cut as shown in the following figures. How will it appear when unfolded?



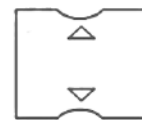
(a)



(b)



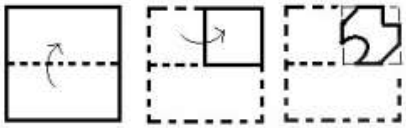
(c)



(d)

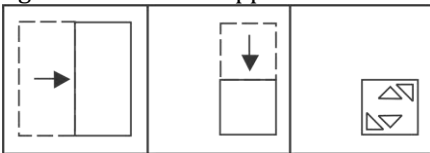


Q133. A paper is folded and cut as shown below. How will it appear when unfolded?



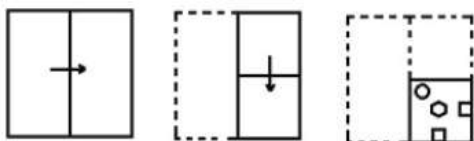
- (a)
- (b)
- (c)
- (d)

Q134. A paper is folded and cut as shown in the following figures. How will it appear when unfolded?



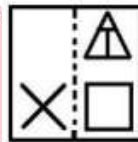
- (a)
- (b)
- (c)
- (d)

Q135. The sequence of folding a piece of paper and the manner in which the folded paper has been cut is shown in the following figures. How would this paper look when unfolded?



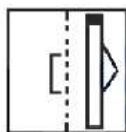
- (a)
- (b)
- (c)
- (d)

Q136. Select the option that depicts how the given transparent sheet of paper would appear if it is folded at the dotted line.

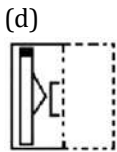
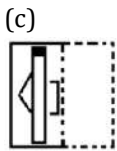
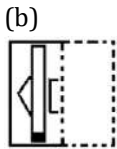


- (a)
- (b)
- (c)
- (d)

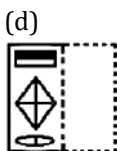
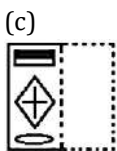
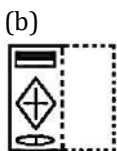
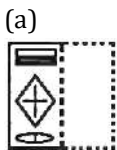
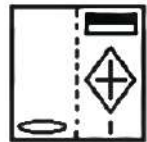
Q137. Select the option that depicts how the given transparent sheet of paper would appear if it is folded at the dotted line.



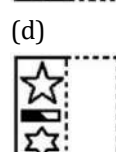
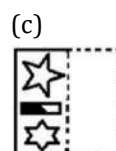
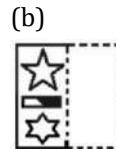
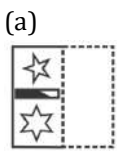
- (a)



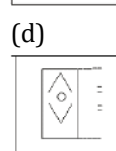
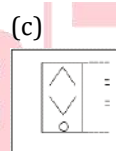
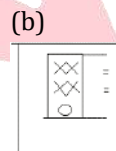
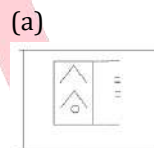
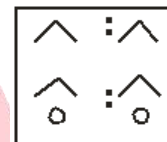
Q138. A figure of transparent sheet with a pattern is given below. Figure out from amongst the four options as to how the pattern would appear when the transparent sheet is folded at the dotted line.



Q139. A figure of the transparent sheet with a pattern is given below. Figure out from amongst the four options as to how the pattern would appear when the transparent sheet is folded at the dotted line.



Q140. A figure of transparent sheet with a pattern is given below. Select the option that shows how the pattern would appear when the transparent sheet is folded at the dotted line.



Q141. A Nurse moved 90 m in the East in a hospital to look for her duty Doctor, then she turned right and went 20m. After this she turned right and after going 30 m she reached I.C.U. but the Doctor was not there. From there she went 100 m to her north and met her doctor. What is the minimum distance between the starting point of Nurse and Final position of Duty Doctor?

- (a) 100 m
- (b) 120 m
- (c) 80 m
- (d) 140 m

Q142. Rama walks from his university campus 4 km towards north and then turns to the right to reach his department. After walking 2.5 km from the department he turns to the left and walks 4 km and reached Conference hall. Now in which direction is he from the starting place?

- (a) South-West
- (b) North-East
- (c) South
- (d) West

Q143. Ram's school bus was facing north - west when it reaches his school. After starting from his house the took one left turn, one Right turn another left turn to reach. If bus pick up Ram and starting towards East direction then in which direction bus facing to reach school.

- (a) South-east
- (b) North-east
- (c) North.
- (d) South

Q144. Saumya is standing facing north. She walks 10 km straight, turns left and walks another 10 km and turns right and walks 5 km and finally turns left and walks 15 km, to reach a park. Which direction is she facing now ?

- (a) East
- (b) West
- (c) North
- (d) South

Q145. Ram starts moving in north direction for 4 km. He took a right turn walk for 3 km. He turned 135° clockwise and walked for 5 km. What is the distance between his initial and final position?

- (a) 4 km
- (b) 2 km
- (c) 7 km
- (d) 0 km

Q146. A is located to the West of B, C is located North in between A and B. D is exactly to the south of B and also in line with B. In which direction of C is D located?

- (a) South
- (b) South-East
- (c) West
- (d) South-West

Q147. Four players P, Q, R and S are standing on a playing field in such a way that Q is to East of P, R is to the south of P and S is to the North of P. In which direction of Q is S standing?

- (a) North
- (b) South
- (c) North-west
- (d) south-East

Q148. Ram walks 12 kms to the North, then 10 kms to West, 12 kms to South. How far is Ram from the starting points?

- (a) 9 kms
- (b) 13 kms
- (c) 8 kms
- (d) 10 kms

Q149. Abhishek started from a point A and walked 30 m towards south. He turned left and walked 40 m. He then turned left again and walked 30 m. He again turned left and walked 70 m. and reached a point B. How far and in which direction is point B with respect to point A?

- (a) 15 m, east
- (b) 30 m, west
- (c) 30 m, east
- (d) 15 m, west

Q150. Aman started walking positioning his back towards the sun. After sometime, he turned left, then turned right and then towards the left again. In which direction is he going now?

- (a) North or south
- (b) East or west
- (c) North or west
- (d) South or west

Q151. Two statements are given, followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

Some teachers are philosophers.
Some philosophers are writers.

Conclusions:

- I. Some writers are teachers.
- II. No writer is a teacher.
- (a) Only conclusion II follows
- (b) Either conclusion I or II follows
- (c) Neither conclusion I nor II follows
- (d) Only conclusion I follows

Q152. Two statements are given, followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All teachers are painters.
Some painters are rich.

Conclusions:

- I. All painters are teachers.
- II. Some rich are not painters.
- (a) Only conclusion II follows
- (b) Neither conclusion I nor II follows
- (c) Only conclusion I follows
- (d) Either conclusion I or II follows

Q153. Two statements are given, followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All humans are parents.

All parents are teachers.

Conclusions:

I. Some teachers are parents.

II. Some teachers are humans.

(a) Both the conclusions follow

(b) Only conclusion II follows

(c) Either conclusion I or II follows

(d) Only conclusion I follows

Q154. Two statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All squirrels are lizards.

All lizards are goose.

Conclusions:

I. Some squirrels are not goose.

II. Some lizards are squirrels.

III. Some goose are squirrels.

(a) Conclusions I and III follow

(b) Conclusions I and II follow

(c) Conclusions II and III follow

(d) Conclusions I, II and III follow

Q155. Two statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All drums are sticks.

Some drums are boxes.

Conclusions:

I. Some boxes are sticks.

II. Some sticks are drums.

III. All sticks are drums.

(a) Only conclusions II and III follow

(b) Only conclusions I and II follow

(c) Only conclusions I and III follow.

(d) All the conclusions I, II and III follow

Q156. Two statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All postcard are envelopes.

No envelope is a paper.

Conclusions:

I. Some envelopes are postcards.

II. No paper is an envelope.

III. No postcard is a paper.

(a) Only conclusions I and III follow.

(b) Only conclusions I and II follow.

(c) Only conclusions II and III follow.

(d) All the conclusions, I, II and III, follow

Q157. Two statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All owls are parrots.

Some parrots are crows.

Conclusions:

I. No owl is a crow.

II. All parrots are owls.

III. Some owls are crows.

(a) All the conclusions, I, II and III, follow

(b) Only conclusions II and III follow.

(c) Either conclusion I or III follows.

(d) Either conclusion I or II follows.

Q158. Two statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All fields are farm-houses.

Some fields are gardens.

Conclusions:

I. Some farm-houses are fields.

II. Some gardens are fields.

III. Some farm-houses are gardens.

(a) All the conclusions, I, II and III, follow

(b) Either conclusion I or III follows.

(c) Only conclusions I and II follow.

(d) Only conclusions I and III follow.

Q159. Two statements are given followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All utensils are spoons.

All bowls are spoons.

Conclusions:

I. No utensil is a bowl.

II. Some utensils are bowls.

III. No spoon is a utensil

(a) Only conclusion I follows

(b) Conclusions I and III follow

(c) Either conclusion I or II follows

(d) Only conclusion III follows

Q160. Two statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

No grass is a flower.

All flowers are trees.

Conclusions:

I. Some trees are flowers.

II. Some trees are grasses.

III. No tree is a grass.

(a) Only conclusion III follows

(b) Either conclusions II or III, and I follow

(c) Either conclusion II or III follow

(d) Only conclusion I follows

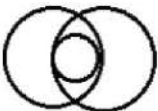
Q161. Select the Venn diagram that best illustrates the relationship between the following classes.

Fuel, Diesel, Liquid

(a)



(b)



(c)



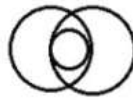
(d)



Q162. Select the Venn diagram that best illustrates the relationship between the following classes.

Mango, Eatables, Liquid

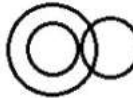
(a)



(b)



(c)



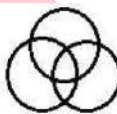
(d)



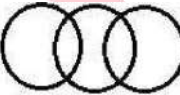
Q163. Select the Venn diagram that best illustrates the relationship between the following classes

Uncle, Relatives, Rich

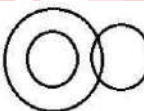
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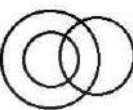
(b)



(c)



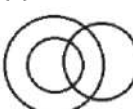
(d)



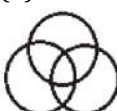
Q164. Select the Venn diagram that best illustrates the relationship between the following classes

Parents, Rich Persons, Farmers

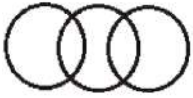
(a)



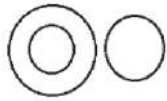
(b)



(c)



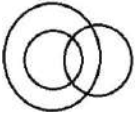
(d)



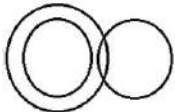
Q165. Select the Venn diagram that best illustrates the relationship between the following classes.

Graduates, Literates, Hardworking

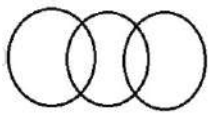
(a)



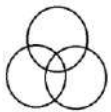
(b)



(c)



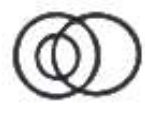
(d)



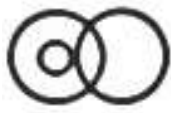
Q166. Select the Venn diagram that best illustrates the relationship between the following classes.

Snakes, Reptiles, Poisonous

(a)



(b)



(c)



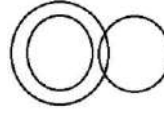
(d)



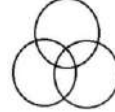
Q167. Select the Venn diagram that best illustrates the relationship between the following classes.

Doctors, Salaried Persons, Parents

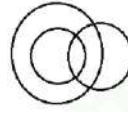
(a)



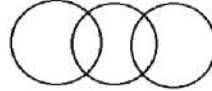
(b)



(c)



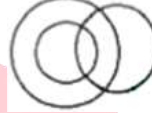
(d)



Q168. Choose the Venn diagram that best illustrates the relationship among the following classes:

Women, Entrepreneurs, Engineers

(a)



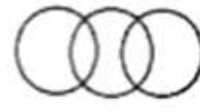
(b)



(c)



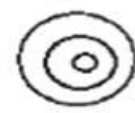
(d)



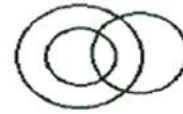
Q169. Choose the Venn diagram that best illustrated the relationship among the following classes:

Crocodiles, Aquatic, Reptiles

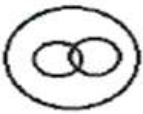
(a)



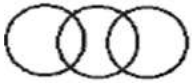
(b)



(c)



(d)



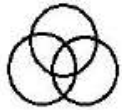
Q170. Select the Venn diagram that best illustrates the relationship between the following classes.

Graduates, Teachers, Literates

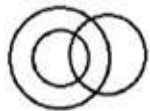
(a)



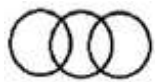
(b)



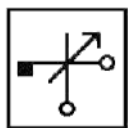
(c)



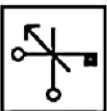
(d)



Q171. Select the correct mirror image of the given figure when the mirror is placed to the right of the figure.



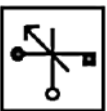
(a)



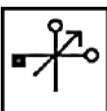
(b)



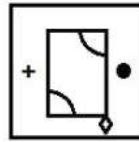
(c)



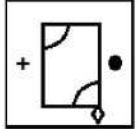
(d)



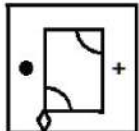
Q172. Select the correct mirror image of the given figure when the mirror is placed on the right of the figure.



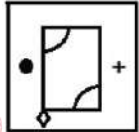
(a)



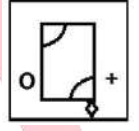
(b)



(c)



(d)



Q173. Select the correct mirror image of the given figure when the mirror is placed to the right of the figure.



(a)



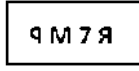
(b)



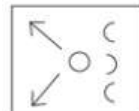
(c)



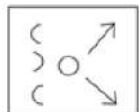
(d)

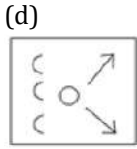
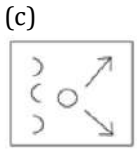
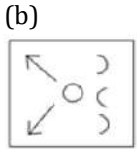


Q174. Select the correct mirror image of the given figure when the mirror is placed to the right of the figure.

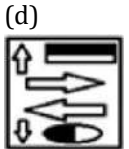
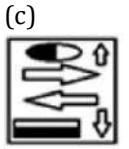
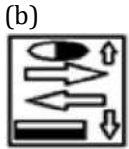
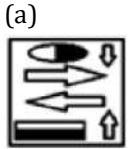


(a)

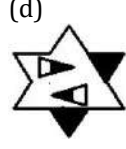
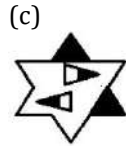
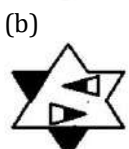
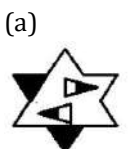




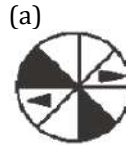
Q175. Select the correct mirror image of the given figure when a vertical mirror is placed on the right of the figure.



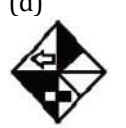
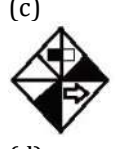
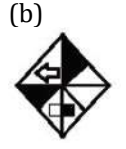
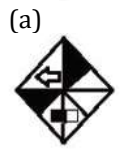
Q176. Select the correct mirror image of the given figure when the mirror is placed to the right of the figure.



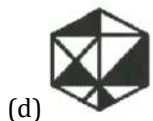
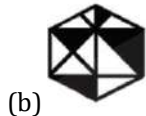
Q177. Select the correct mirror image of the given figure when the mirror is placed to the right of the figure.



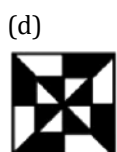
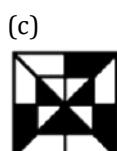
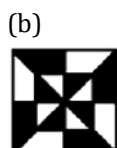
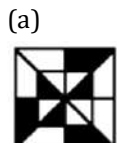
Q178. Select the correct mirror image of the given figure when a vertical mirror is placed on the right of the figure.



Q179. Select the correct mirror image of the given figure when the mirror is placed to the right of the figure.



Q180. Select the correct mirror image of the given figure when the mirror is placed to the right of the figure.



Q181. At what angle, the hands of a clock are inclined at 20 minutes past 11?

- (a) 175°
- (b) 220°
- (c) 190°
- (d) 150°

Q182. An accurate clock shows 5 o'clock in the morning. Through how many degrees will the hour hand rotate when the clock shows 1 o'clock in the afternoon?

- (a) 260°
- (b) 150°
- (c) 108°
- (d) 240°

Q183. The angle between the minute hand and the hour hand of a clock when the time is 2 : 20 is

- (a) 0°
- (b) 10°
- (c) 50°
- (d) 20°

Q184. Find the time between 3 and 4 O'clock when the two hands of a clock are at right angle.

- (a) $31\frac{9}{11}$ minutes past 3 O'clock
- (b) $32\frac{8}{11}$ minutes past 3 O'clock
- (c) $30\frac{10}{11}$ minutes past 3 O'clock
- (d) $55\frac{6}{11}$ minutes past 3 O'clock

Q185. Find the time between 11 and 12 O'clock when the two hands of a clock are in the same straight line with an angle of 180° .

- (a) $47\frac{3}{11}$ minutes past 11 O'clock
- (b) $37\frac{3}{11}$ minutes past 11 O'clock
- (c) $26\frac{4}{11}$ minutes past 11 O'clock
- (d) $27\frac{3}{11}$ minutes past 11 O'clock

Q186. In Narendra's clock shop two clocks were brought for repairs. One clock has the cuckoo coming out every six minutes, while the other one has the cuckoo coming out every eight minutes. Both cuckoos come out at 12.00 noon. When will they both come out together again?

- (a) 12 : 06PM
- (b) 12 : 08PM
- (c) 12 : 24PM
- (d) 12 : 32PM

Q187. At what time will the two hands of a clock be together between 2 and 3 O'clock?

- (a) At $16\frac{4}{11}$ minutes past 2 O'clock
- (b) At $20\frac{4}{11}$ minutes past 2 O'clock
- (c) At $10\frac{5}{11}$ minutes past 2 O'clock
- (d) At $10\frac{10}{11}$ minutes past 2 O'clock

Q188. After 9 O'clock at what time between 9 pm. and 10 pm. will the angle between the hour and minute hands of a clock is 50° ?

- (a) 55 minutes past 9
- (b) 56 minutes past 9
- (c) $58\frac{2}{11}$ minutes past 9
- (d) $57\frac{1}{11}$ minutes past 9

Q189. At what time are the hands of clocks together between 1:00pm and 2:00pm?

- (a) $5\frac{5}{11}$ minutes past 1
- (b) $6\frac{4}{11}$ minutes past 1
- (c) $7\frac{3}{11}$ minutes past 1
- (d) $5\frac{5}{18}$ minutes past 1

Q190. At what angle, the hands of a clock are inclined at 50 minutes past 7?

- (a) 75°
- (b) 60°
- (c) 68°
- (d) 65°

Q191. If 23th March 1997 is a Friday, what was the day of the week on 23rd March, 1996?

- (a) Wednesday
- (b) Thursday
- (c) Friday
- (d) Saturday

Q192. Select the fourth day which comes after the day which comes second after the day which comes immediately after the day which comes second after Wednesday?

- (a) Wednesday
- (b) Saturday
- (c) Friday
- (d) Sunday

Q193. The calendar for the year 1864 is similar for which year?

- (a) 1893
- (b) 1800
- (c) 1892
- (d) 1995

Q194. Find odd one out.

- (a) 1892
- (b) 1932
- (c) 1916
- (d) 1900

Q195. What will be the day on 15th August 1997?

- (a) Wednesday
- (b) Saturday
- (c) Friday
- (d) Sunday

Q196. How many years after a normal year just after a leap year repeats itself?

- (a) 6
- (b) 11
- (c) 28
- (d) 4

Q197. If 8 days before yesterday was Monday, then what will be the 20th day after tomorrow?

- (a) Saturday
- (b) Tuesday
- (c) Monday
- (d) Wednesday

Q198. Rukmani goes on a tour on Saturday. She reaches her destination in 400 days. Then, on which day will Rukmani reach her final destination?

- (a) Saturday
- (b) Tuesday
- (c) Monday
- (d) Sunday

Q199. Find the number of odd days from 2001 to 2098?

- (a) 3
- (b) 4
- (c) 5
- (d) 6

Q200. What was the day on 6th March 1998?

- (a) Wednesday
- (b) Saturday
- (c) Friday
- (d) Sunday

Solutions

S1. Ans.(d)

Sol. $(8 + 6) \times 2 = 28$

Similarly, $(3 + 7) \times 2 = 20$

S2. Ans.(b)

Sol. $8 + 15 + 9 = 32$, similarly, $4 + 16 + 12 = 32$

S3. Ans.(b)

Sol. $(3 + 5) \times 2 = 16$

Similarly,

$(7 + 9) \times 2 = 32$

S4. Ans.(b)

Sol.

(11, 16, 20)
+5 +4

Same as (15, 20, 24)
+5 +4

S5. Ans.(c)

Sol. $(17 + 7) = 24 = 12 \times 2$

Similarly

$(15 + 23) = 38 = 19 \times 2$

S6. Ans.(a)

Sol. $7^2 - 5^2 = 24$

Similarly

$12^2 - 8^2 = 80$

S7. Ans.(a)

Sol. (+1) pattern follow.

S8. Ans.(d)

Sol. Heart circulate the blood similarly
Kidney excrete the urine

S9. Ans.(d)

Sol. 19: $19+1=20^2=400$
24: $24+1=25^2=625$

S10. Ans.(a)

Sol. Student gets education in school
Same as,
Patient gets treatment in hospital
Chef, judge and teacher give service in their respective.

S11. Ans.(c)

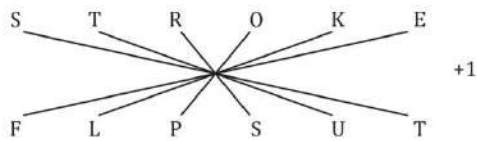
Sol. SEDATIVE \rightarrow ATDESEVI
12345678 \rightarrow 45321876
Similarly,
PERSONAL \rightarrow SOREPLAN
12345678 \rightarrow 45321876

S12. Ans.(c)

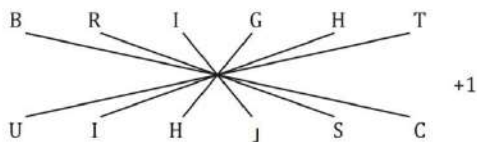
Sol. Upper part of Room is 'ceiling', Similarly, upper part of 'Mouth' is Palate

S13. Ans.(d)

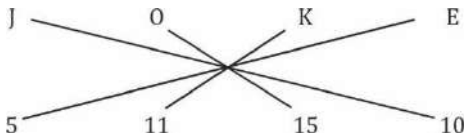
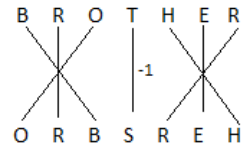
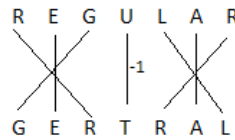
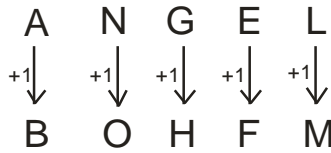
Sol. -1 pattern
URGENT \rightarrow TQFDMS

S14. Ans.(a)**Sol.**

Similarly,

**S15. Ans.(d)**

Sol. R \rightarrow 2
O \rightarrow 6
S \rightarrow 8
E \rightarrow 3

S16. Ans.(c)**Sol.****S17. Ans.(a)****Sol.****S18. Ans.(c)****Sol.**

+1 pattern follow.

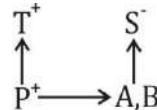
V - W

S19. Ans.(b)

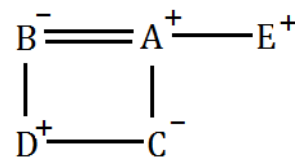
Sol. H E A D
 $8+5+1+4=18 \times 2+1=37$
B A N K
 $2+1+14+11=28 \times 2+1=57$
Similarly,
K I T E
 $11+9+20+5=45 \times 2+1=91$

S20. Ans.(d)

Sol. P A S T E U R
1 2 3 4 5 6 7
 \downarrow
4 1 7 6 2 3 5
T P R U A S E
Similarly,
1 2 3 4 5 6 7
S E V E N T Y
 \downarrow
4 1 7 6 2 3 5
E S Y T E V N

S21. Ans.(D)**Sol.****S22. Ans.(b)**

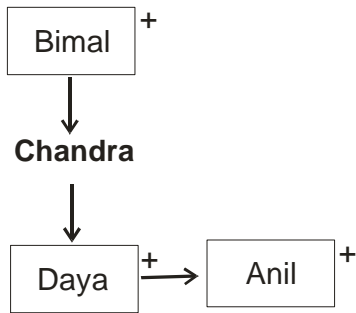
Sol. Father's father \rightarrow Grand father
Grand-father's grand-daughter \rightarrow Sister
Sister's-Husband \rightarrow Brother-in-law.

S23. Ans.(a);**Sol.**

B is sister in law of E.

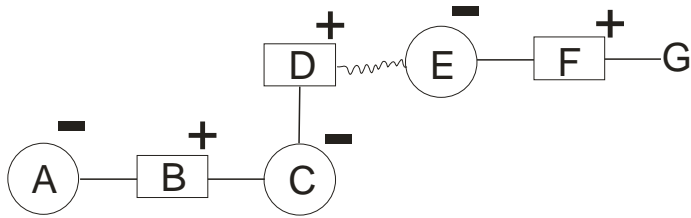
S24. Ans.(b)

Sol.



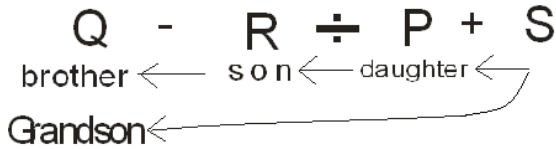
S25. Ans.(a)

Sol.



S26. Ans.(b)

Sol.



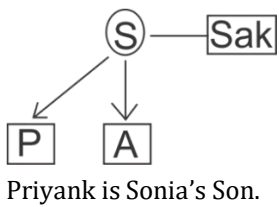
S27. Ans.(a)

Sol. Daughter of uncle's father → uncle's sister



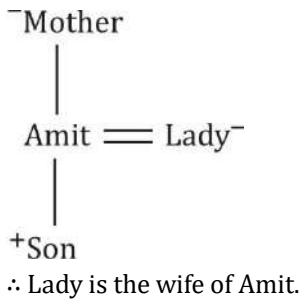
S28. Ans.(C)

Sol.



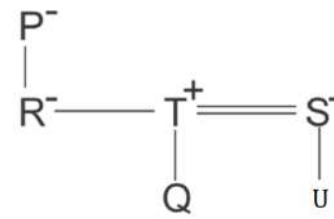
S29. Ans.(d)

Sol.



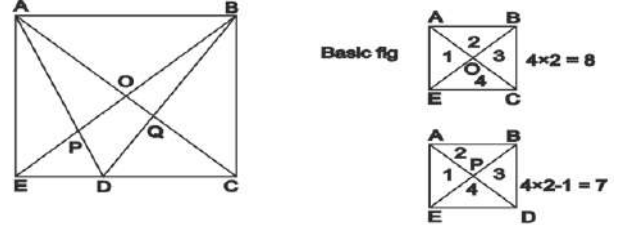
S30. Ans.(d)

Sol.



S31. Ans.(b)

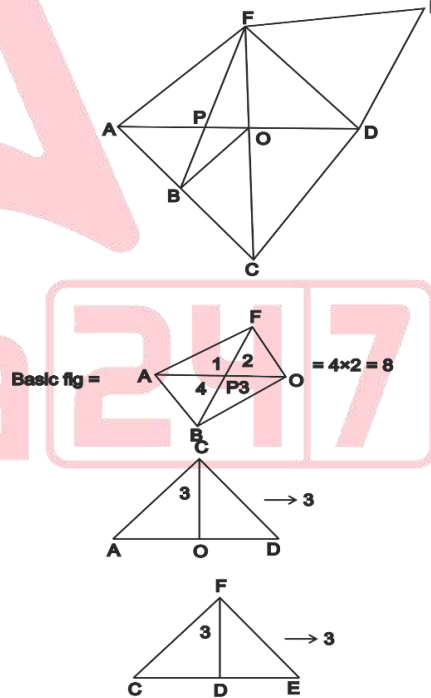
Sol.



Extra = BOQ, BQC, BDC, AOP, AQD = 5
 DQC, ADC, AQB = 3
 Total Triangles = 8+7+5+3 = 23

S32. Ans.(c)

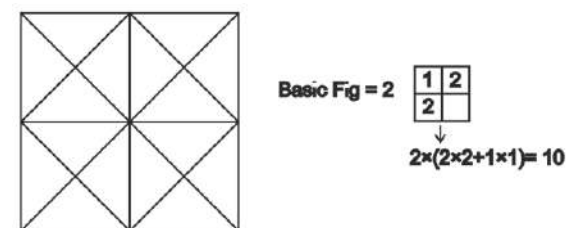
Sol.



Extra = FOD, COD, FBC, FPD, FAD, FAC = 6
 Total Δ = 8+3+3+6 = 20

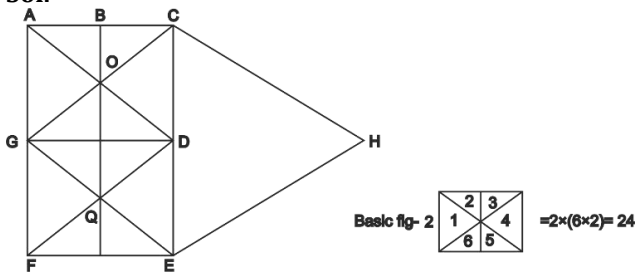
S33. Ans.(d)

Sol.



S34. Ans.(c)

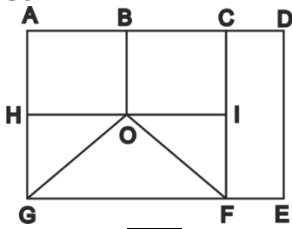
Sol.



Extra = CGE, ADF, GOQ, OQD = 4
 CHE = 1
 Total triangles = 24 + 4 + 1 = 29

S35. Ans.(b)

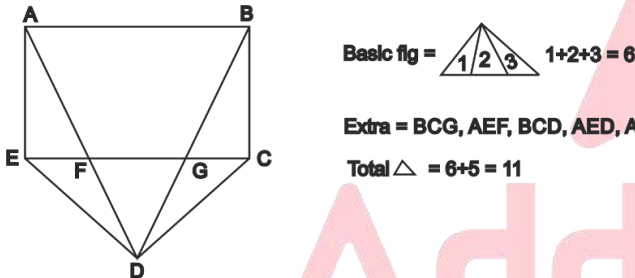
Sol.



Basic fig $2 \begin{bmatrix} 1 & 2 \end{bmatrix} = 2 \times (1+2) = 6$
 Extra = FGHI, ACFG, ABOG, IOGF, HOFG = 5
 Total = 6 + 5 = 11

S36. Ans.(d)

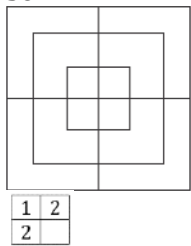
Sol.



Basic fig = $\frac{1}{2} \begin{bmatrix} 1 & 2 & 3 \end{bmatrix} = 1+2+3 = 6$
 Extra = BCG, AEF, BCD, AED, ABD = 5
 Total $\Delta = 6+5 = 11$

S37. Ans.(b)

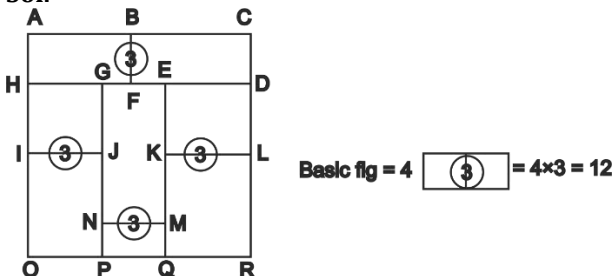
Sol.



Basic fig. $3 \Rightarrow 3 \times (2 \times 2 + 1 \times 1) \Rightarrow 15$ Ans.

S38. Ans.(b)

Sol.



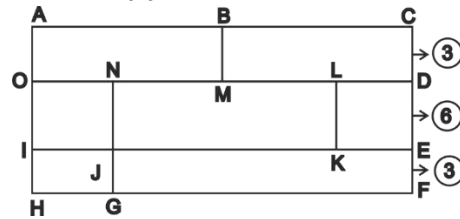
Basic fig = $4 \begin{bmatrix} 3 \end{bmatrix} = 4 \times 3 = 12$

Extra = HEQO, GDRP, HDRO = 3

ACRO = 1

Total = 12 + 3 + 1 = 16

S39. Ans.(b)



Basic fig. = $\begin{bmatrix} 1 & 2 & 3 \end{bmatrix} = 1+2+3 = 6$

$2 \begin{bmatrix} 1 & 2 \end{bmatrix} = 2 \times (1+2) = 6$

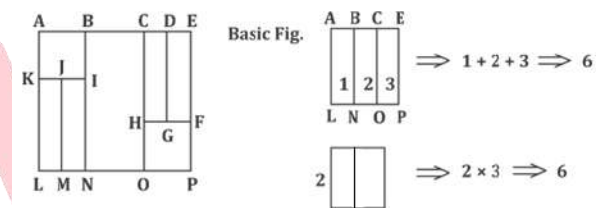
Extra = ACEI, ODFH, ACFH = 3

NDFG, ONGH = 2

Total = 6 + 6 + 3 + 2 = 17

S40. Ans.(b)

Sol.



Extra \Rightarrow ABIK, HFPO \Rightarrow 2

Total $\Rightarrow 6 + 6 + 2 \Rightarrow 14$ quadrilaterals

S41. Ans.(a)

Sol.

5 4 1
 $\uparrow \quad \uparrow \quad \uparrow \Rightarrow 3$ is opposite to 5

5 6 2

S42. Ans.(d)

Sol. opposite pairs are

1 - 3

4 - 5

6 - 2

S43. Ans.(d)

Sol. opposite sides are

3-1

4-2

6-5

S44. Ans.(c)

Sol. 3 is opposite to 1

S45. Ans.(a)

Sol. Opposite faces are

\leftrightarrow %

& \leftrightarrow *

\$ \leftrightarrow +

S46. Ans.(a)

Sol. 3-2-1

3-4-5

S47. Ans.(a)

Sol. % — ^ — #

% — + — &

S48. Ans.(c)

Sol. + — = — @

+ — \$ — !

So '+' is opposite face of '*'.

S49. Ans.(c)

Sol. Opposite faces are:

6 ↔ 4

1 ↔ 2

3 ↔ 5

S50. Ans.(c)

Sol. 4 - 1 - 2

4 - 6 - 5

S51. Ans.(b)

Sol. 4, 1, 5, 2, 3

S52. Ans.(a)

Sol. 45231

S53. Ans.(a)

Sol. 2, 4, 3, 1, 5

S54. Ans.(d)

Sol. 2, 1, 4, 5, 3

S55. Ans.(b)

Sol. 3, 5, 4, 1, 2

S56. Ans.(a)

Sol. 2, 3, 4, 5, 1

S57. Ans.(d)

Sol. 2, 1, 3, 4, 5

S58. Ans.(b)

Sol. 6, 3, 1, 2, 4, 5

S59. Ans.(b)

Sol. Perk → Pick → Pile → Pith → Pour

4, 1, 3, 2, 5

S60. Ans.(d)

Sol. 1, 2, 4, 3, 5

S61. Ans.(c)

Sol. 3. Pain

5. Hospital

1. Diagnosis

4. Treatment

2. Recovery

S62. Ans.(a)

Sol. Showroom → Car → Drive → Accident → Injury → Recovery

S63. Ans.(a)

S64. Ans.(b)

S65. Ans.(a)

Sol. (2, 5, 1, 3, 4)

S66. Ans.(a)

Sol. 5,2,4,1,6,3

S67. Ans.(d)

Sol. Gold → Goldsmith → ornament → Jewelry shop → Bride

S68. Ans.(a)

Sol. Letter → Word → Phrase → Sentence → Paragraph → Chapter

S69. Ans.(d)

S70. Ans.(a)

S71. Ans.(d)

Sol. INR cannot be formed using the letters of the given word "INDEPENDENCE."

S72. Ans.(c)

Sol. SPOONS cannot be formed using the letters of the given word "TRANSPORTATION."

S73. Ans.(c)

Sol. TOYS cannot be formed using the letters of the given word "REVOLUTIONARY."

S74. Ans.(a)

Sol. ELMO cannot be formed using the letters of the given word "TECHNOLOGY."

S75. Ans.(c)

Sol. VIBLET cannot be formed using the letters of the given word "ENVIRONMENTAL"

S76. Ans.(d)

Sol. TELEDROM cannot be formed using the letters of the given word "ELECTROMAGNETIC."

S77. Ans.(b)

Sol. STONES cannot be formed using the letters of the given word "DEMONSTRATION."

S78. Ans.(a)

Sol. SHRIMP cannot be formed using the letters of the given word "HYPOTHESIS."

S79. Ans.(d)

Sol. EMPEROR cannot be formed using the letters of the given word "COMPREHENSIVE."

S80. Ans.(d)

Sol. DEITY cannot be formed using the letters of the given word "DISCIPLINARY."

S81. Ans.(a)

S82. Ans.(a)

S83. Ans.(a)

S84. Ans.(c)

S85. Ans.(b)

S86. Ans.(c)

S87. Ans.(c)

S88. Ans.(c)

S89. Ans.(b)

S90. Ans.(d)

S91. Ans.(c)

Sol. $24 - 12 \div 4 + 8 \times 2 = 11$

Interchange + and -

$24 + 12 \div 4 - 8 \times 2 = 11$

$= 24 + 3 - 16 = 11$

$= 27 - 16 = 11$

S92. Ans.(b)

Sol. $8 + 2 \times 5 - 16 \div 4$

$= 8 + 10 - 4 = 14$

S93. Ans.(c)

Sol. $16 + 3 - 5 \times 2 \div 4 = 9$

$16 + 3 - 5 \div 2 \times 4 = 9$

$16 + 3 - 10 = 9$

$19 - 10 = 9$

$9 = 9$

S94. Ans.(d)

Sol. $25 - \frac{2}{10} \times 5 + 2$

$= 25 \times 2 + 10/5 - 2$

$= 25 \times 2 + 2 - 2$

$= 52 - 2$

$= 50$

S95. Ans.(b)

Sol. $24 \div 8 - 5 + 5 \times 3$

$= 3 - 5 + 15$

$= 13$

S96. Ans.(d)

Sol. $12 \times 8 + 36 \div 3 - 6$

$= 96 + 12 - 6$

$= 102 = \text{R.H.S.}$

S97. Ans.(a)

Sol. on interchanging + and \div

$27 + 3 - 18 \div 3 \times 2$

$= 30 - 6 \times 2 = 18 = \text{RHS}$

S98. Ans.(c)

Sol. $= 4 \times 5 + 24 \div 12 - 8$

$= 20 + 2 - 8 = 14$

S99. Ans.(a)

Sol. $24 + 12 - 6 \times 6 \div 2 = 18$

$= 36 - 6 \times \frac{6}{2}$

$= 36 - 18$

$= 18$

S100. Ans.(c)

Sol. $18 + 24 \div 6 \times 6 - 3$

$= 18 + 24 - 3$

$= 39$

S101. Ans.(a)

Sol.

D O P , F P N , H Q L , J R J , L S H

Follow sequence of +2, +1, -2

S102. Ans.(b)

Sol.

15, 43, 83, 137, 207, 295

S103. Ans.(d)

Sol.

7, 11, 19, 31, 47

S104. Ans.(a)

Sol. follow +3, +5, +4 sequences

F B A, I G E, L L I, O Q M, R V Q

S105. Ans.(d)

Sol.

2, 6, 14, 30, 62, 126

S106. Ans.(a)

Sol. 4 16 36 64 100 144 196 256

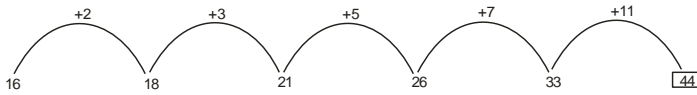
$(2)^2 (4)^2 (6)^2 (8)^2 (10)^2 (12)^2 (14)^2 (16)^2$

S107. Ans.(d)

L V D, O T F, R R H, U P J, X N L

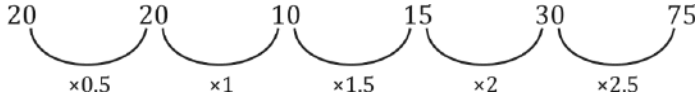
S108. Ans.(b)

Sol. Addition of prime numbers.



S109. Ans.(d)

Sol.



S110. Ans.(b)

Sol. $3 \times 2 + 1 = 7$

$7 \times 2 + 2 = 16$

$16 \times 2 + 3 = 35$

$35 \times 2 + 4 = 74$

$74 \times 2 + 5 = 153$

S111. Ans.(b)

Sol. all follow -3, +6, -3 sequence except (b)

S112. Ans.(a)

Sol. except (a) all are wear on Foot.

S113. Ans.(a)

Sol. All are prime number except (a).

S114. Ans.(a)

Sol. All are grounds of playing different sports except (a)

S115. Ans.(c)

Sol. All follow +2, +3, +4 series except (c)

S116. Ans.(b)

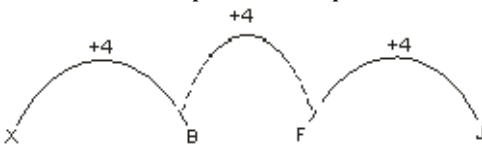
Sol. All are prime numbers except (b)

S117. Ans.(b)

Sol. all three subjects are of Art's except (b).

S118. Ans.(d)

Sol. all follow +4 pattern except 'd'.



S119. Ans.(c)

Sol. except 'c' all are the square of numbers +1.

$8^2 + 1 = 65$

$13^2 + 1 = 170$

$7^2 + 1 = 50$

S120. Ans.(b)

Sol. Microwave is used for cooking purpose. Rest all related to computer devices.

S121. Ans.(b)

Sol. $S > P > T > Q > R$

S122. Ans.(c)

Sol. $V > M > F > E > D > N > O$

S123. Ans.(d)

Sol. $V > S > R > U > Z$

S124. Ans.(d)

Sol. $Q > T > P/R > S > P/R$

S125. Ans.(a)

Sol. $Y > X > V > U > W$

S126. Ans.(a)

Sol. $A > S > C > B > T$

S127. Ans.(b)

Sol. Kritika's new position is ninth from the right end is same as Somya's earlier position which is eleventh from the left end.

So, total number of girls in the row = $(8 + 1 + 10) = 19$

S128. Ans.(d)

Sol. The number of students in the class = $7 + 1 + 51 = 59$

S129. Ans.(c)

Sol. The total number of boys in the row = $15 + 19 + 5 = 39$

S130. Ans.(b)

Sol. Total number of people in the row = $(25 + 31) - 47 - 2 = 7$

S131. Ans.(c)

S132. Ans.(b)

S133. Ans.(c)

S134. Ans.(c)

S135. Ans.(c)

S136. Ans.(b)

S137. Ans.(a)

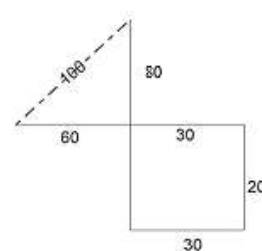
S138. Ans.(b)

S139. Ans.(d)

S140. Ans.(a)

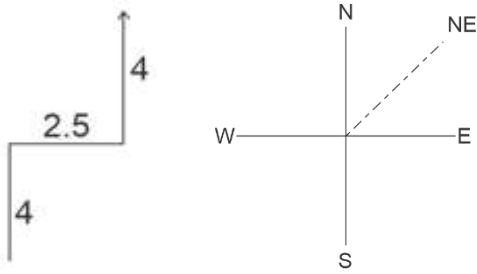
S141. Ans.(a)

Sol.



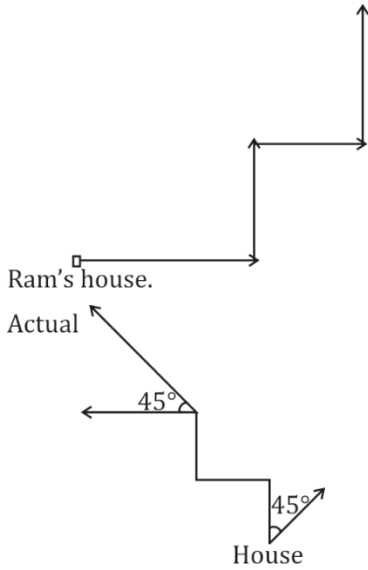
S142. Ans.(b)

North-east



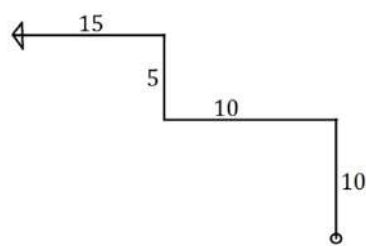
S143. Ans.(c)

Sol.



S144. Ans.(b)

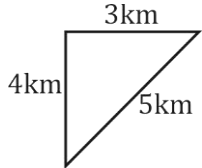
Sol.



She is facing west

S145. Ans.(d)

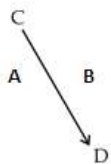
Sol.



S146. Ans.(b)

Sol.

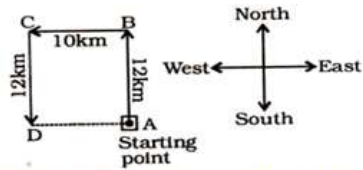
South-east



S147. Ans.(c)

S148. Ans.(d)

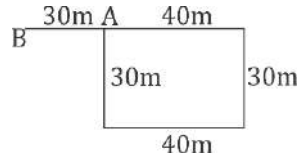
Sol.



Required distance = AD = 10 km

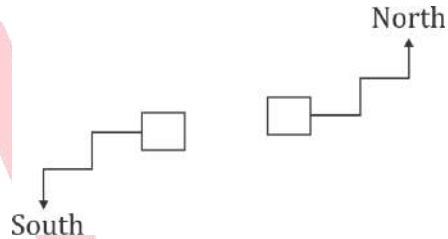
S149. Ans.(b)

Sol.



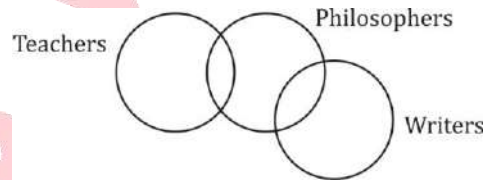
S150. Ans.(a)

Sol. Two possibilities



S151. Ans.(b)

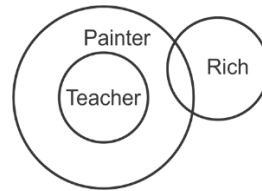
Sol.



Either I or II follows

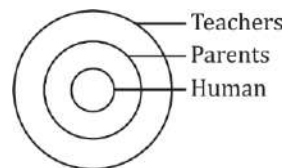
S152. Ans.(b)

Sol.



S153. Ans.(a)

Sol.

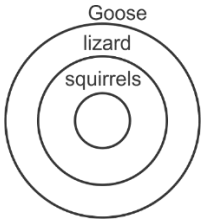


I

II

S154. Ans.(c)

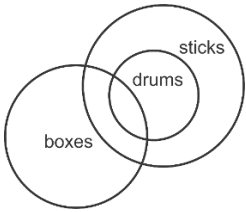
Sol.



- I ×
- II follows
- III follows

S155. Ans.(b)

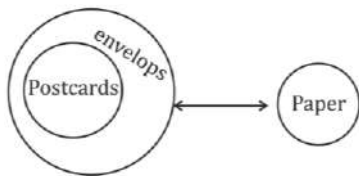
Sol.



- I. ✓
- II. ✓
- III. ×

S156. Ans.(d)

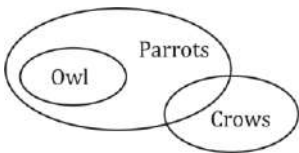
Sol.



- I. ✓
- II. ✓
- III. ✓

S157. Ans.(c)

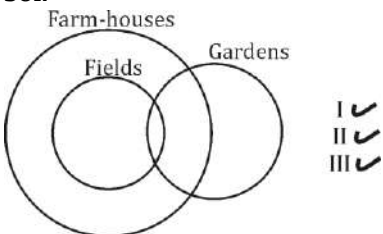
Sol.



- I. ×
 - II. ×
 - III. ×
- Either I or III follow.

S158. Ans.(a)

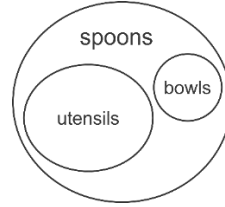
Sol.



- I ✓
- II ✓
- III ✓

S159. Ans.(c)

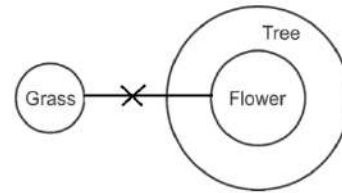
Sol.



- I. ×
 - II. ×
 - III. ×
- Either conclusion I or II follow.

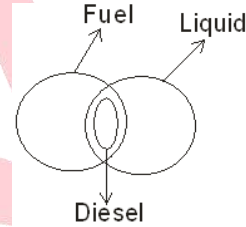
S160. Ans.(b)

Sol.



S161. Ans.(b)

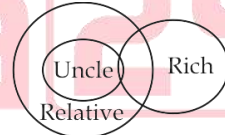
Sol.



S162. Ans.(c)

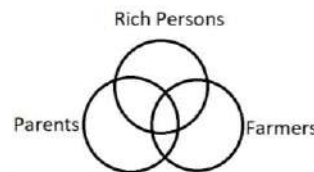
S163. Ans.(d)

Sol.



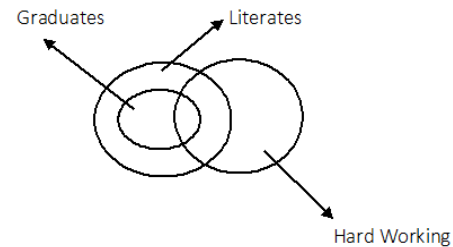
S164. Ans.(b)

Sol.



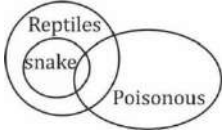
S165. Ans.(a)

Sol.



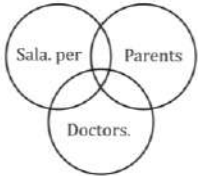
S166. Ans.(a)

Sol.



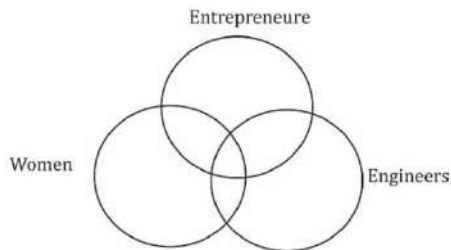
S167. Ans.(b)

Sol.



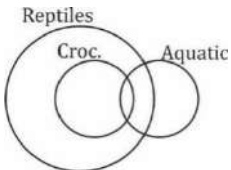
S168. Ans.(c)

Sol.



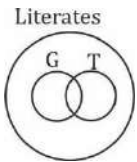
S169. Ans.(b)

Sol.



S170. Ans.(a)

Sol.



S171. Ans.(a)

S172. Ans.(c)

S173. Ans.(a)

S174. Ans.(c)

S175. Ans.(b)

S176. Ans.(a)

S177. Ans.(c)

S178. Ans.(b)

S179. Ans.(d)

S180. Ans.(d)

S181. Ans.(b)

$$\text{Sol. } \theta = \left| \frac{11M-60H}{2} \right|$$

$$\theta = \left| \frac{11 \times 20 - 60 \times 11}{2} \right| = \left| \frac{220 - 660}{2} \right| = 220^\circ$$

S182. Ans.(d)

Sol. Angle traced by the hour hand in 8 hours

$$= \left(\frac{360}{12} \times 8 \right)^\circ = 240^\circ$$

S183. Ans.(c)

$$\text{Sol. } \theta = \left| \frac{11M-60H}{2} \right| = \left| \frac{11 \times 20 - 60 \times 2}{2} \right|$$

$$= \left| \frac{220 - 120}{2} \right| = \left| \frac{100}{2} \right| = |50|$$

$$\theta = 50^\circ$$

S184. Ans.(b)

$$\text{Sol. } \theta = \left| \frac{11M-60H}{2} \right|$$

$$\left| \frac{11M-60 \times 3}{2} \right| = 90$$

$$M = \frac{360}{11}, M = 32 \frac{8}{11}$$

S185. Ans.(d)

$$\text{Sol. } \theta = \left| \frac{11M-60H}{2} \right|$$

$$\left| \frac{11M-60 \times 11}{2} \right| = 180$$

$$M = \frac{360 - 660}{11} = \frac{300}{11} = 27 \frac{3}{11}$$

S186. Ans.(c)

Sol. LCM of 6 and 8

$$= 6 \times 4 = 24$$

Both Cuckoos will come out together again at

12 : 24 PM

S187. Ans.(d)

$$\text{Sol. } \theta = \left| \frac{11M-60H}{2} \right|$$

$$\theta = 0$$

$$H = 2$$

$$M = \frac{120}{11} = 10 \frac{10}{11}$$

∴ The two hands of a clock will be together between 2 and 3

O'clock at $10 \frac{10}{11}$ minutes past 2 O'clock

S188. Ans.(c)

$$\text{Sol. } \theta = \left| \frac{11M-60H}{2} \right|$$

$$50^\circ = \frac{11M - 60 \times 9}{2}$$

$$M = \frac{640}{11} = 58 \frac{2}{11}$$

S189. Ans.(a)

$$\text{Sol. } \theta = \left| \frac{11M-60H}{2} \right|$$

$$\theta = 0$$

$$H = 1$$

$$M = \frac{60}{11} = 5 \frac{5}{11} \text{ minutes,}$$

$$= 5 \frac{5}{11} \text{ minutes past 1}$$

S190. Ans.(d)

$$\text{Sol. } \theta = \left| \frac{11M - 60H}{2} \right|$$

$$\theta = \left| \frac{11 \times 50 - 60 \times 7}{2} \right| = \left| \frac{130}{2} \right| = 65^\circ$$

S191. Ans.(b)

Sol. Since, 1996 is a leap year but 23rd March 1996 to 23rd March 1997 doesn't contain 29 Feb so there is only 1 odd day in an ordinary leap year.

Hence, day of the week on 23rd March, 1996 = Friday - 1 = Thursday.

S192. Ans.(c)

Sol. The second after Wednesday is Friday
The day immediately after Friday is Saturday
The second day after Saturday is Monday.
The fourth day after Monday is Friday.

S193. Ans.(c)

Sol. A leap year repeats itself after 28 years.
1864 + 28 = 1892

S194. Ans.(d)

Sol. Except 1900 all others are leap year.

S195. Ans.(c)

Sol. Firstly, all the months are given some numbers which you have to remember.

Month	Number	Month	Number
January	0	July	6
February	3	August	2
March	3	September	5
April	6	October	0
May	1	November	3
June	4	December	5

Formula to find odd days:

(Date + Month{Number given above} + Year{ with last two digits only} + Leap Year) / 7

15th August 1997

Date = 15

Year = 97

Month = 2

Leap year = $\frac{97}{4} = 24$

Putting the above values in the above formula,

$(15 + 2 + 24 + 97) / 7 = 138 / 7 = 5$ odd days and that is the day of the week.

5th day of the week is Friday.

S196. Ans.(a)

Sol. A normal year just after leap year repeats itself after 6 years.

S197. Ans.(d)

Sol. Total No. of days = 8 + 1 + 20 + 1 = 30 = 2 odd days

Hence, Two days after Monday = Wednesday

S198. Ans.(d)

Sol. No. of odd days = 400 / 7 = 1

Hence, it will be Sunday.

S199. Ans.(a)

Sol. Total Number of leap years = 24

Total number of ordinary years = 74

Total Odd days = 24 × 2 + 74 × 1 = 122 or simply 3 odd days

S200. Ans.(c)

Sol. Firstly, all the months are given some numbers which you have to remember.

Month	Number	Month	Number
January	0	July	6
February	3	August	2
March	3	September	5
April	6	October	0
May	1	November	3
June	4	December	5

Formula to find odd days:

(Date + Month{Number given above} + Year{ with last two digits only} + Leap Year) / 7

Date = 6

Year = 98

Month = 3

Leap year = $\frac{98}{4} = 24$

Putting the above values in the above formula,

$(6 + 3 + 98 + 24) / 7 = 131 / 7 = 5$ odd days and that is the day of the week.

5th day of the week is Friday.

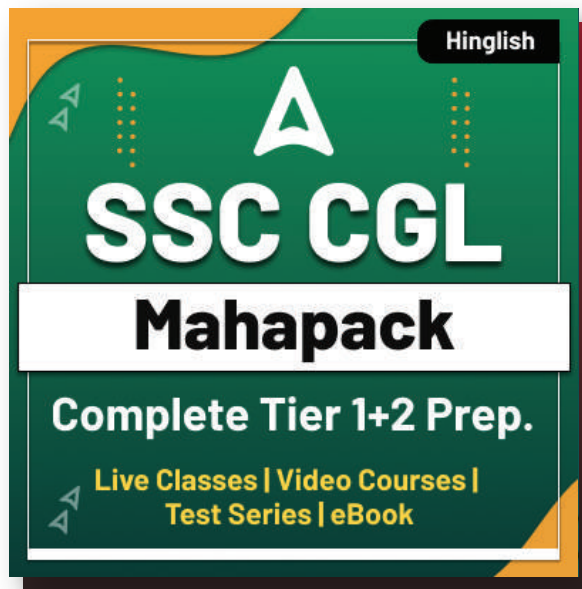
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Mathematical Ability

Q1. What is the sum of digits of the least number, which when divided by 15, 18 and 42 leaves the same remainder 8 in each case and is also divisible by 13?

- (a) 25
- (b) 24
- (c) 22
- (d) 26

Q2. The square root which of the following is a rational number?

- (a) 5535.36
- (b) 3152.88
- (c) 72905.2
- (d) 67508.5

Q3. The number 23474 is exactly divisible by :

- (a) 2 and 4 only
- (b) 2 and 11 only
- (c) 2 and 3 only
- (d) 2 only

Q4. The sum of all possible three digit numbers formed by digits 3, 0 and 7, using each digit only once is :

- (a) 2220
- (b) 1990
- (c) 2110
- (d) 2010

Q5. To what power -3 should be raised to get -2187?

- (a) -7
- (b) -5
- (c) 5
- (d) 7

Q6. The number 30744 is divisible by which of the single digit numbers:

- (a) All numbers except 5 and 7
- (b) Only by 2, 3, 6 and 9
- (c) Only by 2, 3 and 6
- (d) All numbers except 5

Q7. What is the difference between the greatest four digit and the smallest four digit number using the digits 2, 9, 6 and 5 (each digit can be used only once)?

- (a) 6993
- (b) 7056
- (c) 6606
- (d) 7083

Q8. The number 66249 is divisible by which of the single digit numbers:

- (a) Only by 3 and 9
- (b) Only by 3 and 7
- (c) Only by 9
- (d) Only by 3

Q9. The least number that should be added to 10000 so that it is exactly divisible by 327 is:

- (a) 327
- (b) 237
- (c) 137
- (d) 190

Q10. The cube root of 3375 is equal to:

- (a) 35
- (b) 25
- (c) 55
- (d) 15

Q11. Two numbers are in the ratio 4 : 5. If their HCF is 16, then the sum of these two numbers is:

- (a) 144
- (b) 124
- (c) 160
- (d) 150

Q12. Two numbers are in the ratio 4 : 7. If their HCF is 26, then the sum of these two numbers will be:

- (a) 312
- (b) 364
- (c) 338
- (d) 286

Q13. Two numbers are in the ratio 5 : 11. If their HCF is 24, then the sum of two these numbers is:

- (a) 384
- (b) 408
- (c) 120
- (d) 264

Q14. Two numbers are in the ratio 6 : 11. If their HCF is 28, then the sum of these two numbers is:

- (a) 476
- (b) 448
- (c) 392
- (d) 420

Q15. Which of the following statement is true?

- (a) $HCF + LCM$ of two numbers = Product of two numbers
- (b) LCM of two natural numbers is divisible by their HCF.
- (c) Two prime numbers are co-prime numbers if their LCM is 1.
- (d) HCF of two numbers is the smallest common divisor of both numbers.

Q16. The HCF and LCM of two numbers is 6 and 5040 respectively. If one of the numbers is 210, then the other number is :

- (a) 630
- (b) 144
- (c) 256
- (d) 30

Q17. A and B start walking together from a point. Their steps measure 72 cm and 84 cm respectively. What is the minimum distance they should walk so that each takes exact number of steps?

- (a) 2.7 m
- (b) 3.54 m
- (c) 6.3 m
- (d) 5.04 m

Q18. The product of two numbers is 45360, if the HCF of the numbers is 36, then their LCM is:

- (a) 252
- (b) 630
- (c) 126
- (d) 1260

Q19. The greatest number of four digits which is exactly divisible by 24, 36 and 54 is:

- (a) 9990
- (b) 9924
- (c) 9936
- (d) 9960

Q20. Four bells ring simultaneously at a certain instant. Thereafter they ring at intervals of 6, 8, 10 and 12 seconds respectively. In how many minutes will they ring together again for the first time?

- (a) 2 minutes
- (b) $2\frac{1}{4}$ minutes
- (c) 1 minute
- (d) $1\frac{1}{2}$ minutes

Q21. The value of $6\frac{1}{5} - \left[4\frac{1}{2} - \left\{\frac{5}{6} - \left(\frac{3}{5} + \frac{3}{10} - \frac{7}{15}\right)\right\}\right]$ is :

- (a) 2.5
- (b) 1.8
- (c) 2.1
- (d) 2.8

Q22. $\frac{17}{30} + \left[3\frac{1}{5} - \left\{\frac{5}{6} - \left(3\frac{4}{5} \div 9\frac{1}{2}\right)\right\}\right]$ is equal to :

- (a) $\frac{3}{5}$
- (b) $\frac{1}{5}$
- (c) $\frac{11}{3}$
- (d) $\frac{10}{3}$

Q23. The value of $\frac{1}{3} \div \frac{5}{6} \times \frac{-5}{8}$ is equal to :

- (a) 0
- (b) $\frac{1}{4}$
- (c) $-\frac{1}{4}$
- (d) 1

Q24. The value of $3 \times 3 - [6 - \{12 + 15 \div (7 - 2)\}]$ is equal to :

- (a) 18
- (b) 0
- (c) 15
- (d) -15

Q25. $7 - \{4 \times 3 - (-10) \times 8 \div (-4)\}$ is equal to:

- (a) -1
- (b) 53
- (c) 0
- (d) 15

Q26. $\frac{3}{5} \times 4 \left[7 - \left\{\frac{2}{5} \times (13 + 2)\right\}\right]$ is equal to:

- (a) $2\frac{2}{5}$
- (b) $\frac{1}{5}$
- (c) 1
- (d) 0

Q27. $\sqrt{4 + \sqrt{144}}$ is equal to:

- (a) 3.74
- (b) 14
- (c) 12.17
- (d) 4

Q28. $(-4) \times (-8) \div (-2) + 3 \times 5$ is equal to:

- (a) -1
- (b) 1
- (c) 31
- (d) -31

Q29. $\frac{3}{4} + \frac{5}{2} \left[\frac{1}{4} \times \left(\frac{8}{5} - \frac{4}{3}\right)\right]$ is equal to:

- (a) $\frac{13}{24}$
- (b) $\frac{3}{4}$
- (c) $\frac{1}{4}$
- (d) $\frac{11}{12}$

Q30. $13 \div \{4 \text{ of } 2 - 3 + 4 \times (6 - 4)\}$ is equal to:

- (a) $-2\frac{1}{13}$
- (b) 1
- (c) 0
- (d) 13

Q31. The price of sugar has decreased by 15%. By what percentage can a person increase the consumption so that there is no change in the expenditure?

- (a) $\frac{300}{23}\%$
- (b) $\frac{300}{17}\%$
- (c) $\frac{50}{3}\%$
- (d) $\frac{20}{3}\%$

Q32. If A's income is 40% more than the income of B, then what percentage of B's income is less than income of A?

- (a) $27\frac{4}{7}\%$
- (b) $28\frac{5}{7}\%$
- (c) $27\frac{5}{7}\%$
- (d) $28\frac{4}{7}\%$

Q33. In an examination, 54% of the candidates passed in science and 42% failed in mathematics. If 32% failed in both subjects, what percentage passed in both subjects?

- (a) 56%
- (b) 48%
- (c) 32%
- (d) 44%

Q34. The income of A is 24% more than the income of B. By what percent is the income of B less than the income of A?

- (a) $\frac{150}{7}$ %
- (b) $\frac{600}{29}$ %
- (c) $\frac{500}{31}$ %
- (d) $\frac{600}{31}$ %

Q35. In an examination, 48% of candidates passed in science and 56% failed in mathematics. If 32% failed in both subjects, then what percent of students pass in both subjects?

- (a) 24%
- (b) 32%
- (c) 28%
- (d) 22%

Q36. The price of sugar is decreased by 10%. By what can a person increase the consumption so that there is no change in the expenditure?

- (a) $\frac{100}{11}$ %
- (b) $\frac{109}{11}$ %
- (c) $\frac{100}{9}$ %
- (d) 10%

Q37. The price sugar has increased by 18%, By what percentage can a person decrease the consumption so that, there is no change in the expenditure? (correct to one decimal place)

- (a) 15.9%
- (b) 15.7%
- (c) 15.5%
- (d) 15.3%

Q38. If the income of A is 40% more than the income of B, then by what percentage is B's income less than that income of A?

- (a) $\frac{230}{7}$ %
- (b) 56%
- (c) 25%
- (d) $\frac{200}{7}$ %

Q39. In an examination, 53% of the candidates failed in science and 48% failed in mathematics. If 40% failed in both subjects, what percentage passed in both subjects?

- (a) 51%
- (b) 39%
- (c) 49%
- (d) 43%

Q40. In an examination, 47% passed in science and 51% failed in mathematics. If 42% failed in both subjects, what percentage passed in both subjects?

- (a) 38%
- (b) 42%
- (c) 40%
- (d) 36%

Q41. If the income of A is 24% less than income of B, then what percentage is B's income is more than that of A?

- (a) $\frac{600}{31}$ %
- (b) $\frac{600}{17}$ %
- (c) $\frac{600}{29}$ %
- (d) $\frac{600}{19}$ %

Q42. The price of sugar has increased by 14%. By what percentage can a person decrease the consumption so that there is an increase in the expenditure by 8% only? (correct to one decimal place)

- (a) 5.9%
- (b) 5.3%
- (c) 5.7%
- (d) 5.5%

Q43. The population of a town has increased by 5% at the end of the first year and decreased by 4% at the end of second year. If the population at the end of second year was 5512248, then the population at the beginning of first year was:

- (a) 5572950
- (b) 5468500
- (c) 5300420
- (d) 5623012

Q44. A number which, when increased by 16% becomes 1914. The number is :

- (a) 2220
- (b) 1650
- (c) 1780
- (d) 2010

Q45. What percentage is 3 cm in 12 m?

- (a) 0.25
- (b) 0.025
- (c) 2.5
- (d) 25

Q46. From the monthly income, A spends 24% on household expenses, 16% on entertainment, 12% on education and saves the rest. If savings are Rs. 3,288 the monthly income of A is:

- (a) Rs. 6,323
- (b) Rs. 6,480
- (c) Rs. 6,850
- (d) Rs. 6,654

Q47. 8% of 5 litres is:

- (a) 0.4 ml
- (b) 400 ml
- (c) 40 ml
- (d) 4 ml

Q48. The price of petrol was raised by 15%. By how much percentage should a motorist reduce the consumption of petrol so that the expenditure on it does not increase?

- (a) $9\frac{2}{11}\%$
- (b) $15\frac{3}{13}\%$
- (c) $13\frac{1}{23}\%$
- (d) $6\frac{7}{8}\%$

Q49. A marketing agent earns a commission of 2% on first Rs 2,00,000, 1.5% on next Rs 2,00,000 and 1% on the remaining amount of sales made in a month. If the sales achieved by the agent for the month of April 2018 are Rs 5,68,000, the commission earned is:

- (a) Rs 8,680
- (b) Rs 7,730
- (c) Rs 8,240
- (d) Rs 7,105

Q50. $\frac{9}{40}$ Converted to percentage is:

- (a) $2\frac{1}{2}$
- (b) 2
- (c) 22
- (d) $22\frac{1}{2}$

Q51. What is 34% of 1.2 km?

- (a) 4,080 cm
- (b) 4,08,000 cm
- (c) 408 cm
- (d) 40,800 cm

Q52. Salary of A increased by 8% in the year 2015 as compared to 2014 and decreased by 6% in the year 2016 as compared to 2015. If his salary was Rs. 2,34,778 in 2016, his salary (round of to nearest whole number) in 2014 was:

- (a) Rs. 2,31,263
- (b) Rs. 2,34,987
- (c) Rs. 2,38,347
- (d) Rs. 2,36,402

Q53. What percentage of Rs.124 is Rs.49.60?

- (a) 250
- (b) 16
- (c) 123
- (d) 40

Q54. $\frac{64}{25}$ converted to percentage is:

- (a) 25.6
- (b) 256
- (c) 0.256
- (d) 2.56

Q55. A saves 12% of her income If she spends Rs.2,16,128, her total income is:

- (a) Rs. 2,42,063
- (b) Rs. 2,45,600
- (c) Rs.2,48,000
- (d) Rs. 2,43,560

Q56. 2.4 converted to percentage is:

- (a) 0.24
- (b) 24
- (c) 240
- (d) 2.4

Q57. What percent of 2.4 m is 32 cm?

- (a) 75%
- (b) 7.5%
- (c) $1000\frac{1}{3}\%$
- (d) $13\frac{1}{3}\%$

Q58. In an examination, Shreya score 84 out of 90 in Mathematics, 45 out of 50 in Science, 23 out of 25 in Computer Science and 68 out of 80 in English. In which subject did Shreya score the highest percentage?

- (a) Mathematics
- (b) English
- (c) Science
- (d) Computer Science

Q59. A number which, when increased by 123% becomes 3345. The number is—

- (a) 1245
- (b) 1575
- (c) 1500
- (d) 1775

Q60. A sum of Rs 56960 is divided among A, B and C such that A receives 10% more than B and B receives 12% less than C. What is C's share in the amount?

- (a) 17600
- (b) 9653.2
- (c) 19360
- (d) 20000

Q61. In an examination, 33% passed in science and 57% failed in mathematics. If 41% failed in both subjects, what percentage passed in both subjects?

- (a) 21%
- (b) 23%
- (c) 17%
- (d) 27%

Q62. If the income of A is 27% less than income of B, then what percentage of B's income is more than that of A?

- (a) 36.98%
- (b) 42.85%
- (c) 61.23%
- (d) 49.27%

Q63. The price of sugar is increased by 12%. By what percentage, there should be decrease in consumption so then there is no change in expenditure?

- (a) 10.7%
- (b) 11.4%
- (c) 13.2%
- (d) 12.6%

Q64. In the expression xy^2 the values of both variables x and y are decreased by 20%. By this, the value of expression is decreased by

- (a) 40%
- (b) 80%
- (c) 48.8%
- (d) 51.2%

Q65. A candidate, who gets 30% marks fails by 5 marks while an another candidate who gets 40% marks and thus gets 10 marks more than the pass marks. Minimum marks required to pass the examination is

- (a) 50
- (b) 70
- (c) 100
- (d) 150

Q66. In an examination Ram scored 25 marks less than Rohit. Rohit scored 45 more marks than Sam. Rohan scored 75 marks which is 10 more marks than Sam. Ravi's score is 50 less than maximum marks of the test. What approximate percentage of marks did Ravi score in the examination if gets 34 marks more than Ram?

- (a) 60 %
- (b) 80%
- (c) 70 %
- (d) 85%

Q67. 40% of the employees of a certain company are men and 75% of the men earn more than Rs 25000 per year. If 45% of the company's employees can more than Rs 25000 per year, what fraction of the women employed by the company earn less than or equal to Rs 25000 per year?

- (a) $\frac{1}{2}$
- (b) $\frac{3}{4}$
- (c) $\frac{2}{3}$
- (d) $\frac{4}{5}$

Q68. The price of sugar is increased by 17%. By how much% consumption should be decreased so that there is no change in expenditure?

- (a) 13.69%
- (b) 14.32%
- (c) 14.79%
- (d) 14.52%

Q69. A number is first decreased by 10% and then increased by 10%. The new number is 100 less than the original no , then original number is -

- (a) 100
- (b) 10000
- (c) 1000
- (d) 100000

Q70. ADDA247 is a very popular YouTube channel. It gives live classes from 8.00 am to 12.00 am. 60 advertisements each of 8 seconds and 16 advertisements each of 30 seconds is telecast in between live classes. What is the percentage of time of the working hours in a day devoted for the advertisements?

- (a) 1.5%
- (b) 1.66%
- (c) 2%
- (d) 2.5%

Q71. Price of apple is reduced from Rs. 5 Rs./kg. to 4 Rs./kg then expenditure increases by $33\frac{1}{3}\%$.find the percentage change in consumption.

- (a) 50% decrease
- (b) 80% increase
- (c) $66\frac{2}{3}\%$ increase
- (d) $16\frac{2}{3}\%$ decrease

Q72. What is 40% of 30% of Rs. 1500?

- (a) Rs 250
- (b) Rs 180
- (c) Rs 275
- (d) Rs 210

Q73. If the price of an article rose by 25% every odd year and fell by 20% every even year, then what would be the percentage change after 20 years?

- (a) 10% increase
- (b) 20% decrease
- (c) 25% increase
- (d) No change

Q74. The entry fee in an exhibition was Rs 20. Later this was reduced by 15%, which increased the sale of tickets by 25%. Find the percentage increase in the number of visitors.

- (a) 47%
- (b) 53%
- (c) 42%
- (d) 49%

Q75. If a value is increased twice successively by 37%, then what is the net percentage increase in that value?

- (a) 82.39%
- (b) 81.69%
- (c) 85.39%
- (d) 87.69%

Q76. Each side of rectangular field is diminished by 25%. By how much percent is the area of the field diminished?

- (a) 51.25%
- (b) 57.93%
- (c) 43.75%
- (d) 61.25%

Q77. The entrance ticket of a Qutub Minar exhibition was Rs. 5. Later it was decreased by 20% and thus the sale amount is increased by 44%. What was the percentage increase in the number of visitors?

- (a) 64%
- (b) 24%
- (c) 80%
- (d) 20%

Q78. A person spends $12\frac{1}{2}\%$ of his income on the items of daily use and 30% of the rest on house rent. Thus he has Rs. 2940 left with him. What is his salary (in Rupees)?

- (a) 4800
- (b) 5200
- (c) 4500
- (d) 4000

Q79. After distributing Rs. 1,48,000 in three parts, the first part at the rate of 4% per annum for 5 years, the second part at the rate of 5% per annum for 10 years and the third part at the rate of 10% per annum for 8 years were given on loan. If the amounts in all the three conditions are equal then what are the difference between 1st and 2nd part?

- (a) Rs. 40,000
- (b) Rs. 12,000
- (c) Rs. 60,000
- (d) Rs. 48,000

Q80. The salary of an employee of a company increase by 4% per month. If the salary in August is Rs. 6,300 then what will be his salary in October of the same year?

- (a) Rs. 6,552
- (b) Rs. 6,967
- (c) Rs. 6,814
- (d) Rs. 6,627

Q81. When 75% of a number is added to 75, the result is the same number. Find the number :

- (a) 225
- (b) 270
- (c) 300
- (d) 325

Q82. Two numbers are respectively 20% and 50% of a third number. What percent is the first number of the second ?

- (a) 10%
- (b) 20%
- (c) 30%
- (d) 40%

Q83. A village lost 12% of its goats in a flood. And 5% of remainder died from diseases. If the number of goats left now is 19228. How many goats in the village before the flood?

- (a) 17800
- (b) 23000
- (c) 21000
- (d) 19300

Q84. What should be added 15% of 160 so that the sum may be equal to 25% of 240?

- (a) 24
- (b) 84
- (c) 60
- (d) 36

Q85. If the radius of a right circular cylinder is increased by 30% and height is decreased by 27%. Find the percentage increase/decrease in volume?

- (a) Increase 23.37%
- (b) Decrease 37.5%
- (c) Decrease 14.77%
- (d) Increase 12.5%

Q86. Two numbers are respectively 12.5% and 25% more than a 3rd number. The first number as a percentage of the second number is:

- (a) 50 %
- (b) 60%
- (c) 75 %
- (d) 90%

Q87. If the price of potatoes is reduced by 25%, one can buy 6.25kg more for Rs.100. The reduced price of potatoes is

- (a) Rs. 3 per kg
- (b) Rs. 3.50 per kg
- (c) Rs. 4 per kg
- (d) Rs. 4.50 per kg

Q88. John spends 75% of his salary. If his salary is increased by 21% and his saving is increased by 16% then by how much percentage his expenditure will increase.

- (a) 21.9%
- (b) 22.6%
- (c) 20.2%
- (d) 19.8%

Q89. If a student multiplied a number by $\frac{9}{13}$ instead of $\frac{11}{39}$. Find the percentage error in the calculation.

- (a) 88.88%
- (b) 111.11%
- (c) 113.26%
- (d) 145.45%

Q90. Ram started working on a project. If his work-time per day is increased by 8% and salary per hour increased by 50%, then by how much percent his daily income would be increased?

- (a) 58%
- (b) 62%
- (c) 63%
- (d) 53%

Q91. In a town one male is married to one woman and vice-versa. If 60% male and 40% female are married. How much % people are unmarried?

- (a) 48%
- (b) 15%
- (c) 52%
- (d) all are married.

Q92. $\frac{52}{55}$ Converted to percentage is?

- (a) $92\frac{8}{11}$
- (b) $93\frac{7}{11}$
- (c) $94\frac{6}{11}$
- (d) $98\frac{2}{11}$

Q93. A is 30% more than B and 25% less than C. How much % is C more than B?

- (a) 53.33%
- (b) 73.33%
- (c) 66.66%
- (d) 79.55%

Q94. The Raw material and manufacturing cost formed individually 60% and 40% of the total cost and the profit 33.33% of the Raw Material. If the cost of raw material is increased 6.66% and cost of manufacture increased by 30% and the selling price is increased 60% then new profit percentage is.

- (a) 58%
- (b) 60%
- (c) 65.5%
- (d) 68.7%

Q95. If 25% of P = x, then x% of 20 is equal to.

- (a) 4% of P
- (b) 5% of P
- (c) 2% of P
- (d) 8% of P

Q96. A number first decreased by 83.33% and then increased by 37.5%. The number so obtained is 55.5 less than the original number. The original number is

- (a) 70.2
- (b) 72.0
- (c) 76.0
- (d) 66.8

Q97. If 20% of a = b, then b% of 20 is equal to:

- (a) 4% of a
- (b) 2% of a
- (c) 16% of a
- (d) 8% of a

Q98. A sells a car to B at 10% loss. If B sells it for Rs. 5,40,000 and gains 20%, the cost price of the car for A was:

- (a) Rs. 5,10,000
- (b) Rs. 5,40,000
- (c) Rs. 5,20,000
- (d) Rs. 5,00,000

Q99. Original breadth of a rectangular box is 20 cm. The box was then remade in such a way that its length increased by 30% but the breadth decreased by 20% and the area increased by 100 cm². What is the new area of the box?

- (a) 2500 cm²
- (b) 2200cm²
- (c) 2400cm²
- (d) 2600 cm²

Q100. Divide Rs 8, 288 between A, B and C such that the proportion of their shares is 5 : 7 : 9. The share of C is: (cpo 2018 pyq set 10 Q.117)

- (a) Rs 2,032
- (b) Rs 3, 552
- (c) Rs 3,872
- (d) Rs 2,612

Q101. What is the mean proportional of 135 and 540?

- (a) 360
- (b) 180
- (c) 270
- (d) 145

Q102. What is the ratio of the mean proportion between 4.9 and 16.9 and third proportion between 3 and 7?

- (a) 61 : 59
- (b) 11 : 13
- (c) 43 : 57
- (d) 39 ; 70

Q103. A man ordered 4 pairs of black socks and some pairs of brown socks. The price of a black socks is double that of a brown pair. While preparing the bill the clerk interchanged the number of black and brown pairs by mistake which increased the bill by 50%. The ratio of the number of black and brown pairs of socks in the original order was :

- (a) 2 : 1
- (b) 1 : 4
- (c) 1 : 2
- (d) 4 : 1

Q104. In two types of stainless steel, the ratio of chromium and steel are 2 : 11 and 5 : 21 respectively. In what proportion should the two types be mixed so that the ratio of chromium to steel in the mixed type becomes 7: 32?

- (a) 2 : 3
- (b) 3 : 4
- (c) 1 : 2
- (d) 1 : 3

Q105. If $a : b = c : d = e : f = 1 : 2$, then find the value of $(pa + qc + re) : (pb + qd + rf)$

- (a) $p : (q + r)$
- (b) $(p + q) : r$
- (c) 2 : 3
- (d) 1 : 2

Q106. A student is given 4 marks for each correct answer in an exam and for each wrong answer 2 marks is deducted. If a student answered all 75 questions and fetched 150 marks then the number of questions he answers correctly was :

- (a) 45
- (b) 50
- (c) 55
- (d) 48

Q107. If $a:b = 3/2:1/3$ $b:c = 4/9 : 5/3$ $c:d = 1/2 : 1/8$ then $a:b:c:d = ?$

- (a) 72:16:60:15
- (b) 72:32:60:15
- (c) 36:16:15:60
- (d) 36:16:60:15

Q108. Find the third proportion of $(a^2 - b^2)$ and $(a-b)$?

- (a) $\frac{a-b}{a+b}$
- (b) $\frac{a^2 + b^2}{a - b}$
- (c) $\frac{a+b}{a-b}$
- (d) $\frac{a^2 - b^2}{a^2 - b^2}$

Q109. If $a : b = 2/3 : \frac{5}{6}$ $b : c = 3/5 : \frac{1}{4}$

Find $a : b : c$

- (a) 25 : 36 : 36
- (b) 48 : 60 : 25
- (c) 25 : 48 : 36
- (d) 72 : 25 : 60

Q110. A sum of Rs 15000 is invested partly at 12% per annum and the remaining at 10% per annum simple interest. If the total interest at the end of 2 yrs is Rs 3344 how much money was invested at 10% per annum?

- (a) Rs 6,200
- (b) Rs 6600
- (c) Rs 6400
- (d) Rs 6500

Q111. A borrowed a loan from B at 8% simple interest for 2 years and repaid the loan with interest totaling Rs 191864. The amount of loan taken A is :

- (a) Rs 166540
- (b) Rs 168920
- (c) Rs 165400
- (d) Rs 164492

Q112. In what time will a sum double itself at 8% p.a. simple interest?

- (a) 5 years
- (b) 6 years
- (c) 8 years
- (d) 12.5 years

Q113. Simple interest on a certain sum at certain rate of interest is 529% of the sum. If the number represents rate percent and time in years be equal then the rate of interest is—

- (a) 24.5%
- (b) 23%
- (c) 23.12%
- (d) 22.23%

Q114. The simple interest on a sum of money is $\frac{1}{9}$ of the principal and the number of years is equal to the rate percent per annum. Find Rate percent per annum -

- (a) $\frac{100}{9} \%$
- (b) $\frac{10}{3} \%$
- (c) $\frac{5}{3} \%$
- (d) None of these

Q115. A person invests Rs. 12,000 as fixed deposit at a bank at the rate of 10% per annum simple interest. But due to some pressing needs he has to withdraw the entire money after 3 years, for which the bank allowed him a lower rate of interest. If he gets Rs. 3,320 less than what he would have got at the end of 5 years, the rate of interest allowed by the bank is

- (a) $7\frac{5}{9} \%$
- (b) $7\frac{4}{9} \%$
- (c) $7\frac{8}{9} \%$
- (d) $8\frac{7}{9} \%$

Q116. A sum of Rs. 13,440 was distributed in two parts. The first part given on loan at 4% per annum for three years while the second part at 6% for 5 years. If interests accrued on both the parts were equal, then what was the difference between the parts?

- (a) Rs. 3840
- (b) Rs. 3640
- (c) Rs. 9600
- (d) Rs. 5760

Q117. If the simple interest on Rs. 1 for 1 month is 1 paisa, then find the rate percent per annum?

- (a) 10%
- (b) 8%
- (c) 12%
- (d) 6%

Q118. A man invests in three different plans at 10%, 12% and 15% per annum respectively for 6 years, 10 years and 12 years. If the end of each plan, he gets equal simple interest. The sum of money invested will be in the ratio (cpo 2019_15 sets_set 10 Q.145)

- (a) 6 : 3 : 2
- (b) 2 : 3 : 4
- (c) 3 : 4 : 6
- (d) 3 : 4 : 2

Q119. A sum of Rs 20,000 is invested for 15 months at the interest of 10% per annum compounded half yearly. What is the percentage gain, correct to one decimal place, at the end of 15 months?

- (a) 12.5%
- (b) 13.6%
- (c) 13.0%
- (d) 13.4%

Q120. A shopkeeper marks the price of an article such that after giving a discount of 30%, he gains 20%. If the marked price of the article is Rs. 480, what is the cost price of the article?

- (a) Rs. 280
- (b) Rs. 300
- (c) Rs. 250
- (d) Rs. 260

Q121. The successive discounts of 30%, 25% and 15% is equivalent to a single discount of:

- (a) 60.275%
- (b) 54.625%
- (c) 55.375%
- (d) 60.725%

Q122. The single discount equivalent to two successive discounts of 12% and 8% is: (rounded off)

- (a) 18%
- (b) 19%
- (c) 20%
- (d) 17%

Q123. A trader marks the products 25% above the cost price and allows a discount of 15%. If the cost price is Rs 2080, then the selling price is:

- (a) Rs 2210
- (b) Rs 2392
- (c) Rs 2600
- (d) Rs 1809

Q124. A manufacturer sells the product to a wholesaler at 6% profit, the wholesaler sells the product to a retailer at 8% profit and the retailer sells the product to his customer at 10% profit. The price paid by the customer is Rs 31482. The cost of the product to the manufacturer is :

- (a) Rs 26524
- (b) Rs 25000
- (c) Rs 26980
- (d) Rs 28306

Q125. A sells 12 bicycles at a profit of Rs. 516 per bicycle and sells 3 bicycles at a loss of Rs. 129 per bicycle. If the total profit percentage on all the bicycles sold is 15%, the cost price per bicycle is:

- (a) Rs. 2960
- (b) Rs. 3870
- (c) Rs. 4440
- (d) Rs. 2580

Q126. A mobile cover costing Rs. 264 is available at a discount of 12%. What would be the selling price of 4 such mobile covers?

- (a) Rs. 936.72
- (b) Rs. 929.28
- (c) Rs. 940.46
- (d) Rs. 934.04

Q127. A trader marks the cost of a car 24% above its price and allows a discount of 15%. If the discount is Rs. 2,23,200, then the cost price of the car is:

- (a) Rs. 11,60,000
- (b) Rs. 15,80,000
- (c) Rs. 14,25,000
- (d) Rs. 12,00,000

Q128. The marked price of a dress is Rs 2,340 which is 25% above the cost price. If the dress is sold at a profit of 10%, the profit earned on the dress is:

- (a) Rs 234
- (b) Rs 187.20
- (c) Rs 197
- (d) Rs 175.50

Q129. A trader gives a discount of 4% for purchases above Rs 25,000, 6% for purchases above Rs 35,000 and 8% for purchases above Rs 50,000. If an item is purchased for Rs 38,500, what would be the amount of discount?

- (a) Rs 3,740
- (b) Rs 1,810
- (c) Rs 3,080
- (d) Rs 2,310

Q130. The average of 16 numbers is 48. The average of first 7 numbers is 45 and the average of the next 6 numbers is 52. If the 14th number is 11 less than the 15th number and is 5 more than 16th number, then the average of the 15th and 16th number is:

- (a) 47.5
- (b) 48.5
- (c) 49
- (d) 48

Q131. In a class of 50 students, 40% are girls. The average weight of the boys is 62 kg and that of the girls is 58 kg. What is the average weight (in kg) of the whole class?

- (a) 60.4
- (b) 60.2
- (c) 60.8
- (d) 60.6

Q132. The average of 18 members is 52. The average of the first 8 members is 62 and the average of the next 7 numbers is 45. If the 16th number is 6 less than the 17th number and the 17th number is one more than the 18th number, then what is the average of the 16th and 18th numbers?

- (a) 39
- (b) 39.5
- (c) 40.5
- (d) 40

Q133. In a class of 45 students, 40% are girls and the remaining are boys. The average marks of the girls is 64 and that of the boys is 60. What is the average marks of the whole class?

- (a) 62.4
- (b) 61.8
- (c) 61.6
- (d) 62.9

Q134. In a class of 70 students, 40% are girls and remaining are boys. The average marks of the boys are 63 and that of the girls are 70. What is the average marks of the whole class?

- (a) 65.4
- (b) 65.8
- (c) 65.2
- (d) 64.8

Q135. The average of 22 numbers is 52. The average of the first 8 numbers is 48 and the average of next 11 numbers is 54. The 20th number is 7 less than the 21st number and 21st number is 4 more than 22nd number. What is the average of the 20th and 22nd numbers?

- (a) 52
- (b) 52.5
- (c) 53
- (d) 53.5

Q136. In a class of 45 students, 40% are boys and rest are girls. The average weight of the girls is 55 kg and that of boys is 65 kg. What is the average weight (in kg) of the whole class?

- (a) 58 kg
- (b) 69 kg
- (c) 61 kg
- (d) 59 kg

Q137. The average of 20 numbers is 65. The average of the first 9 numbers is 68 and the average of next 8 numbers is 62. If the 18th number is 3 more than 19th number and 9 less than 20th number, then what is the average of 19th and 20th number?

- (a) 66
- (b) 64.5
- (c) 65
- (d) 65.5

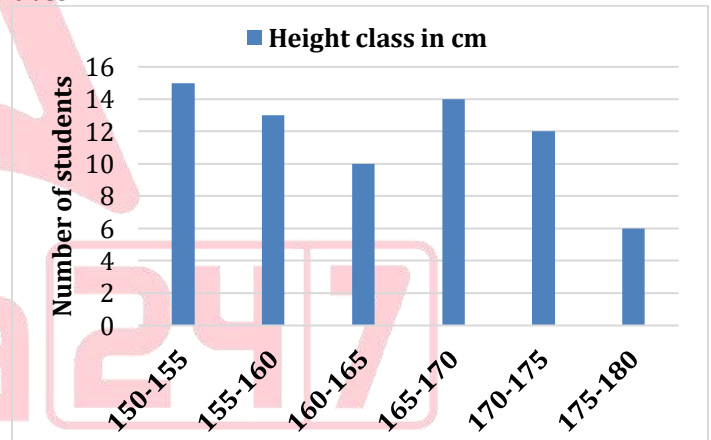
Q138. The average age of a cricket team of eleven players is 27 years. If two more players are included in the team the average becomes 26 years, then the average age (in years) of the two included players is :

- (a) 20.5
- (b) 24.5
- (c) 26
- (d) 27

Q139. The average of all prime numbers between 10 and 25 is :

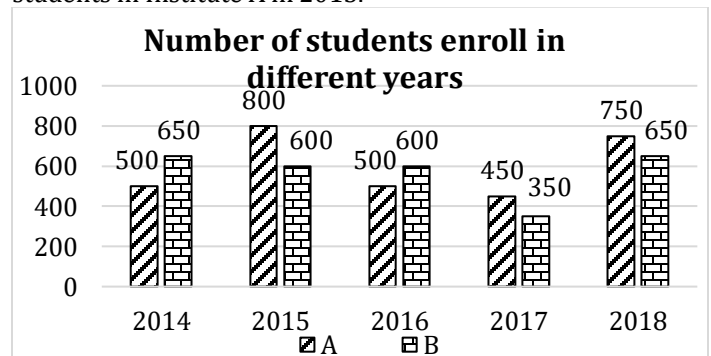
- (a) 14.7
- (b) 15.3
- (c) 18.67
- (d) 16.6

Q140. In the given histogram, which class is the median class?



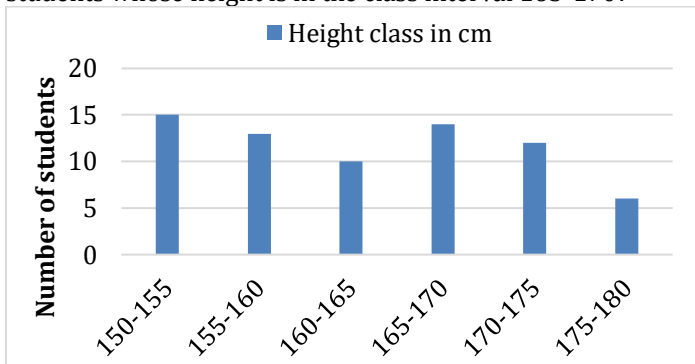
- (a) 150-155
- (b) 155-160
- (c) 160-165
- (d) 165-175

Q141. In the given bar graph, the percentage decrease in the number of students in Institute A in 2016 is what percent of students in Institute A in 2015.



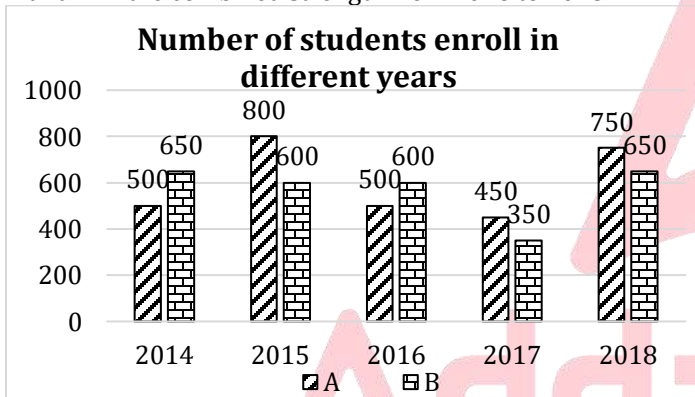
- (a) 37.5%
- (b) 35.5%
- (c) 40.5%
- (d) 39.5%

Q142. In the given histogram, what is the percentage of students whose height is in the class interval 165-170?



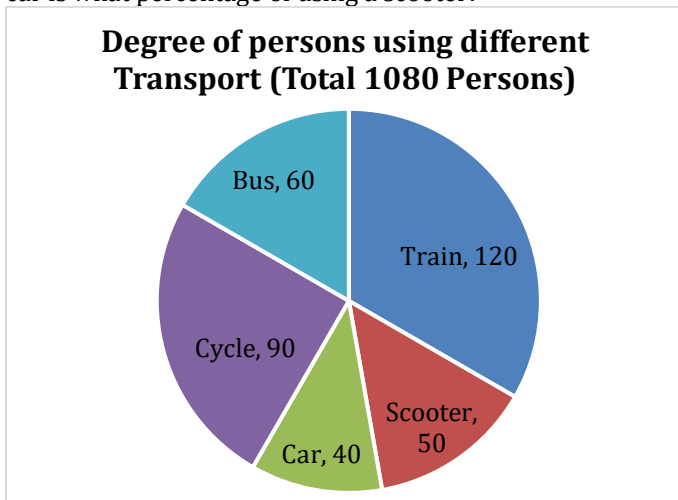
- (a) 25%
- (b) 20%
- (c) 18%
- (d) 15%

Q143. In the given bar graph, what is the ratio of students of A and B in the combined strength from 2016 to 2018?



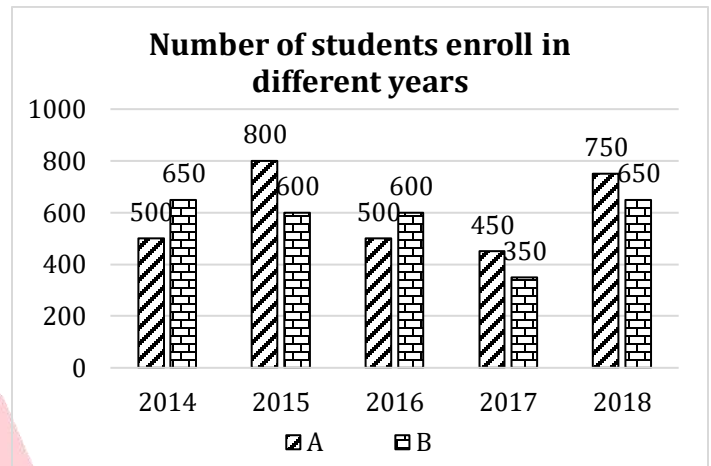
- (a) 19 : 20
- (b) 20 : 19
- (c) 17 : 16
- (d) 21 : 23

Q144. In the given pie-chart, the number of persons using a car is what percentage of using a scooter?



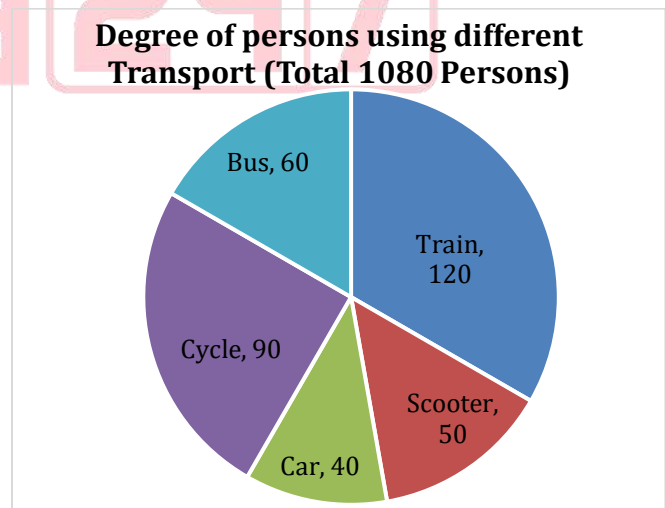
- (a) 60%
- (b) 75%
- (c) 80%
- (d) 50%

Q145. In the given bar graph, the number of students enrolled in institute B in the year 2016 is what percentage of students enrolled in institute A in 2016?



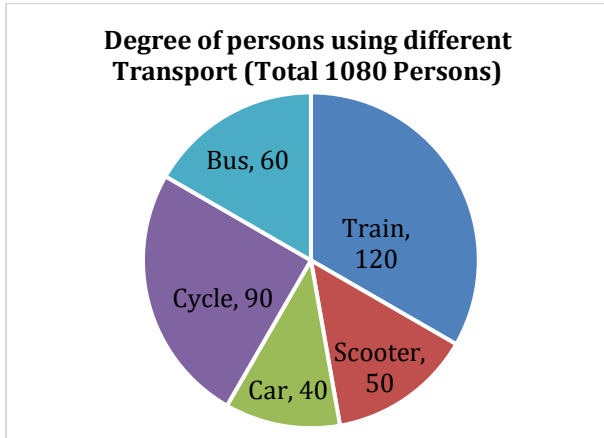
- (a) 120%
- (b) $\frac{250}{3}\%$
- (c) 85%
- (d) $\frac{325}{6}\%$

Q146. In the given pie chart, what is the ratio of the total number of persons using train and car together to the total number of persons using other modes of transport to reach their workplace?



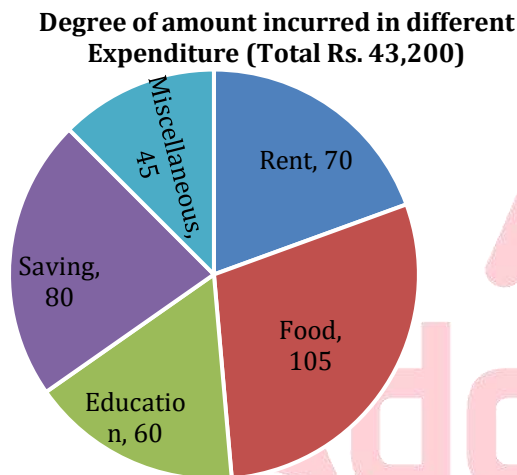
- (a) 3 : 5
- (b) 5 : 3
- (c) 5 : 6
- (d) 4 : 5

Q147. In the given pie-chart, how many persons are using train to reach their workplace?



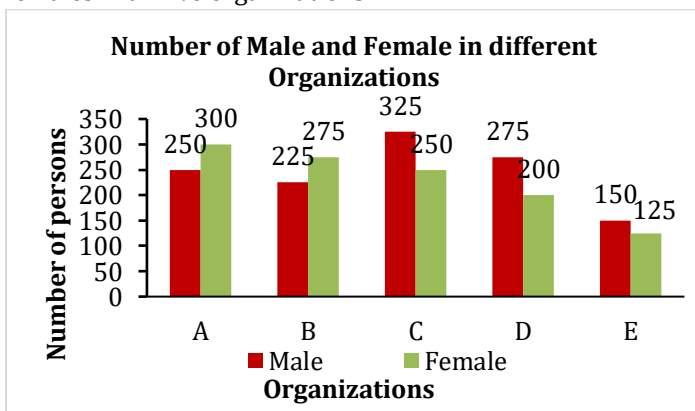
- (a) 380
- (b) 400
- (c) 320
- (d) 360

Q148. In the given pie-chart, the amount spent on education is what percent of the savings?



- (a) 80%
- (b) 60%
- (c) 70%
- (d) 75%

Q149. In the given bar graph, what is the average number of females in all five organizations?



- (a) 245
- (b) 235
- (c) 230
- (d) 225

Q150. A, B and C started a business by investing Rs 55,000, Rs 65,000 and Rs 75,000 respectively. A is a working partner and gets 20% of the profit and the remaining is distributed in the proportion of their investments. If total profit is Rs 87750 what is the share of A?

- (a) Rs 27,000
- (b) Rs 37500
- (c) Rs 23,000
- (d) Rs 37,350

Q151. A, B and C started a business by investing Rs 55,000, Rs 65,000 and Rs 75,000 respectively. A is a working partner and gets 20% of the profit as working allowance and remaining is distributed in the proportion of their investment. If the money received by C is Rs 27,000 what is the total profit?

- (a) Rs 85,500
- (b) Rs 87,750
- (c) Rs 76,850
- (d) Rs 70,200

Q152. A, B and C started a business by investing Rs 27,500, Rs 32,500 and Rs 37,500 respectively. A is a working partner and gets 20% of profit as working allowance and the remaining is distributed in proportion of their investments. If the money received by C is Rs 13,500, what is total profit?

- (a) Rs 35,100
- (b) Rs 38,425
- (c) Rs 42,750
- (d) Rs 43,875

Q153. A, B and C started a business by investing Rs. 1,37,500 and Rs. 1,62,500 and Rs. 1,87,500 respectively. A is a working partner and gets 20% of the profit as working allowance and remaining is distributed in the proportion of their investment. If the total profit is Rs. 2,19,375, what is the share of C? Q.139)

- (a)Rs. 88,600
- (b) Rs. 64,500
- (c) Rs. 67,500
- (d) Rs. 62,700

Q154. A, B and C are partners. They share profits in the ratio of 5:3:6. If A earns Rs 192380 as his share of profit, then the share of C is :

- (a) Rs 230856
- (b) Rs 160317
- (c) Rs 115428
- (d) Rs 82449

Q155. Three partners A, B and C, share profits and losses in the ratio of 3 : 4 : 7. If the profit for the year before charging 30% tax is 1, 10, 166 what is B's share of profit after tax?

- (a) Rs. 22,033.20
- (b) Rs. 24,673.10
- (c) Rs. 31,476
- (d) Rs. 9,442.80

Q156. A, B and C are partners in a firm sharing profit in the ratio of 3 : 4 : 5. If they set aside 4% of the profits as emergency fund and shared the rest of the profit and B gets his share of profit as Rs 1,81,400, the amount of profit set aside for emergency fund is:

- (a) Rs 27,845
- (b) Rs 18,140
- (c) Rs 22,675
- (d) Rs 24,500

Q157. Ram and Pankaj started a partnership business investing in the ratio of 7 : 42. Atul joined them after 5 months with an amount equal to $\frac{2}{21}$ th of Pankaj. What was their profit (in Rs.) at the end of the year if Atul got Rs. 5060 as his share?

- (a) 1, 10, 420
- (b) 1, 11, 320
- (c) 98,720
- (d) 1,05,472

Q158. A and B enter into a partnership by making investment in the ratio 1 : 2, 5% of the total profit goes to charity. If B's share is Rs 760, then total profit is -

- (a) Rs 2400
- (b) Rs 1800
- (c) Rs 1200
- (d) Rs. 1560

Q159. A started a business with a capital of Rs. 1,00,000. One year later, B joined him with a capital of Rs. 2,00,000. At the end of 3 years from the start of the business, the profit earned was 84,000. The share of B in the profit exceeded the share of A by

- (a) Rs. 10,000
- (b) Rs. 12,000
- (c) Rs. 14,000
- (d) Rs. 15,000

Q160. A mixture A having 18% concentration of acid is mixed with another mixture B having 39% concentration of acid. If the resultant mixture has 27% of the concentration of acid, then find the ratio in which A and B were mixed.

- (a) 4 : 3
- (b) 7 : 6
- (c) 9 : 8
- (d) 2 : 1

Q161. 40 liters of 70% concentration of acid solution is added to 35 liters to 40% concentration of acid solution. What is the concentration of acid in the new solution?

- (a) $52\frac{4}{5}\%$
- (b) 56%
- (c) $51\frac{2}{3}\%$
- (d) 53%

Q162. Two equal containers are filled with a mixture of milk and water. If the concentration of water in both the containers are 40% and 45% respectively, then find the ratio of milk in both the containers:

- (a) 14 : 13
- (b) 19 : 14
- (c) 12 : 11
- (d) 15 : 16

Q163. A and B are two solutions of acid and water. The ratio of water and acid in A and B are 11:13 and 5:7, respectively. If x litres of A is mixed with y litres of B, then the ratio of water and acid in the mixture becomes 4:5. What is x:y ?

- (A) 2 : 1
- (B) 7 : 9
- (C) 7 : 3
- (D) 5 : 9

Q164. In what ratio coffee at Rs. 240 per kg be mixed with coffee at Rs. 290 per kg so that on selling the mixture at Rs. 300 per kg, there is a profit of 20%?

- (a) 3 : 7
- (b) 7 : 3
- (c) 10 : 13
- (d) 12 : 11

Q165. In a vessel ratio of milk and water is 7 : 3. When x liters milk is added then the ratio of milk and water becomes 17 : 6. Now in this mixture 3.5 liters milk and 3 liters water are added then the ratio of milk and water becomes 5 : 2. Find the value of x.

- (a) 5 lt
- (b) 7 lt
- (c) 6 lt
- (d) 8 lt

Q166. How many kg of the rice costing Rs. 40 per kg should be mixed by 10 kg rice costing Rs. 20 per kg so that by selling the mixture at Rs. 35.4 per kg there is a gain of 18% ?

- (a) 11 kg
- (b) 10 kg
- (c) 12 kg
- (d) 13 kg

Q167. In what ratio should coffee powder costing Rs. 2200 per kg be mixed with coffee powder costing Rs. 1700 per kg so that the cost of the mixture is Rs. 2000 per kg?

- (a) 2 : 3
- (b) 3 : 2
- (c) 4 : 5
- (d) 5 : 7

Q168. There are two liquids that are mixed in a ratio of 5 : 6 and the mixture is sold at Rs. 18 per litre at a 20% profit. If the 1st liquid cost Rs. 5 more than that of 2nd, what is the cost price per litre of the 2nd liquid?

- (a) 18.25 per/litre
- (b) 17.81 per/litre
- (c) 12.72 per/litre
- (d) 15.17 per/litre

Q169. A milkman mixes water with milk. He sells the mixture at CP of pure milk and thus he gains 48.33%. In what ratio he mixes milk and water?

- (a) 31 : 29
- (b) 29 : 31
- (c) 29 : 60
- (d) 60 : 29

Q170. A part of the journey is covered in 31.5 minutes at 80 km/h and the remaining part in 16 minutes at 75 km/h. The total distance of the journey is:

- (a) 45 km
- (b) 38 km
- (c) 62 km
- (d) 54 km

Q171. A train 100 m long running at uniform speed crosses a station which is 500 m long in 25 seconds. How long will it take for the train to pass a station that is 380 m long?

- (a) 21 seconds
- (b) 20 seconds
- (c) 19 seconds
- (d) 22 seconds

Q172. A train covers a distance of 576 km at a certain speed. If the speed is decreased by 24 km/hr, it will take 2 hours more to cover the same distance. Find $33\frac{1}{3}\%$ of original speed.

- (a) 32 km/hr
- (b) 24 km/hr
- (c) 38 km/hr
- (d) 28 km/hr

Q173. If a train runs with the speed of 78 km/hr, it reaches its destination late by 25 minutes. However, if its speed is 91 km/hr, it is late by 10 minutes only. The right time for the train to cover its journey is -

- (a) 60 minutes
- (b) 80 minutes
- (c) 75 minutes
- (d) 92 minutes

Q174. A motorist and a cyclist start from A to B at the same time. AB is 18 km. The speed of motorist is 15 km per hr. more than the cyclist. After covering half the distance, the motorist rests for 30 minutes and there after his speed is reduced by 20%. If the motorist reaches the destination B, 15 minutes earlier than that of the cyclist, then find the speed of the cyclist.

- (a) 16 kmph
- (b) 12 kmph
- (c) 14 kmph
- (d) 15 kmph

Q175. A man covered a distance of 3990 km partly by air, partly by sea and remaining by land. The time spent in air, on sea and on land is in the ratio 1 : 16 : 2 and the ratio of average speeds is 20 : 1 : 3 respectively. If total average speed is 42 km per hr, find the distance covered by sea.

- (a) 1720 km
- (b) 1620 km
- (c) 1520 km
- (d) 1820 km

Q176. The speed of a car increases by 2 km/h after every one hour. If the distance travelled in the first one hour was 35 km, what was the total distance travelled in 12 hours?

- (a) 558 km
- (b) 650 km
- (c) 560 km
- (d) 552 km

Q177. A boy increases his speed to $\frac{9}{5}$ times of his original speed. By this, he reaches his school 30 minutes before the usual time. How much time does he takes usually?

- (a) 67.50 minutes
- (b) 67.10 minutes
- (c) 67.75 minutes
- (d) 67.25 minutes

Q178. A train starts from Jaipur at 9:00 am and reaches Delhi at 3:00 pm. Another train starts from Delhi at 11:00 am and reaches jaipur 4:00 pm. Find the meeting time.

- (a) 12: 40 pm
- (b) 12: 20 pm
- (c) 12:36 pm
- (d) 12:49 pm

Q179. Two trains having same length cross an electric pole in 33 secs and 30 secs respectively. Then, in how much time they will cross each other if they are moving in opposite directions?

- (a) 13.7 secs
- (b) 31.4 secs
- (c) 9.8 secs
- (d) 15.6 secs

Q180. A boat can go 30 km downstream and 24 km upstream in 2 hrs 27 minutes. Also, it can go 20 km downstream and 8 km upstream in 74 minutes. What is the speed of the boat in still water in km/h?

- (a) 18
- (b) 20
- (c) 24
- (d) 22

Q181. A boat can go 30 km downstream and 24 km upstream in 2 hrs 27 minutes. Also, it can go 10 km downstream and 4 km upstream in 37 minutes. What is the speed of the boat upstream (in km/h)?

- (a) 24
- (b) 18
- (c) 22
- (d) 20

Q182. A boat can go 20 km downstream and 30 km upstream in 2 hours 20 minutes. Also, it can go 10 km downstream and 8 km upstream in 49 minutes. What is the speed of boat downstream in km/h?

- (a) 18
- (b) 20
- (c) 16
- (d) 24

Q183. A boat can go 10 km downstream and 8 km upstream in 49 minutes. Also it can go 12 km downstream and 4 km upstream in 42 minutes. What is the speed of stream in km/h?

- (a) 1.5
- (b) 1
- (c) 2
- (d) 2.5

Q184. The speed of a boat in still water is 6 km/h. If it takes four times as much time as going upstream as in going the same distance downstream, the speed of the stream is:

- (a) 5 km/h
- (b) 4.2km/h
- (c) 3.6 km/h
- (d) 2.5km/h

Q185. A person can row $7\frac{1}{2}$ km an hour in still water. He finds that it takes twice the time to row upstream than the time to row downstream. The speed of the stream is:

- (a) 2 km/hour
- (b) 2.5 km/hour
- (c) 3 km/hour
- (d) 4 km/hour

Q186. The ratio of speed of a motorboat to that of the current of water is 55:7. The boat goes along with the current in 6 hours 24 minutes. It will come back in.

- (a) 9.3 hours
- (b) 7.3 hours
- (c) 11.3 hours
- (d) 8.2 hours

Q187. Two boats A and B start towards each other from two places, 273 km apart. Speed of the boats A and B in still water are 22 km/hr. and 17 km/hr. respectively. If A proceeds down and B up the stream, then will meet after how many hours?

- (a) 7 hr.
- (b) 6.4 hr.
- (c) 7.5 hr.
- (d) 6 hr.

Q188. A swimmer goes 6 km in one hour in still water but it takes thrice as much time in going the same distance against the current. The speed of the current (in km/hr) is

- (a) 4
- (b) 5
- (c) 3
- (d) 2

Q189. A Dolphin (in still water) can swim at a speed of 13 km/h. If the speed of the stream is 4 km/h, then how much time will the dolphin take to swim 68 km downstream?

- (a) 2 hours
- (b) 8 hours
- (c) 3 hours
- (d) 4 hours

Q190. If A had worked alone, he would have taken 63 hours to do the task. What is B's share, if A and B together on a task finishing it in 36 hours and they get paid Rs. 5,950 for it?

- (a) 3600
- (b) 3400
- (c) 2750
- (d) 2550

Q191. The efficiencies of A, B and C are in the ratio 7 : 6 : 9. Working together, they can complete a piece of work in 135 days. In how many days will, C alone be able to complete 65% of that work?

- (a) $202\frac{3}{5}$ days
- (b) $214\frac{1}{2}$ days
- (c) $197\frac{1}{2}$ days
- (d) 211 days

Q192. A and B together can do a piece of work in 30 days, B and C together can do it in 20 days. A starts the work and works on it for 5 days, then B takes it up and works for 15 days. Finally, C finishes the work in 18 days. In how many days can C do the work alone ?

- (a) 40 days
- (b) 24 days
- (c) 120 days
- (d) 60 days

Q193. Two men undertake a job for Rs. 960. They can complete it in 16 days and 24 days respectively. They work along with a third man and take 8 days to complete it. Then the share of the third man should be

- (a) Rs. 555
- (b) Rs. 165
- (c) Rs. 160
- (d) Rs. 150

Q194. Working together printers A and B would finish a task in 48 minutes A alone would finish the task in 120 minutes. How many pages does the task contain if printer B prints 10 page a minute more than printer A?

- (a) 2800
- (b) 2000
- (c) 2400
- (d) 1600

Q195. 3 men, 4 women and 6 children can complete a work in 7 days. A woman does double the work a man does and a child does half the work a man does. How many women alone can complete this work in 7 days?

- (a) 6
- (b) 8
- (c) 9
- (d) 7

Q196. A can do a work in 20 days, while B can do the same work in 25 days. They started the work jointly. Few days later C also joined them and thus all of them completed the whole work in 10 days. All of them were paid total of Rs. 700. What is the share of C?

- (a) Rs. 75
- (b) Rs. 55
- (c) Rs. 70
- (d) Rs. 65

Q197. A earns Rs. 40 per hour and works for 12 hours. B earns Rs. 60 per hour and works for 10 hours. Find the ratio of their per day wages.

- (a) 4 : 5
- (b) 5 : 4
- (c) 15 : 4
- (d) 6 : 5

Q198. 2 Woman, 5 Men, 6 Children can complete a work in 9 days. A woman does three times the work a man does and a child does half the work of woman does. How many women alone can complete this work in 5 days. (cpo 2019_15 sets_ set 15 Q.110)

- (a) 10
- (b) 12
- (c) 8
- (d) 14

Q199. Construction of a road was entrusted to a civil engineer. He was to finish the work in 124 days for which he employed 120 workmen. Two-third of the work was completed in 64 days. How many workmen can be removed now without affecting the completion of the work on time ?

- (a) 80
- (b) 64
- (c) 56
- (d) 24

Q200. Two pipes A and B can fill a tank in 6 hrs and 9 hrs respectively. They are opened alternately for 1 hr each, starting with pipe A first. In how many hours will the tank be filled?

- (a) 5
- (b) 4
- (c) 6
- (d) 7

Q201. Pipes A and B can fill a tank in 6 hrs and 9 hrs respectively and pipe C can empty the full tank in 12 hrs. If all three pipes are opened together when a tank is empty, in how many hours will 35% of the tank be filled?

- (a) 1.9
- (b) 1.5
- (c) 1.6
- (d) 1.8

Q202. Two pipes A and B can fill an empty tank in 8 hrs and 12 hrs respectively. They are opened alternately for 1 hr each, starting with pipe A first. In how many hrs will the empty tank be filled?

- (a) $9\frac{1}{3}$
- (b) 9
- (c) $9\frac{1}{2}$
- (d) $9\frac{1}{4}$

Q203. Pipes A and B can fill a tank in 6 hrs and 8 hrs respectively and pipe C can empty the full tank in 12 hrs. All three pipes are opened together, but pipe A is closed after 3 hrs. In how many hrs will the remaining part of the tank be filled?

- (a) 9
- (b) 12
- (c) 11
- (d) 10

Q204. Two pipes A and B can fill an empty tank in 10 hours and 16 hours respectively. They are opened alternately for 1 hour each, starting with pipe A first. In how many hours, the empty tank will be filled?

- (a) $12\frac{1}{3}$
- (b) $12\frac{1}{8}$
- (c) $12\frac{1}{4}$
- (d) $12\frac{1}{6}$

Q205. Pipes A and B can fill a tank in 12 hours and 16 hours respectively and pipe C can empty the full tank in 24 hours. All three pipes are opened together, but after 4 hours pipe A is closed. In how many hours from the beginning the tank be filled?

- (a) 24
- (b) 28
- (c) 30
- (d) 32

Q206. Pipes A and B can fill a tank in 16 hours and 24 hours respectively whereas pipe C can empty the full tank in 40 hours. All three pipes are opened together, but pipe A is closed after 8 hours. After how many hours, the remaining part of tank will be filled?

- (a) 28
- (b) 22
- (c) 26
- (d) 30

Q207. Two pipes A and B can fill a tank in 16 hours and 20 hours respectively. They are opened alternatively for 1 hour each, starting with pipe A first. In how many hours will the empty tank be filled?

- (a) $17\frac{3}{5}$
- (b) $17\frac{1}{5}$
- (c) $17\frac{1}{4}$
- (d) $17\frac{3}{4}$

Q208. One-fourth of a tank can be filled in 3 hours by pipe A and one-third of the same tank can be filled in 2 hours by pipe B. How long will it take for the tank to be filled if both the pipes are kept open?

- (a) 2h
- (b) $2\frac{1}{2}h$
- (c) 5h
- (d) 4h

Q209. A tank can be filled by pipe A in 5 hours and emptied by pipe B in 8 hours respectively. How much time will it take for the tank to be half full?

- (a) $12\frac{1}{3}h$
- (b) $3\frac{1}{3}h$
- (c) $8\frac{2}{3}h$
- (d) $6\frac{2}{3}h$

Q210. 5 cubes, each of edge 4 cm, are joined end to end. What is the total surface area of the resulting cuboid?

- (a) 352 cm^2
- (b) 486 cm^2
- (c) 720 cm^2
- (d) 526 cm^2

Q211. Find the inner surface area of four walls of a rectangular room with length 7m breadth 5 m and height 3.5 m.

- (a) 168 m^2
- (b) 84 m^2
- (c) 126 m^2
- (d) 42 m^2

Q212. The base of an isosceles triangle is 6 cm and its perimeter is 16 cm, its area is :

- (a) 11 cm^2
- (b) 12 cm^2
- (c) 9 cm^2
- (d) 10 cm^2

Q213. The area of a parallelogram is 338 m^2 . If its altitude is twice the corresponding base, Its base is:

- (a) 13
- (b) 14
- (c) 28
- (d) 26

Q214. Find the cost of carpeting a room which is 11 m long and 6 m broad by a carpet which is 60 cm broad at the rate of Rs 112.50 per meter.

- (a) Rs 12,375
- (b) Rs 13,280
- (c) Rs 11,695
- (d) Rs 12,040

Q215. A sphere of radius 6 cm is melted and recast into spheres of radius 2 cm each. How many such spheres can be made?

- (a) 36
- (b) 25
- (c) 27
- (d) 24

Q216. The radius of a cylinder is increased by 150 cm and its height is decreased by 20 cm. What is the percentage increase in its volume?

- (a) can't be determined
- (b) 600%
- (c) 500%
- (d) 80%

Q217. A cuboid of edges 32 cm, 4 cm and 4 cm is cut to form cubes of edge 4 cm each. What is the sum of total surface areas of all cubes formed?

- (a) 576 cm^2
- (b) 768 cm^2
- (c) 640 cm^2
- (d) 544 cm^2

Q218. The volume of a solid cylinder with height 6 cm is 231 cm^3 . The radius of the cylinder is:

- (a) 2.1 cm
- (b) 35 cm
- (c) 3.5 cm
- (d) 21 cm

Q219. The length, breadth and height of a box are 506 cm, 345 cm and 230 cm respectively. The length of the longest scale that will measure the three dimensions of the box is:

- (a) 23 cm
- (b) 15 cm
- (c) 46 cm
- (d) 30 cm

Q220. If $a^3 - b^3 = 3552$ and $(a - b) = 6$, then $(a + b)^2 - ab$ is equal to :

- (a) 618
- (b) 636
- (c) 592
- (d) 568

Q221. If $(x - 3)^2 + (2x - 5)^3 + (x - 4)^3 = (3x - 9)(2x - 5)(x - 4)$, then what is the value of x?

- (a) 4
- (b) 5
- (c) 2
- (d) 3

Q222. If $x \frac{1}{x} = 4$, then $x^3 - \frac{1}{x^3}$ is equal to:

- (a) 68
- (b) 64
- (c) 72
- (d) 76

Q223. If $x^2 + \frac{1}{x^2} = 11$, then $x - \frac{1}{x}$ is equal to:

- (a) 5
- (b) 2
- (c) 4
- (d) 3

Q224. If $ab + bc + ca = 8$ and $a + b + c = 12$ then $(a^2 + b^2 + c^2)$ is equal to :

- (a) 160
- (b) 144
- (c) 128
- (d) 134

Q225. If $a^3 - b^3 = 416$ and $a - b = 8$, then $(a + b)^2 - ab$ is equal to:

- (a) 38
- (b) 52
- (c) 42
- (d) 32

Q226. If $x + \frac{1}{x} = 4\sqrt{3}$, then $x^2 + \frac{1}{x^2}$ is equal to:

- (a) 52
- (b) 46
- (c) 44
- (d) 56

Q227. If $(2x - 5)^3 + (x - 4)^3 + (x - 11)^3 = 3(2x - 5)(x - 4)(x - 11)$, then what is the value of x?

- (a) 18
- (b) 3
- (c) 5
- (d) 7

Q228. If $x + \frac{1}{x} = 2\sqrt{3}$, then $x^2 + \frac{1}{x^2}$ is equal to:

- (a) 8
- (b) 16
- (c) 10
- (d) 12

Q229. If $(2x - 1)^3 + (3x - 4)^3 + (x - 7)^3 = (6x - 3)(3x - 4)(x - 7)$, then what is the value of x?

- (a) 5
- (b) 8
- (c) 2
- (d) 3

Q230. If $4 \tan \theta = 3, \frac{5 \sin \theta - 3 \cos \theta}{5 \sin \theta + 3 \cos \theta}$ is equal to:

- (a) $\frac{1}{3}$
- (b) 9
- (c) 3
- (d) $\frac{1}{9}$

Q231. $(1 + \cot^2 \theta)(1 - \cos^2 \theta)$ is equal to:

- (a) 0
- (b) $\frac{1}{2}$
- (c) 1
- (d) Not defined

Q232. If $x = a \cos \theta + b \sin \theta$ and $y = a \sin \theta - b \cos \theta$, the value of $x^2 + y^2$ is:

- (a) $a^2 - b^2$
- (b) $a - b$
- (c) $a^2 + b^2$
- (d) $a + b$

Q233. The value of $4 \sin^2 30^\circ + 3 \cot^2 60^\circ$ is:

- (a) 1
- (b) $\frac{1}{\sqrt{3}}$
- (c) 2
- (d) 0

Q234. $\frac{\operatorname{cosec} 31^\circ}{\sec 59^\circ}$ is equal to:

- (a) 1
- (b) 3
- (c) 0
- (d) 2

Q235. $1 + \frac{\tan^2 A}{1 + \sec A}$ is equal to:

- (a) $\sec A$
- (b) $\operatorname{cosec} A$
- (c) $\cos A$
- (d) $\sin A$

Q236. $\sin 18^\circ - \cos 72^\circ$ is equal to:

- (a) $\frac{1}{2}$
- (b) 0
- (c) 2
- (d) 1

Q237. If $5 \cos \theta - 12 \sin \theta = 0$, the value of $\frac{2 \sin \theta + \cos \theta}{\cos \theta - \sin \theta}$ is:

- (a) $1 \frac{75}{119}$
- (b) $3 \frac{1}{7}$
- (c) $2 \frac{34}{35}$
- (d) $3 \frac{2}{3}$

Q238. The value of $\cos^2 45^\circ + \sin^2 30^\circ - \sin^2 60^\circ$ is equal to:

- (a) $\frac{3}{2}$
- (b) $\frac{1}{2}$
- (c) 0
- (d) 1

Q239. The value of $\cot^2 A - \frac{1}{\sin^2 A}$ is equal to:

- (a) 0
- (b) -1
- (c) -2
- (d) 1

Q240. A girl 1.2 m tall can just see the sun over a 3.62 m tall wall which is 2.42 m away from her. The angle of elevation of the sun is:

- (a) 60°
- (b) 30°
- (c) 90°
- (d) 45°

Q241. From the top of a 30 m high building, the angle of elevation of the top of a tower is 30° and the angle of depression of the foot of the tower is θ , such that $\sec \theta = 5/4$.

What is the height of the tower ($\sqrt{3} = 1.73$)?

- (a) 53.23
- (b) 52.99
- (c) 51.85
- (d) 48.99

Q242. From the top of a 100 m high tower, the angle of depression of the top of a pole is 30° and the angle of depression of the foot of the pole is θ , such that $\tan \theta = \frac{2}{3}$. What is the height of the pole?

- (a) $50(2 - \sqrt{3})\text{m}$
- (b) $50(2 + \sqrt{3})\text{m}$
- (c) $100(2 + \sqrt{3})\text{m}$
- (d) $100(2 - \sqrt{3})\text{m}$

Q243. The length of shadow of a vertical pole on the ground is 36 m. if the angle of elevation of the sun at that time is θ , such that $\sin \theta = \frac{5}{13}$, then what is height of the pole?

- (a) 10 m
- (b) 12 m
- (c) 18 m
- (d) 15 m

Q244. The horizontal distance between the two towers is 60 m. The angular elevation of the top of the taller tower as seen from the top of the shorter one is 30° . If the height of the taller tower is 150 m, the height of the shorter one, approximately, is

- (a) 116 m
- (b) 216 m
- (c) 200 m
- (d) None of these

Q245. A tower subtends α angle at a point A at its base plane. If the angle of depression of the foot of the tower at a point B at height above A is β , then the height of the tower is.

- (a) $b \cot \alpha \tan \beta$
- (b) $b \tan \alpha \tan \beta$
- (c) $b \tan \alpha \cot \beta$
- (d) $b \cot \alpha \cot \beta$

Q246. From a point O on a level ground the angle of elevation of the top of a tower is 60° if the height is 270 m. The distance of point O from the foot of the tower is?

- (a) 200.2
- (b) 155.88
- (c) 172.28
- (d) 165.45

Q247. The angle of elevation of the top of a tower at a point on level ground is 30° . When moving 25 m towards the tower, the angle of elevation becomes 60° . What is the height of the tower? (Take $\sqrt{3} = 1.73$)

- (a) 26.625
- (b) 21.625
- (c) 25.625
- (d) 27.625

Q248. An aeroplane when flying at a height of 5000m from the ground passes vertically above another aeroplane at an instant, when the angles of elevation of the two aeroplanes from the same point on the ground are 60° and 45° respectively. The vertical distance between the aeroplanes at that instant is

- (a) $5000(\sqrt{3} - 1)$ m
- (b) $5000(3 - \sqrt{3})$ m
- (c) $5000\left(\frac{\sqrt{3}-1}{\sqrt{3}}\right)$ m
- (d) 4500 m

Q249. The angles of elevation of the top of a building and the top of the chimney on the roof of the building from a point on the ground are x and 45° respectively. The height of building is n metre. Then the height of the chimney, in metre, is:

- (a) $n \cot x + n$
 (b) $n \cot x - n$
 (c) $n \tan x - n$
 (d) $n \tan x + n$

Q250. The sides of a triangle are in the ratio $3 : 2 : 4$ and the perimeter is 72 cm. The sides are:

- (a) 24, 16, 32
 (b) 48, 24, 12
 (c) 36, 24, 12
 (d) 36, 18, 9

Q251. If the angle of a triangle are in ratio $2 : 3 : 7$, then the sides opposite to the angle are in the ratio of-

- (a) $\sqrt{2} : 2 : \sqrt{3} + 1$
 (b) $2 : \sqrt{2} : \sqrt{3} + 1$
 (c) $\frac{1}{2} : \sqrt{2} : \frac{\sqrt{2}}{\sqrt{3}-1}$
 (d) $\frac{1}{\sqrt{2}} : \frac{1}{2} : \frac{\sqrt{3}+1}{2}$

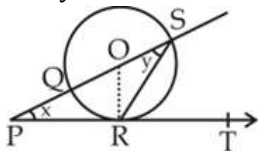
Q252. PA and PB are two tangents to a circle with center O, from a point P outside the circle. A and B are points on the circle. If $\angle APB = 40^\circ$, then $\angle OAB$ is equal to

- (a) 40°
 (b) 20°
 (c) 50°
 (d) 25°

Q253. ABCD is a cyclic quadrilateral such that AB is a diameter of the circle circumscribing it and angle $ADC = 130^\circ$. Then angle BAC is equal to:

- (a) 50°
 (b) 60°
 (c) 150°
 (d) 40°

Q254. In the given figure, PT is the tangent of a circle with centre o at point R. If diameter SQ is increased, it meets with PT at point P. if $\angle SPR = x^\circ$ and $\angle QSR = y^\circ$, what is the value of $x + 2y$?



- (a) 105
 (b) 135
 (c) 90
 (d) 180

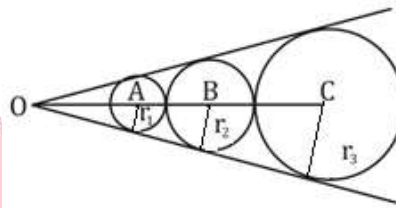
Q255. Two circles with radii 5 cm and 8 cm touch each other externally at a point A. If a straight line through the point A cuts the circles at points P and Q respectively, then AP: AQ is

- (a) 8 : 5
 (b) 5 : 8
 (c) 3 : 4
 (d) 4:3

Q256. ABCD is a cyclic quadrilateral such that AB is a diameter of the circle inscribing it and $\angle ADC = 145^\circ$. What is the Measure of $\angle BAC$?

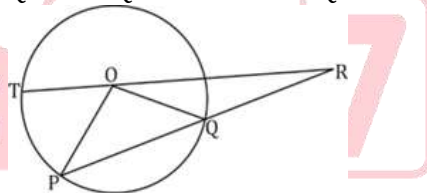
- (a) 65°
 (b) 55°
 (c) 45°
 (d) 50°

Q257. Three circles with radii r_1, r_2, r_3 (Where $r_1 < r_2 < r_3$) are placed as shown in the given figure. What is the value of r_2 ?



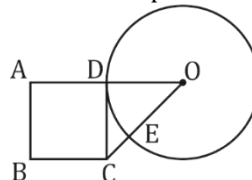
- (a) $\sqrt{r_1 + r_3}$
 (b) $\sqrt{r_1 r_3}$
 (c) $\frac{r_1 + r_2}{2}$
 (d) $\frac{2r_1 + r_3}{r_1 + r_3}$

Q258. In the given figure, O is the centre of the circle, $OQ = QR$ and $\angle QRO = 15^\circ$. Find $\angle QOP$.



- (a) 120°
 (b) 135°
 (c) 150°
 (d) 105°

Q259. ABCD is a square. DC is a tangent (at point D) to the circle with centre O and $EC = OD$. Find the ratio of radius of circle to the perimeter of square.



- (a) $4 : \sqrt{3}$
 (b) $\sqrt{3} : 4$
 (c) $1 : 4\sqrt{3}$
 (d) $4\sqrt{3} : 1$

Solutions

S1. Ans.(d)

Sol. LCM, 15, 18, 42

$$= 630$$

630×3
 $1890 + 8 = 1898$

No. divided by 15, 18, 42
 leaves remainder 8

No. divisible by 13

$$1898 = 1 + 8 + 9 + 8$$

$$= 26 \text{ (digit sum)}$$

S2. Ans.(a)

Sol. $\sqrt{5535.36} = 77.4$

S3. Ans.(b)

Sol. 23474 is exactly divisible by 2 and 11.

$$(2 + 4 + 4) - (3 + 7) = 0$$

Rule of divisible by 11.

S4. Ans.(c)

Sol. All three digit no. formed by 0, 3 and 7 are

$$307 + 703 + 730 + 370$$

$$= 2110$$

S5. Ans.(d)

Sol. $(-3)^7 = -2187$

S6. Ans.(d)

S7. Ans.(d)

Sol. $9652 - 2569 = 7083$

S8. Ans.(a)

Sol. 66249

Divisibility of 3, 9 are

Sum of digits is multiple of 3, 9

S9. Ans.(c)

Sol. When we divide 10000 by 327

It gives remainder 190

Number, we can add = $327 - 190 = 137$

137 add to 10,000 than it exactly divided by 327

S10. Ans.(d)

Sol. $\sqrt[3]{3375} = 15$

S11. Ans.(a)

Sol. Sum of No.

$$\Rightarrow (4+5) \times 16 = 144$$

S12. Ans.(d)

Sol. 4 : 7

HCF = 26

Sum of no. = $(4 + 7) \times 26$

$$= 11 \times 26 = 286$$

S13. Ans.(A)

Sol. Number are 5×24 & 11×24

Sum is = $24(5+11)$

$$= 24 \times 16$$

$$= 384$$

S14. Ans.(b)

Sol. $(6 + 18) \times 28 = 17 \times 28$

$$= 448$$

S15. Ans.(b)

Sol. L C M of two natural number is divided by their H C F

S16. Ans.(b)

Sol. A. T. Q

LCM \times HCF = Product of no.

$$\frac{6 \times 5040}{210} = x$$

$$x = 144$$

other no. is $\rightarrow 144$

S17. Ans.(d)

Sol. L.C.M. of $\{72\text{cm}, 84\text{cm}\} = 504\text{cm} = 5.04\text{m}$

S18. Ans.(d)

Sol. HCF \times LCM = product of No.

$$\text{Product of no.} = \frac{45360}{36} = 1260$$

S19. Ans.(c)

Sol. 9936 is the no. exactly

Divisible by 24, 36, 54

LCM (24, 36, 54) = 216

9936 is the multiple of 216

So it exactly divided by 24, 36, 54

S20. Ans.(a)

Sol. L.C.M. of 6, 8, 10, 12 = 120

They will ring together in 120 sec. or 2 minutes.

S21. Ans.(c)

$$\text{Sol. } \frac{31}{5} - \left[\frac{9}{2} - \left\{ \frac{5}{6} - \frac{13}{30} \right\} \right]$$

$$\Rightarrow \frac{31}{5} - \left[\frac{9}{2} - \frac{12}{30} \right]$$

$$\Rightarrow \frac{31}{5} - \frac{123}{30}$$

$$\Rightarrow \frac{63}{30}$$

$$= 2.1$$

S22. Ans.(d)

$$\text{Sol. } \frac{17}{30} + \left[\frac{16}{5} - \left\{ \frac{5}{6} - \frac{2}{5} \right\} \right]$$

$$\Rightarrow \frac{17}{30} + \left[\frac{16}{5} - \frac{13}{30} \right]$$

$$\Rightarrow \frac{17}{30} + \frac{83}{30}$$

$$\Rightarrow \frac{100}{30} = \frac{10}{3}$$

S23. Ans.(c)

$$\text{Sol. } \frac{1}{3} \times \frac{6}{5} \times \frac{-5}{8}$$

$$= \frac{-1}{4}$$

S24. Ans.(a)

$$\text{Sol. } 9 - \left[6 - \left\{ 12 + \frac{15}{5} \right\} \right]$$

$$9 - [6 - 15]$$

$$9 + 9 = 18.$$

S25. Ans.(d)

$$\text{Sol. } 7 - \left\{ 4 \times 3 + \frac{10 \times 8}{(-4)} \right\}$$

$$7 - \{12 - 20\}$$

$$7 + 8 = 15$$

S26. Ans.(a)

$$\text{Sol. } \frac{3}{5} \times 4 \left[7 - \left(\frac{2}{5} \times 15 \right) \right]$$

$$\frac{3}{5} \times 4 [7 - 6]$$

$$2 \frac{2}{5}$$

S27. Ans.(d)

$$\text{Sol. } \sqrt{4 + \sqrt{144}} = \sqrt{4 + 12} = \sqrt{16} = 4$$

S28. Ans.(a)

$$\text{Sol. } (-4) \times (-8) \div (-2) + 3 \times 5$$

$$-16 + 15 = -1$$

S29. Ans.(d)

$$\text{Sol. } \Rightarrow \frac{3}{4} + \frac{5}{2} \left[\frac{1}{4} \times \frac{4}{15} \right]$$

$$\Rightarrow \frac{3}{4} + \frac{5}{2} \times \frac{1}{15}$$

$$= \frac{3}{4} + \frac{1}{6} = \frac{11}{12}$$

S30. Ans.(b)

$$\text{Sol. } 13 \div \{4 \times 2 - 3 + 4(6-4)\}$$

$$13 \div \{8 - 3 + 8\}$$

$$13 \div 13 = 1$$

S31. Ans.(b)

Sol.

$$15\% = \frac{3}{20} \quad \begin{array}{ccc} \text{Original} & & \text{New} \\ 20 & \text{---} & 17 \\ & \text{---} & \\ & -3 & \end{array}$$

$$\frac{3}{17} \times 100 = \frac{300}{17}\%$$

S32. Ans.(d)

Sol.

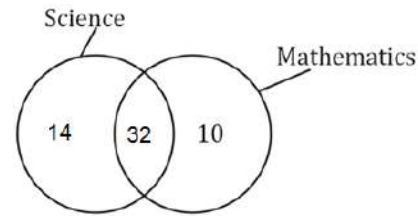
$$\begin{array}{ccc} A & & B \\ 7 & & 5 \\ \text{---} & & \\ & 2 & \end{array}$$

$$40\% = \frac{2}{5}$$

$$B's \text{ less than } A = \frac{2}{7} \times 100 = 28 \frac{4}{7}\%$$

S33. Ans.(d)

$$\text{Sol. Failed in science} = 100 - 54 = 46.$$



$$\text{Total failed} = 14 + 32 + 10$$

$$= 56$$

$$\text{Passed in Both} = 100 - 56$$

$$44\%$$

S34. Ans.(d)

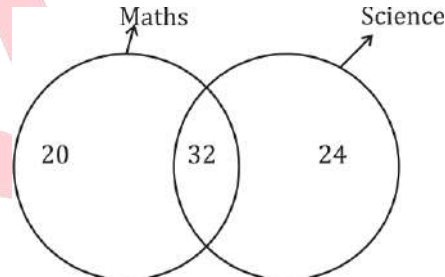
$$\text{Sol. } 24\% = \frac{24}{100} = \frac{6}{25}$$

$$\begin{array}{ccc} A & & B \\ 31 & & 25 \\ \text{---} & & \\ & 6 & \end{array}$$

$$= \frac{600}{31}\%$$

S35. Ans.(a)

Sol.



$$\text{Passed in Both} = 100 - 76 = 24\%$$

S36. Ans.(c)

Sol.

$$\begin{array}{ccc} 10 & & 9 \\ \text{---} & & \\ & -1 & \end{array}$$

$$\frac{1}{9} \times 100 = \frac{100}{9}\%$$

S37. Ans.(d)

$$\text{Sol. Price} \rightarrow 100 \quad : \quad 118$$

$$\text{Consumption} \rightarrow \underline{118} \quad : \quad \underline{100}$$

$$\text{Exp.} \quad 11800 \quad : \quad 11800$$

$$so, = \frac{18}{118} \times 100$$

$$= 15.3\%$$

S38. Ans.(d)

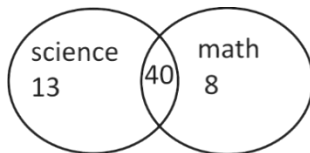
Sol.

$$\begin{array}{ccc} A & & B \\ 7 & & 5 \\ \text{---} & & \\ & 2 & \end{array}$$

$$\text{Req \%} = \frac{2}{7} \times 100 = \frac{200}{7}\%$$

S39. Ans.(b)

Sol.



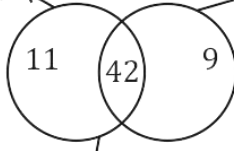
Total failed = $13+40+8 = 61\%$

Passed = $100-61 = 39\%$

S40. Ans.(a)

Sol. Failed in science = $100 - 47 = 53$

F in science ← F in maths



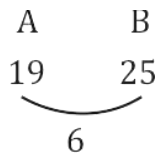
Failed in both

Passed in both = $100 - (11 + 42 + 9)$
 $= 38\%$

S41. Ans.(d)

Sol.

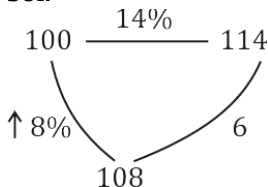
$24\% = \frac{6}{25}$ → Original no.



B more than A is $\Rightarrow = \frac{6}{19} \times 100$
 $= \frac{600}{19}\%$

S42. Ans.(b)

Sol.



$\frac{6}{114} \times 100 = 5.26$
 ≈ 5.3

S43. Ans.(b)

Sol. Let population of town be = x

A. T. Q

$x \times \frac{105}{100} \times \frac{96}{100} = 5512248$
 $= 5468500$

S44. Ans.(b)

Sol. $16\% = \frac{4}{25} +$

$29 \rightarrow 1914$

$1 \rightarrow 66$

$25 \rightarrow 1650$

S45. Ans.(a)

Sol. $\frac{3}{1200} \times 100 = 0.25\%$

S46. Ans.(c)

Sol. ATQ

$48\% = 3288$

$100\% = \frac{3288}{48} \times 100 = \text{Rs. } 6850.$

S47. Ans.(b)

Sol. $\frac{8}{100} \times 5000 = 400 \text{ ml}$

S48. Ans.(c)

Sol. $15\% = \frac{3}{20}$
 $\frac{20}{23}$
 $\frac{3}{23}$

% reduce = $\frac{300}{23} = 13\frac{1}{23}\%$

S49. Ans.(a)

Sol. $\Rightarrow \frac{200000 \times 2}{100} = 4000$

$\Rightarrow \frac{200000 \times 1.5}{100} = 3000$

$568000 - 400000$

$= \frac{168000 \times 1}{100} = 1680$

Total commission = $4000 + 3000 + 1680 = 8680$

S50. Ans.(d)

Sol. $\frac{9}{40} \times 100 = \frac{45}{2} = 22\frac{1}{2}\%$

S51. Ans.(d)

Sol. $\frac{34}{100} \times 120000 = 40800 \text{ cm.}$

S52. Ans.(a)

Sol. Let salary in 2014 $\rightarrow x$

A.T.Q. = $x \times \frac{108}{100} \times \frac{94}{100} = 234778$

$x = 231263$

S53. Ans.(d)

Sol. $124 \times \frac{x}{100} = 49.60$

$x = \frac{4960}{124}$

$x = 40\%$

S54. Ans.(b)

Sol. $\frac{64}{25} \times 100 = 256$

S55. Ans.(b)

Sol.

$12\% = \frac{3}{25}$ — Saving.
 — Income

Spent = $25 - 3$

$= 22$

$\xrightarrow{\times 9824} 216\ 128$

income = 25×9824

$= 245600 \text{ Rs.}$

S56. Ans.(c)

Sol. $2.4 = 2.4 \times 100\% = 240\%$

S57. Ans.(d)

Sol. $\frac{32}{240} \times 100 = 13\frac{1}{3}\%$

S58. Ans.(a)

Sol. Mathematics $\frac{84}{90} \times 100 = 93.3\%$

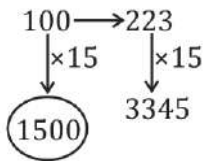
Science $= \frac{45}{50} \times 2 = 90\%$

Computer science $= \frac{23}{25} \times 100 = 92\%$

English $= \frac{68}{80} \times 100 = 85\%$

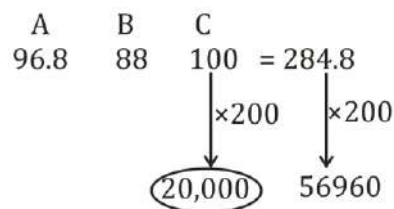
S59. Ans.(c)

Sol.



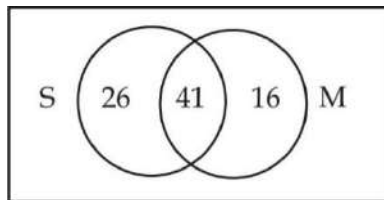
S60. Ans.(d)

Sol.



S61. Ans.(c)

Sol.

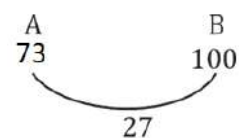


Passed = $100 - (41 + 26 + 16)$

Passed = 17%

S62. Ans.(a)

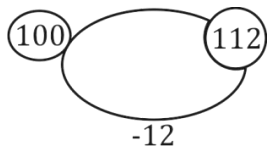
Sol.



$\frac{27}{73} \times 100 = 36.98\%$

S63. Ans.(a)

Sol.



$\frac{12}{112} \times 100 = 10.7\%$

S64. Ans.(c)

Sol.

Let $x = 10$ & $y = 10$

$xy^2 = 10 \times 10 \times 10 = 1000$ units.

Decreasing values of x & y by 20%

Expression $= xy^2 = 8 \times 8 \times 8 = 512$

Decreasing $= 1000 - 512 = 488$ units.

% decrease $= \frac{488}{1000} \times 100 = 48.8\%$

S65. Ans.(a)

Sol.

$x \times \frac{30}{100} + 5 = x \times \frac{40}{100} - 10 \Rightarrow x = 150$

Min marks req. to pass $= \frac{150 \times 30}{100} + 5 = 50$

S66. Ans.(c)

Sol.

Ram	Rohit	Sam	Rohan	Ravi
$x-25$	x	$x-45$	75	
85	110	65		119

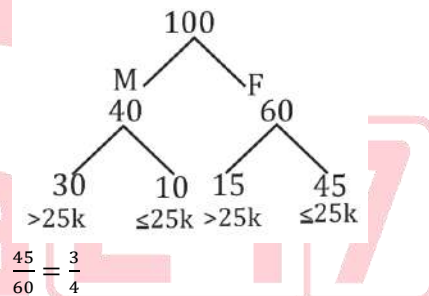
+34

M.M = 169

$\frac{119}{169} \times 100 = 70\%$

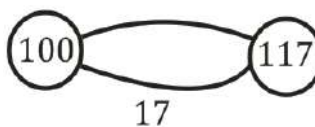
S67. Ans.(b)

Sol.



S68. Ans.(d)

Sol.



$\frac{17}{117} \times 100 = 14.52\%$

S69. Ans.(b)

Sol.

$$\frac{10}{100} \quad \frac{9}{99}$$

$1 \rightarrow 100$

No. is $= 100 \times 100$

$= 10000$

S70. Ans.(b)**Sol.** Total time for live classes = 16×60 minutesTime for advertisements = $(8 \times 60 + 30 \times 16)$ $= 480 + 480 = 960$ sec. $\frac{960}{60} = 16$ minutesTime devoted = $\frac{16}{16 \times 60} \times 100$ $= 1.66\%$.**S71. Ans.(c)****Sol.** A.T.Q,

	Initial	Final
Price.	5	4
consumption	$\frac{3}{5}$	1
Expenditure.	3	4

Consumption change = $1 - \frac{3}{5} = \frac{2}{5}$ $\frac{2}{3} \times 100 = 66\frac{2}{3}\%$ Increase.**S72. Ans.(b)****Sol.** $\frac{40}{100} \times \frac{30}{100} \times 1500 = \text{Rs. } 180$ **S73. Ans.(d)****Sol.** We know that if price is increased by 25% and then decreased by 20%, then there is no change. So after 20 years, there will be no change.**S74. Ans.(a)****Sol.** Let no. of visitors be 100

$$-15\% \left[\begin{array}{l} 20 \times 100 = 2000 \\ 17 \times x = 2500 \\ x = \frac{2500}{7} \approx 147 \end{array} \right] +25\%$$

% increase = 47%.

S75. Ans.(d)**Sol.** $37 + 37 + \frac{(37)^2}{100} = 87.69\%$ **S76. Ans.(c)****Sol.**

$$\begin{array}{ccc} L & B & A \\ 4 & 4 & 16 \\ 3 & 3 & 9 \end{array} \Bigg] 7$$

 $\frac{7}{16} \times 100 = 43.75\%$ **S77. Ans.(c)****Sol.**New amount = 144% of $5x = 7.2x$ No. of viewers = $\frac{7.2x}{80\% \text{ of } 5} = 1.8x$ Req. Increase = $\frac{1.8x - x}{x} \times 100\% = 80\%$ **S78. Ans.(a);****Sol.**

$87\frac{1}{2} \times 70 \times x = 2940$

$X = 4800$

S79. Ans.(b)**Sol.**

$x + \frac{x \times 4 \times 5}{100} = y + \frac{y \times 5 \times 10}{100} = z + \frac{z \times 10 \times 8}{100}$

$x : y : z = 15 : 12 : 10$

I part = $\frac{15}{15+12+10} \times 148000 = 60000$

II part = $\frac{12}{37} \times 148000 = 48,000$

III part = $\frac{10}{37} \times 148000 = 40,000$

So, the diff. between I part & II part is

$= 60000 - 48000 = 12000$

S80. Ans.(c)**Sol.**

salary of September = $6300 \times \frac{104}{100} = 6552$

Salary of October = $6552 \times \frac{104}{100} = 6814$ approx.

S81. Ans.(c);**Sol.**

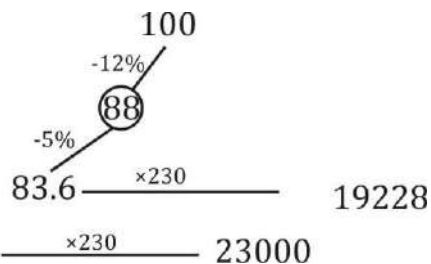
Let the number be x.

$x \times \frac{75}{100} + 75 = x \Rightarrow 75 = x - \frac{3}{4}x$

$\frac{x}{4} = 75 \Rightarrow x = 300$

S82. Ans.(d);**Sol.**

Let third number is x.

So, first number will be = $\frac{x}{5}$ Second number will be = $\frac{x}{2}$ \Rightarrow First number is 40% of second number**S83. Ans.(b)****Sol.****S84. Ans.(d)****Sol.** $x + 15\% \text{ of } 160 = 25\% \text{ of } 240$

$x + 3 \times 8 = 60$

$x = 36$

S85. Ans.(a)

R H V

Sol. 100 100 1000000

130 73 1233700

$$\% \text{ increase} = \frac{233700}{1000000} \times 100 = 23.37\%$$

S86. Ans.(d)

Sol. Let 3 numbers are $9x$, $10x$, and $8x$ respectively.

$$\text{Required } \% = \frac{9}{10} \times 100 = 90\%$$

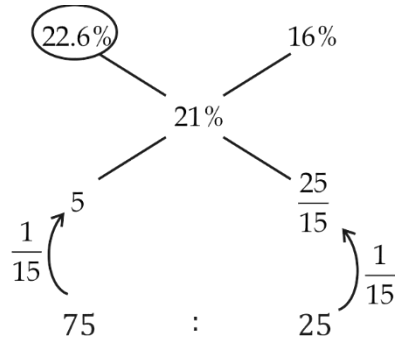
S87. Ans.(c)

Sol.

$$\frac{100 * 25}{6.25 * 100} = \text{Rs.4 per kg}$$

S88. Ans.(b)

Sol.



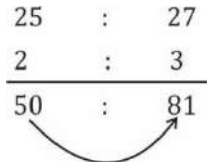
S89. Ans.(d)

$$\text{Sol. } \% \text{ error} = \frac{9x - 11x}{\frac{11x}{39}} \times 100$$

$$= \frac{16}{11} \times 100 = 145.45\%$$

S90. Ans.(b)

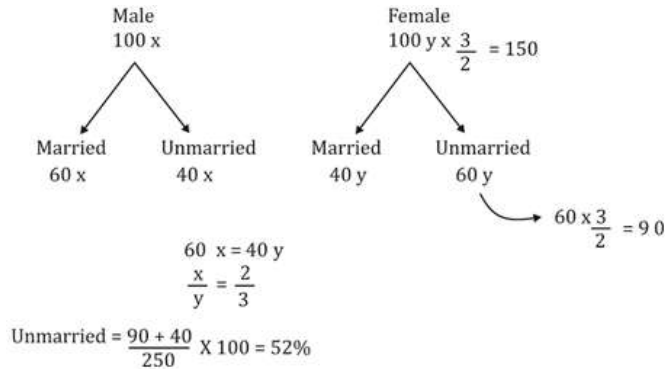
Sol.



$$\frac{31}{50} \times 100 = 62\%$$

S91. Ans.(c)

Sol.



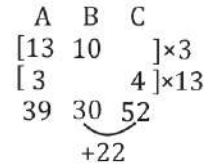
S92. Ans.(c)

$$\text{Sol. } \frac{52}{55} \times 100 = \frac{1040}{11} = 94 \frac{6}{11} \%$$

S93. Ans.(b)

$$\text{Sol. } 30\% = \frac{3}{10}$$

$$25\% = \frac{1}{4}$$



$$\frac{22}{30} \times 100 = 73.33\%$$

S94. Ans.(c)

Sol. R.m = 60% of Cost price.

M.c = 40% of cost price.

Cost price = Raw material + manufacturing cost

RM	MC	cost price
60	40	100

33.33%

20

$$\text{Selling price} = 100 + 20 = 120$$

$$\text{A.T.Q } 6.66\% = \frac{1}{15}, 30\% = \frac{3}{10}, 60\% = \frac{3}{5} \%$$

New	RM	MC	CP	S.P
	64	52	116	120 + 72 = 192

$$120 \times \frac{60}{100} = 72$$

$$\text{Profit} = \frac{72}{116} \times 100 = 65.51\%$$

S95. Ans.(b)

$$\text{Sol. } \frac{25}{100} \times P = x$$

$$x = \frac{P}{4}$$

A.T.Q

$$\frac{P}{4} \% \text{ of } 20$$

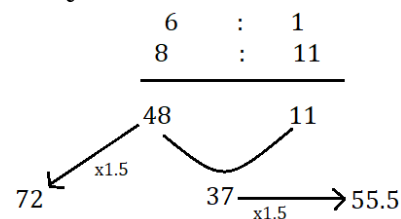
$$= 5\% \text{ of } P.$$

S96. Ans.(b)

$$\text{Sol. } 83.33\% = \frac{5}{6}$$

$$37.5\% = \frac{3}{8}$$

A.T.Q



S97. Ans.(a)

Sol. $\frac{20}{100} \times a = b$

$\frac{a}{b} = \frac{5}{1}, a = 5b$

A.T.Q.

$\frac{a}{5} \times 20\% = 4\% \text{ of } a.$

S98. Ans.(d)

Sol. Let cost price of Car for A = x

A.T.Q.

$x \times \frac{9}{10} \times \frac{6}{5} = 540000$

$x = 5,00,000$

S99. Ans.(d)

Sol. Let length = l

A.T.Q.

$l \quad 20$

$\frac{13l}{10} \quad 16$

$\frac{13l}{10} \times 16 - 20l = 100$

$l = 125$

New area = $\frac{13 \times 125}{10} \times 16 = 2600 \text{ cm}^2$

S100. Ans.(b)

Sol. $5x + 7x + 9x = 21x \quad \underline{\quad\quad\quad} \quad 8288$

$9x \quad \underline{\quad\quad\quad} \quad \frac{8288}{21x} \times 9x = 3552$

S101. Ans.(c)

Sol. $x^2 = 135 \times 540$

$x = \sqrt{135 \times 540}$

$= 270$

S102. Ans.(d)

Sol. Mean proportion = $\sqrt{\frac{49 \times 169}{100}} = \frac{7 \times 13}{10} = 9.1$

Third proportion $\frac{3}{7} = \frac{7}{x}$

$x = \frac{49}{3}$

$\therefore 9.1 : \frac{49}{3} = 27.3 : 49 = 39 : 70$

S103. Ans.(b)

Sol.

A.T.Q.

No. of brown socks = x

Price of brown socks = y

Price of black socks = 2y

So, $4y + x \times 2y = \frac{150}{100} (4 \times 2y + xy)$

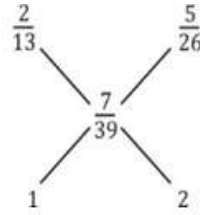
$4 + 2x = \frac{3}{2} (8 + x)$

$x = 16$

Req. ratio = $4 : 16 = 1 : 4$

S104. Ans.(c)

Sol.



So, ratio = 1 : 2

S105. Ans.(d)

Sol. $a/b=c/d=e/f=1/2;$

$=b=2a;$

$d=2c;$

$f=2e;$

$(1p+1q+1r)/(2p+2q+2r)=1/2$

S106. Ans.(b);

Sol.

$4x - 2(75 - x) = 150$

$x = 50$

S107. Ans.(a)

Sol. (a) a : b : c : d

$\frac{3}{2} : \frac{1}{3} : \frac{4}{9} : \frac{1}{2}$

$\frac{1}{2} : \frac{1}{3} : \frac{4}{9} : \frac{1}{8}$

$72:16:60:15$

S108. Ans.(a)

Sol. $\frac{a^2-b^2}{a-b} = \frac{a-b}{x}$

$a+b = \frac{x}{a-b}$

$x = \frac{a-b}{a+b}$

S109. Ans.(b)

Sol. a : b

$\frac{2}{3} : \frac{5}{6}$

$\frac{a}{b} = \frac{4}{5}$

$b : c = \frac{3}{5} : \frac{1}{4}$

$\frac{b}{c} = \frac{12}{5}$

$a : b : c$

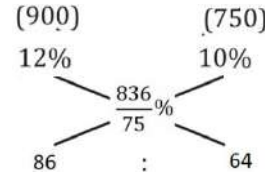
$4 : 5 : 5$

$12 : 12 : 5$

$48 : 60 : 25$

S110. Ans.(c)

Sol.



$86+64=150$

150unit-15000

Invest at 10% = $64 \times 100 = 6400 \text{ R.s}$

S111. Ans.(c)**Sol.** Rate of interest = 8%for two year = 8×2

= 16%

$$16\% = \frac{4}{25} \begin{array}{l} \swarrow \text{Interest} \\ \searrow \text{Principal} \end{array}$$

Amount taken for lone = $191864 \times \frac{25}{29}$
= 165400 Rs.

S112. Ans.(d)**Sol.** A.T.Q

Principle = x

S. Interest = x

Time = ?

$$\frac{x \times t \times 8}{100} = x$$

$$t = \frac{100}{8} = \frac{25}{2}$$

= $12\frac{1}{2}$ years.

= 12.5

S113. Ans.(b)

$$\text{Sol. } 529 = \frac{100 \times R^2}{100}$$

R = 23%

So Rate of interest = 23%

S114. Ans.(b)

$$\text{Sol. } 1x = \frac{9x \times R \times R}{100}$$

$$R = \frac{10}{3}\%$$

S115. Ans.(b)**Sol.**

$$\text{S.I. after five years} = \frac{\text{Principal} \times \text{Time} \times \text{rate}}{100} = 6000$$

Interest earned = 2680

$$\text{Rate} = \frac{2680 \times 1000}{12000 \times 3} = 7\frac{4}{9}\%$$

S116. Ans.(d)**Sol.**

$$p_1 r_1 t_1 = p_2 r_2 t_2$$

$$\frac{p_1}{p_2} = \frac{r_2 t_2}{r_1 t_1} = \frac{6 \times 5}{3 \times 4} = \frac{5}{2}$$

$$\text{I part} = \frac{5}{2+5} \times 13440 = 9600$$

$$\text{Second part} = \frac{2}{2+5} \times 13440 = 3840$$

So, diff = $9600 - 3840 = 5760$ **S117. Ans.(c)**

$$\text{Sol. } \frac{1}{100} = \frac{1}{100} \times \frac{1}{12} \times R$$

R = 12%

S118. Ans.(a)

$$\text{Sol. } \frac{A \times 10 \times 6}{100} = \frac{B \times 12 \times 10}{100} = \frac{C \times 15 \times 12}{100} = k(\text{let})$$

$$A = 2B = 3C = k$$

$$A = k; B = \frac{k}{2}; C = \frac{k}{3}$$

$$A : B : C = 6 : 3 : 2$$

S119. Ans.(c)**Sol.** Time = 2 half yearly and 3 month.Rate = $\frac{10}{2}\%$ = 5% for half yearsRate for 3 months = $\frac{10}{12} \times 3 = \frac{5}{2}\%$

	P	A
	20	21
$5\% = \frac{1}{20}$	20	21
$\frac{5}{2}\% = \frac{1}{40}$	40	41
	16000	18081
	└──────────────────┘ 2081	

$$\text{Gain}\% = \frac{2081}{160} = 13.0\%$$

S120. Ans.(a)**Sol.**

	CP	MP
	(100-Discout%)	(100+Profit%)
	100-30	100+20
	70	120
	└───┘ ×4	└───┘ ×4
280 ←		→ 480

S121. Ans.(c)**Sol.**

$$30\% \quad 25\% \quad 15\%$$

$$\frac{3}{10} \quad \frac{1}{4} \quad \frac{3}{20}$$

Original After Discount

10	7
4	3
20	17
800	357
└──────────────────┘ 443	

$$\text{Equivalent discount} = \frac{443}{800} \times 100$$

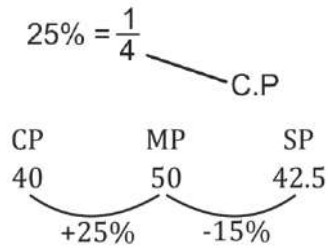
$$= 55.375\%$$

S122. Ans.(b)

$$\text{Sol. } 12 + 8 - \frac{(12 \times 8)}{100}$$

20 - 0.96

19% Approx.

S123. Ans.(a)**Sol.**

$$40 \rightarrow 2080$$

$$1 \rightarrow 52$$

$$42.5 \rightarrow 52 \times 42.5$$

$$= 2210.$$

S124. Ans.(b)**Sol.** let cost price of product = x

$$A. T. Q = x \times \frac{106}{100} \times \frac{108}{100} \times \frac{110}{100} = 31482$$

$$x = 25000 \text{ Rs.}$$

S125. Ans.(d)

$$\text{Sol. P} \quad 12 \text{ cycles} = 6192$$

$$L \quad 3 \text{ cycles} = 387$$

$$\text{Overall Profit} = 5805$$

$$15\% = \frac{3}{20}$$

$$3 \text{ unit} = 5805$$

$$20 \text{ unit} = \frac{5805}{3} \times 20$$

ATQ

$$15 \text{ cycles CP} \quad 38700$$

$$1 \text{ cycle CP} \quad \frac{38700}{15} = 2580$$

S126. Ans.(b)

$$\text{Sol. SP of 4 mobile covers} = 4 \times \frac{88}{100} \times 264 = \text{Rs. } 929.28$$

S127. Ans.(d)

Sol.	CP	MP	SP
	2500	3100	2635

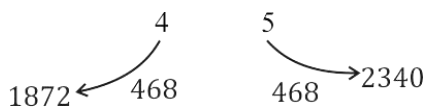
$$465 - 223200$$

$$2500 - \frac{223200}{465} \times 2500 = 1200000$$

S128. Ans.(b)

$$\text{Sol. } 25\% = \frac{1}{4}$$

CP	MP
----	----



$$10\% \text{ profit} = 1872 \times \frac{10}{100} = 187.20 \text{ Rs}$$

S129. Ans.(d)

$$\text{Sol. Discount} = \frac{38500 \times 6}{100} = 2310$$

S130. Ans.(d)

$$\text{Sol. Total} = 16 \times 48 = 768$$

$$\text{Sum of 1st seven numbers} = 7 \times 45 = 315$$

$$\text{Sum of next six numbers} = 6 \times 52 = 312$$

14	15	16
----	----	----

X	x+11	x-5
---	------	-----

$$3x + 6 = 768 - (315 + 312)$$

$$= 141$$

$$3x = 141 - 6$$

$$x = \frac{135}{3} = 45$$

$$\text{Average of 15th and 16th numbers} = \frac{45+11+45-5}{2} = 48$$

S131. Ans.(a)**Sol.** 40% of 50 = 20 girls

60% of 50 = 30 Boys

$$Av. = \frac{30 \times 62 + 58 \times 20}{50} = \frac{3020}{50} = 60.4$$

S132. Ans.(c)**Sol.**

$$18 \times 52 = 936$$

$$8 \times 62 = 496$$

$$7 \times 45 = 315$$

$$\underline{\hspace{1.5cm}} 125$$

16	17	18
x-6	x	x-1

$$3x - 7 = 125$$

$$3x = 132$$

$$x = \frac{132}{3} = 44$$

$$16^{\text{th}} + 18^{\text{th}} = 38 + 43$$

$$= 81$$

$$\text{Average} = 40.5$$

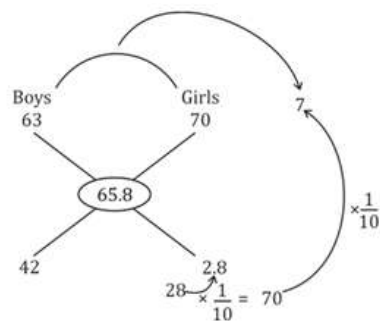
S133. Ans.(c)

$$\text{Sol. Girls} = 45 \times \frac{2}{5} = 18$$

$$\text{Boys} = 45 - 18 = 27$$

$$\text{Average} = \frac{18 \times 64 + 60 \times 27}{45} = \frac{9(2 \times 64 + 60 \times 3)}{45}$$

$$= \frac{128 + 180}{5} = 61.6$$

S134. Ans.(b)**Sol.**

S135. Ans.(d)

Sol. $N_1 + N_2 + \dots + N_{22} = 55 \times 22$
 $N_1 + N_2 + \dots + N_8 = 48 \times 8$
 $N_9 + N_{10} + \dots + N_{19} = 54 \times 11$
 $N_{20} + N_{21} + N_{22} = 52 \times 22 - (48 \times 8 + 54 \times 11) = 166$
 let $N_{22} = x$
 So, $N_{21} = x + 4$
 $N_{20} = x - 3$
 $3x + 1 = 166$
 $x = 55$
 Req. avg. = $\frac{2x-3}{2} = \frac{2 \times 55 - 3}{2} = 53.5$

S136. Ans.(d)

Sol.

Boys	Girls
$\frac{40 \times 45}{100}$	$\frac{60 \times 45}{100}$
18	27

Average weight of whole class = $\frac{55 \times 27 + 65 \times 18}{45} = \frac{45(11 \times 3 + 13 \times 2)}{45}$
 = 59 kg

S137. Ans.(c)

Sol. Sum = $65 \times 20 = 1300$
 1st 9 no. sum = $68 \times 9 = 612$
 Next 8 no. sum = $62 \times 8 = 496$
 18th 19th 20th
 x x-3 x+9
 Sum of 18th, 19th, 20th = $1300 - (612 + 496)$
 = 192
 $x + x - 3 + x + 9 = 192$
 $x = 62$
 Avg. of 19th & 20th = $\frac{62 - 3 + 62 + 9}{2}$
 = 65

S138. Ans.(a)

Sol. Sum of age of team = 27×11
 = 297
 A. T. Q
 $26 \times 13 = 338$
 Sum of extra players = $338 - 297$
 = 41
 Avg. of extra players = $\frac{41}{2}$
 = 20.5

S139. Ans.(d)

Sol. prime no. between 11 and 25
 11, 13, 17, 19, 23
 Avg. = $\frac{11 + 13 + 17 + 19 + 23}{5}$
 = $\frac{83}{5} = 16.6$

S140. Ans.(c)

Sol. $15 + 13 + 10 + 14 + 12 + 6 = 70$
 Median = $\frac{70}{2} = 35$
 When we adding the no. of students 35 comes in interval 160-165

S141. Ans.(a)

Sol. $800 - 500 = 300$
 = $\frac{300}{800} \times 100$
 = 37.5%

S142. Ans.(b)

Sol. $\frac{14}{70} \times 100 = 20\%$

S143. Ans.(c)

Sol. Combine strength of A : Combine strength of B
 = $500 + 450 + 750 : 600 + 350 + 650$
 = $1700 : 1600$
 = $17 : 16$

S144. Ans.(c)

Sol. $\frac{40}{50} \times 100 = 80\%$

S145. Ans.(a)

Sol. $\frac{600}{500} \times 100 = 120\%$

S146. Ans.(d)

Sol. $160 : 200$
 = $4 : 5$

S147. Ans.(d)

Sol. $360^\circ = 1080$
 $1^\circ = 3$
 $120^\circ \Rightarrow 360^\circ$

S148. Ans.(d)

Sol. req. % = $\frac{60}{80} \times 100$
 = 75%

S149. Ans.(c)

Sol. Req. Avg = $\frac{300 + 275 + 250 + 200 + 125}{5}$
 = $\frac{1150}{5}$
 = 230

S150. Ans.(d)

Sol. A B C
 5500 : 65000 : 75000
 11 : 13 : 15
 Total profit = 39 → 87750
 A's share = $\left(\frac{87750}{39} \times \frac{80}{100} \times 11\right) + 87750 \times \frac{20}{100}$
 = $19800 + 17550 = 37350$

S151. Ans.(b)

Sol.

$$\begin{array}{ccc} A & B & C \\ 55000 & : & 65000 & : & 75000 \\ 11 & : & 13 & : & 15 \end{array}$$

15 → 27000

$$\text{Total} \rightarrow \frac{27000}{15} \times \frac{39}{80} \times 100 = 87750$$

S152. Ans.(d)

Sol.

$$\begin{array}{ccc} A & : & B & : & C \\ 11 & : & 13 & : & 15 = 39 \end{array}$$

$\downarrow \times 900$ $\swarrow \times 900$
 13500 **35100**

80% of total profit = 35100

$$100\% \text{ of total profit} = \frac{35100}{80} \times 100 = 43875 \text{ Rs.}$$

S153. Ans.(c)

Sol.

$$\begin{array}{ccc} A & B & C \\ 137500 & : & 162500 & : & 187500 \\ 11 & : & 13 & : & 15 \end{array}$$

39 → 219375

$$\begin{aligned} \text{C's share} &= \frac{219375}{39} \times \frac{80}{100} \times 15 \\ &= 5625 \times 12 \\ &= 67500 \end{aligned}$$

S154. Ans.(a)

Sol.

Ratio of profit = A : B : C

$$\begin{array}{ccc} 5 & : & 3 & : & 6 \\ \swarrow \times 38476 & & \swarrow \times 38476 & & \swarrow \times 38476 \\ 192380 & & 230856 & & 230856 \end{array}$$

S155. Ans.(a)

Sol.

$$\begin{array}{ccc} A & B & C \\ 3 & : & 4 & : & 7 \end{array}$$

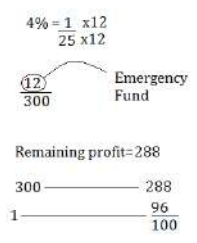
Total profit = 110166
 A.T.Q
 14 → 110166
 1 → 7869
 B's share = 7869 × 4 = 31476
 B's share after 30% tax.
 $31476 \times \frac{70}{100} = 22033.20$

S156. Ans.(c)

Sol.

$$\begin{array}{ccc} A & B & C \\ P & 3 & : & 4 & : & 5 = 12 \times 25 \\ & = & 75 & : & 100 & : & 125 \\ & & \downarrow \times .96 & & \downarrow \times .96 & & \downarrow \times .96 \\ & & 72 & : & 96 & : & 120 \\ & & & & \downarrow & & \\ & & & & 181400 & & \end{array}$$

96 _____ 181400
 12 _____ $\frac{181400}{96} \times 12 = 22675$



S157. Ans.(b)

Sol.

$$\begin{array}{ccc} \text{Ram} & \text{Pankaj} & \text{Atul} \\ 7 & 42 & 4 \\ 12 & 12 & 7 \\ \hline 3 & : & 18 & : & 1 = 22 \end{array}$$

\downarrow \downarrow
 5060 **22 × 5060 = 111,320**

S158. Ans.(c)

$$\begin{array}{ccc} A & B \\ \text{Sol.} & 1 & : & 2 \\ & 19 & : & 38 = 57 \text{ Charity} \\ & & & \swarrow \times 3 \\ 5\% & = & \frac{1 \times 3}{3 \times 20} \text{ — Total Profit} \end{array}$$

Left Profit 19×3

38 unit ----- 760
 1 unit ----- 20
 60 unit ----- 1200

S159. Ans.(b)

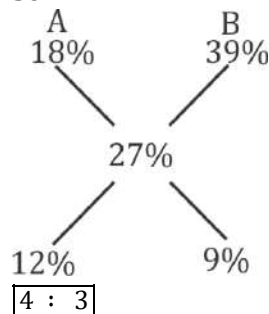
Sol.

Ratio of equivalent capitals of A and B for 1 month
 = (100000 × 36 : 200000 × 24)
 = 3 : 4

Req. diff. = $(\frac{4}{7} - \frac{3}{7}) \times 84000 = 12000$

S160. Ans.(a)

Sol.



S161. Ans.(b)

Sol.

$$\begin{array}{ccc} 70\% & & 40\% \\ & \searrow & / \\ & x & \\ & / & \searrow \\ \hline 40 & : & 35 \\ 8 & : & 7 \end{array}$$

$$\Rightarrow x = \frac{8 \times 70 + 7 \times 40}{8+7} = 56\%$$

S162. Ans.(c)

Sol. Given, the concentration of water in both the containers are 40% and 45%, then the concentration of milk in both the containers will be $(100 - 40) = 60\%$ and $(100 - 45) = 55\%$ respectively.

Hence

Ratio of Concentration of milk in

2 Solution $\Rightarrow 60 : 55 = 12 : 11$

The ratio of milk in both containers is 12 : 11.

S163. Ans.(a)

Sol. Water : Acid

A $\Rightarrow 11 : 13$

B $\Rightarrow 5 : 7$

Assuming the solutions to be equal in both A and B

A $\Rightarrow 11x : 13x$

B $\Rightarrow 10y : 14y$

Now,

$$\frac{11x+10y}{13x+14y} = \frac{4}{5}$$

$$55x + 50y = 52x + 56y$$

$$3x = 6y$$

$$\frac{x}{y} = \frac{2}{1}$$

S164. Ans.(a)

Sol. C.P. of mixture = $330 \times \frac{5}{6}$

$$= 275 \text{ Rs./kg}$$

Using allegation method

$$\begin{array}{ccc} 240 & & 290 \\ & \searrow & / \\ & 275 & \\ & / & \searrow \\ 15 & & 35 \\ 3 : 7 \end{array}$$

S165. Ans.(c)

Sol. 7 : 3

+x

$$\begin{array}{ccc} 17 & : & 6 \\ 3.5\text{Lt} & & 3\text{Lt} \\ \downarrow & & \downarrow \\ 5 & : & 2 \end{array} \rightarrow 17 \times 2 : 6 \times 2$$

$$34 : 12$$

$$\frac{17y+3.5}{6y+3} = \frac{5}{2}$$

$$\boxed{y = 2}$$

$$x = 6 \begin{array}{l} 28 : 12 \\ 34 : 12 \end{array}$$

S166. Ans.(b)

Sol. A.T.Q

$$\left[\because 35.4 \times \frac{100}{118} = 30 \right]$$

$$\begin{array}{ccc} 20 & & 40 \\ & \searrow & / \\ & 30 & \\ & / & \searrow \\ 10 & : & 10 \\ \downarrow & & \downarrow \\ 1 & : & 1 \\ \downarrow & & \downarrow \\ 10 & : & 10 \end{array}$$

($\times 10$ $\times 10$)

S167. Ans.(b)

Sol. A.T.Q

$$\begin{array}{ccc} 2200 & & 1700 \\ & \searrow & / \\ & 2000 & \\ & / & \searrow \\ 300 & & 200 \\ 3 : 2 \end{array}$$

S168. Ans.(c)

Sol. Let the C.P. of first and second liquid be $(x + 5)$ and x .

$$CP = 18 \times \frac{5}{6} = 15$$

Now,

$$\begin{array}{ccc} (x+5) & & (x) \\ & \searrow & / \\ & 15 & \\ & / & \searrow \\ 5 & : & 6 \\ \frac{5(x+5)+6x}{5+6} = 15 \end{array}$$

$$11x + 25 = 165$$

$$11x = 140$$

$$x = 12.72 \text{ per litre.}$$

S169. Ans.(d)

Sol. $48.33\% = 40\% + 8.33\%$

$$\Rightarrow \frac{2}{5} + \frac{1}{12}$$

$$\Rightarrow \frac{24+5}{60}$$

$$\Rightarrow \frac{29}{60}$$

$$\frac{M}{W} = \frac{60}{29}$$

S170. Ans.(c)

Sol. $D_1 = 80 \times \frac{31.5}{60} = 42\text{km}$

$$D_2 = 75 \times \frac{16}{60} = 20\text{km}$$

Total Distance = 62km

S171. Ans.(b)

Sol. $600 = 25 \times S$

$S = 24 \text{ m/s}$

$380 + 100 = 24 \times t$

$\frac{480}{24} = t$

$t = 20 \text{ sec}$

S172. Ans.(a)

Sol.

	Speed	Time	
	24	2	
	48	4	
-24	$\uparrow 72$	6	$\downarrow +2$
	96	8	

\therefore Original speed = 96 km/hr

$33\frac{1}{3}\%$ of original speed = $96 \times \frac{1}{3} = 32 \text{ km/hr}$

S173. Ans.(b)

Sol. Let t be the right time

$78(t + 25) = 91(t + 10)$

$6(t + 25) = 7(t + 10)$

$150 - 70 = t$

$t = 80 \text{ min}$

S174. Ans.(b)

Sol.

Speed of cyclist = x km/h.

Time taken by the motorist to cover half of the AB

$= \frac{18}{2 \times (x + 15)} = \frac{9}{x + 15}$

New speed = $(x + 15) \times \frac{80}{100} = \frac{4(x + 15)}{5} \text{ km/hr.}$

Time taken by the motorist to cover the remaining half distance

$= \frac{9 \times 5}{4(x + 15)} = \frac{45}{4(x + 15)} \text{ hr}$

Total time taken by the motorist to reach B = $\frac{9}{x + 15} + \frac{1}{2} + \frac{45}{4(x + 15)} \text{ hr}$

A.T.Q.

$\frac{18}{x} - \frac{9}{x + 15} - \frac{1}{2} - \frac{45}{4(x + 15)} = \frac{1}{4}$

After solving this,

$x = -30, 12$

So, speed of cyclist = 12 km/hr.

S175. Ans.(c)

Sol.

Ratios $\rightarrow 20 \times 1 : 16 \times 1 : 2 \times 3$

$= 20 : 16 : 6$

$\Rightarrow (20 + 16 + 6)R = 42$

So, Distance covered by sea = $\frac{3990}{42} \times 16 = 1520 \text{ km}$

S176. Ans.(d)

Sol. 35, 37, 39, ----- 12th hour.

Total distance

$S_n = \frac{n}{2} [2a + (n - 1)d]$

$S_n = \frac{12}{2} (35 \times 2 + 11 \times 2)$

$S_n = 6(70 + 22)$

$= 6 \times 92$

$= 552 \text{ km.}$

S177. Ans.(a)

Sol.

	Speed	Time	
Old	5	9) 4 \rightarrow 30 Minute
New	9	5	

$4 \rightarrow 30 \text{ Minute}$

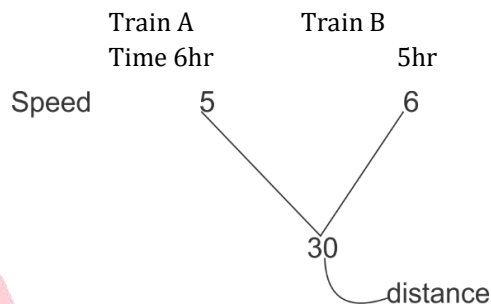
Usual time = 9 Unit

$9 \rightarrow \frac{30}{4} \times 9$

$= \frac{135}{2} = 67.50 \text{ Minutes}$

S178. Ans.(d)

Sol.



Train a cover 10 km in 2hr

$30 - 10$

$20 -$

Relative speed = 6 + 5

Time for meeting = $\frac{20}{11}$

$= 1 \frac{9}{11}$

= 1 hr 49 minute

Time = 11 + 1hr 49

= 12: 49 pm.

S179. Ans.(b)

Sol. $L = S_1 \times 33$

$L = S_2 \times 30$

Req. time = $\frac{2L}{S_1 + S_2} = \frac{2L}{\frac{L}{33} + \frac{L}{30}} = \frac{2 \times 33 \times 30}{63} = 31\frac{3}{7}$

S180. Ans.(d)

Sol. $\frac{30}{D} + \frac{24}{U} = 2 \frac{27}{60}$ — (i)

$3 \times \left(\frac{20}{D} + \frac{8}{U} = 1 \frac{14}{60} \right)$ — (ii)

$\pm \frac{30}{D} \pm \frac{24}{U} = -\frac{49}{20}$

$\frac{60}{D} + \frac{24}{U} = \frac{37}{10}$

$\frac{30}{D} = \frac{25}{20}$

D = 24 put in (i)

$\frac{30}{24} + \frac{24}{U} = \frac{49}{20}$

U = 20

$x + y = D = 24$

$x - y = U = 20$

$2x = 44$

$x = 22$

Speed of boat in still water.

S181. Ans.(d)

$$\text{Sol. } \frac{30}{D} + \frac{24}{U} = \frac{49}{20}$$

$$3 \times \left[\frac{10}{D} + \frac{4}{U} = \frac{37}{60} \right]$$

$$\frac{30}{D} + \frac{12}{U} = \frac{37}{20}$$

$$-\frac{30}{D} + \frac{12}{U} = \frac{37}{-20}$$

$$\frac{12}{U} = \frac{12}{20}$$

$$U = 20$$

Upstream Speed

S182. Ans.(d)**Sol.**

Down stream	up stream
$20\text{km} \times 4$	$30\text{km} \times 4 \rightarrow 140 \text{ min} \times 4$
$10\text{km} \times 15$	$8\text{km} \times 15 \rightarrow 49 \text{ min} \times 15$

$$\text{D.S} \Rightarrow \begin{array}{l} 70\text{km} \rightarrow 175\text{min} \\ 24\text{km} \rightarrow 60 \text{ min} \end{array}$$

$$\text{Req. speed} = 24 \frac{\text{km}}{\text{hr}}$$

S183. Ans.(c)**Sol.** $x + y = D$ (Downstream) $x - y = U$ (upstream) $x =$ speed of boat, $y =$ speed of stream

$$\frac{10}{D} + \frac{8}{U} = \frac{49}{60} \quad \left| \quad 2 \left(\frac{12}{D} + \frac{4}{U} = \frac{42}{60} \right) \right.$$

$$2 \times \left(\frac{12}{D} + \frac{4}{U} = \frac{42}{60} \right)$$

$$\frac{14}{D} = \frac{35}{60}$$

$$D = 24$$

Put $D = 24$

$$\frac{24}{24} + \frac{8}{U} = \frac{84}{60}$$

$$\frac{8}{U} = \frac{24}{60}$$

$$U = 20$$

$$x + y = 24$$

$$-x + y = 20$$

$$2y = 4$$

$$y = 2 \text{ km/h}$$

S184. Ans.(c)**Sol.** Let distance be 0 kmLet speed of stream be $x \text{ km/hrs}$.

$$\frac{D}{6-x} = \frac{4D}{6+x}$$

$$6+x = 24 - 4x$$

$$5x = 18$$

$$x = 3.6 \text{ km/hr.}$$

S185. Ans.(b)**Sol.**

$$\text{A.T.Q.} \Rightarrow \frac{2x}{\frac{15}{2} + y} = \frac{x}{\frac{15}{2} - y}$$

$$y = 2.5 \text{ kmph}$$

S186. Ans.(d)**Sol.**

Downstream	:	Upstream
62	:	48
S 31	:	24
T 24	:	31
x16		x16
384		496
$\frac{496}{60} = 8.2\text{hrs}$		

S187. Ans.(a)

$$\text{Sol. } 273 = (22 + 17) \times t$$

$$t = \frac{273}{39} = 7\text{hr.}$$

S188. Ans.(c);**Sol.** Let V is the speed of swimmerAnd U is the speed of current

$$3(V-U) = (V+U)$$

$$V = 2U$$

$$U = V/2 = 6/2 = 3\text{kmph}$$

S189. Ans.(d)**Sol.**

$$\text{Time taken by the Dolphin downstream} = \frac{68}{13+4}$$

$$= 4 \text{ hours}$$

S190. Ans.(d)**Sol.**

$$\frac{A}{63} \quad \frac{A+B}{36}$$

$$\begin{array}{c} \swarrow 4 \quad \searrow 7 \\ \quad \quad \quad 9 \times 7 \times 4 \end{array}$$

$$A : B$$

$$4 : 3 = 7$$

$$\begin{array}{c} \downarrow \times 850 \quad \downarrow \times 850 \\ \textcircled{2550} \quad 5950 \end{array}$$

S191. Ans.(b)**Sol.**

$$\frac{135 \times 22}{9} \times \frac{65}{100} = 214 \frac{1}{2} \text{ days}$$

S192. Ans.(b)**Sol.**

$$A + B = \frac{1}{30}, B + C = \frac{1}{20}$$

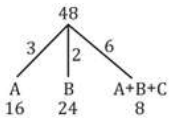
$$5A + 15B + 18C = 1 \text{ work}$$

$$\Rightarrow 5(A + B) + 10(B + C) + 8C = 1$$

$$\left(5 \times \frac{1}{30}\right) + \left(10 \times \frac{1}{20}\right) + 8C = 1$$

$$C = \frac{1}{24}$$

So, C will complete work in 24 days.

S193. Ans.(c)**Sol.**

So, C's efficiency = 1

So, A : B : C = 3 : 2 : 1

$$\text{So, C's share} = \frac{1}{6} \times 960 = 160$$

S194. Ans.(c)

$$\text{Sol. } (A+B) \times 48 = \text{ax}120$$

$$\frac{A+B}{A} = \frac{60}{48} = \frac{5}{2}$$

$$\text{T. W} = 5 \times 48 = 240$$

Efficiency -



$$\frac{1}{240} \quad \text{-----} \quad \frac{10}{2400}$$

S195. Ans.(d)**Sol. A.T.Q.**

Man Woman Children

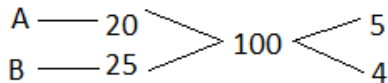
2K 4K 1K

Total Work

$$= (6K + 16K + 6K) \times 7$$

$$\text{N Woman complete in 7 days} = \frac{28K \times 7}{7 \times 4K}$$

N = 7 Women

S196. Ans.(c)**Sol.**

$$10(A+B) = 90$$

Remaining work done by C

$$100 \rightarrow 700$$

$$1 \rightarrow 7$$

C Complete remaining 10 unit work

$$\text{Share of 'C'} = 7 \times 10 = 70 \text{ Rs.}$$

S197. Ans.(a)

Sol. Ratio of their per day wages

$$= 12 \times 40 : 60 \times 10 = 4 : 5$$

S198. Ans.(b)**Sol. A.T.Q**

Man Woman Child

2k 6k 3k

$$\text{Total work} = (2k \times 5 + 2 \times 6k + 6 \times 3k) \times 9$$

$$= 40K \times 9$$

N Women complete work in 5 days.

$$N = \frac{40k \times 9}{6k \times 5} = 12 \text{ Women}$$

S199. Ans.(c)**Sol.**

$$\text{Total work} = 124 \times 120 = 14880 \text{ men days}$$

$$\text{Work completed in 64 days} = \frac{2}{3} \times 14880 \text{ men days}$$

$$= 9920 \text{ men days}$$

Remaining work for remaining 60 days

$$= (14880 - 9920) \text{ men days}$$

$$= 4960 \text{ men days}$$

$$\Rightarrow \frac{120 \times 64}{9920} = \frac{M_2 \times 60}{4960}$$

$$M_2 = 64$$

So, workman reduced = 120 - 64 = 56

S200. Ans.(d)**Sol.**

$$\begin{array}{l|l|l} A \rightarrow 6 & & 3 \\ B \rightarrow 9 & 18 & 2 \end{array}$$

$$A + B = 5 \text{ (2 hour work)}$$

$$(3+2)3 = 15$$

Remaining work 1st done by A

$$18 - 15 = 3$$

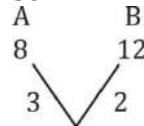
$$\text{Total time} = 6 + 1 = 7 \text{ hours.}$$

S201. Ans.(d)**Sol.**

$$\begin{array}{l|l|l} A \rightarrow 6 & & 6 \\ B \rightarrow 9 & 36 & 4 \\ C \rightarrow 12 & & -3 \end{array}$$

Total tank fill by All = 6 + 4 - 3

$$\frac{36}{7} \times \frac{35}{100} = 1.8 \text{ hr.}$$

S202. Ans.(c)**Sol.**

$$2 \left[\begin{array}{l} A \\ B \end{array} \right] \begin{array}{l} 3 \\ 2 \end{array} 5 \times 4 = 20$$

8 hr 4 unit work left

A 1 hr 1 unit work left

B $\frac{1}{2}$ hr 0 unit work left

$$\left[\begin{array}{l} 2 - 1 \text{ hr} \\ 1 - \frac{1}{2} \text{ hr} \end{array} \right]$$

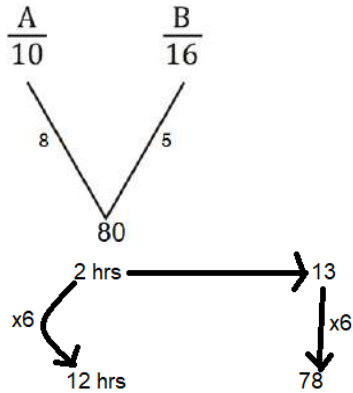
$$\text{Total time} = 9 \frac{1}{2} \text{ hr}$$

S203. Ans.(a)**Sol.**

$$\begin{array}{l} A - 6 \quad \left| \quad \right| \quad 4 \\ B - 8 \quad \left| 24 \right| \quad 3 \\ C - 12 \quad \left| \quad \right| \quad -2 \end{array}$$

$$A + b - C = 5 \times = 15$$

$$\begin{array}{l} 24 - 15 = \boxed{9} \\ B - C = \boxed{1} \end{array} = 9 \text{ hours}$$

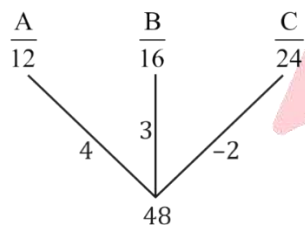
S204. Ans.(c)**Sol.**

After 6 cycles of 2 hrs, A will fill next hours.

So \Rightarrow

$$\frac{2}{8} = \frac{1}{4} \text{ hrs}$$

$$\text{total time} = 12 \frac{1}{4} \text{ hrs.}$$

S205. Ans.(d)**Sol.**

Tank filled in first 4 hour = $5 \times 4 = 20$

Remaining part filled in = $\frac{28}{1} = 28$ hours

Total time = $28 + 4 = 32$ hours

S206. Ans.(b)**Sol.**

$$\begin{array}{l} A \rightarrow 16 \quad \left| \quad \right| \quad 15 \\ B \rightarrow 24 \quad \left| 240 \right| \quad 10 \\ C \rightarrow 40 \quad \left| \quad \right| \quad -6 \end{array}$$

$$A + B - C = 19$$

$$\text{For 8 hour} = 19 \times 8 = 152$$

$$\text{Remaining, } 240 - 152 = 88$$

$$B - C = 10 - 6 = 4$$

$$= \frac{88}{4} = 22$$

S207. Ans.(d)**Sol.**

$$\begin{array}{l} A \rightarrow 16 \quad \left| 80 \right| \quad 5 \\ B \rightarrow 20 \quad \left| \quad \right| \quad 4 \end{array}$$

(A + B) two hours work = $5 + 4 = 9$

If A starts

$$(A + B) \times 8 = 72 \text{ work in } 8 \times 2 = 16 \text{ hrs}$$

Remaining, $80 - 72 = 8$

Remaining work 1st A done then B alone

$$72 + 5 = 77$$

Remaining 3 work done by B = $\frac{3}{4}$

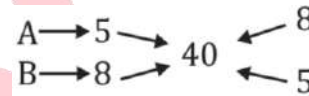
$$16 + 1 + \frac{3}{4} = 17 \frac{3}{4} \text{ hrs}$$

S208. Ans.(d)**Sol.**

$$\begin{array}{l} A \rightarrow 12 \quad \left| \quad \right| \quad 1 \\ B \rightarrow 6 \quad \left| \quad \right| \quad 2 \end{array}$$

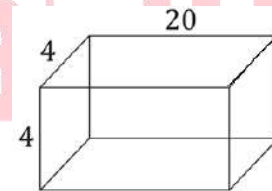
$$A + B = 3$$

(A + B) open together = $\frac{12}{3} = 4 \text{ hr}$

S209. Ans.(d)**Sol.**

$$A + B = 8 - 5 = 3 \text{ unit}$$

$$\text{A. T. Q} = \frac{20}{3} = 6 \frac{2}{3} \text{ hr.}$$

S210. Ans.(a)**Sol.**

T.S.A of cuboid

$$= 2 (lb + bh + hl)$$

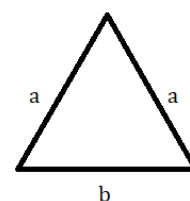
$$= 2 (80 + 80 + 16) = 352 \text{ cm}^2$$

S211. Ans.(b)

Sol. inner surface area of Rectangular Room

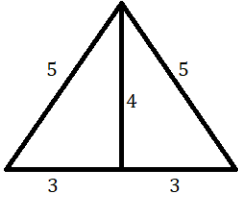
$$\text{is} = 2h (l + b)$$

$$= 7 (5 + 7) = 84 \text{ m}^2.$$

S212. Ans.(b)**Sol.**

$$b = 6$$

$$a = \frac{16-6}{2} = 5$$



$$\text{Area} = \frac{1}{2} \times 6 \times 4 = 12$$

S213. Ans.(a)

Sol. A.T.Q

$$\text{Height} = 2x.$$

$$\text{Base} = x.$$

$$\text{Area} = 338$$

$$2x^2 = 338$$

$$x = \sqrt{169}$$

$$x = 13$$

S214. Ans.(a)

$$\text{Sol. Area} = 11 \times 6 = 66\text{m}^2$$

$$\text{Width} = \frac{60}{100} \text{m} = \frac{3}{5}$$

$$\text{Length} = \frac{66}{\frac{3}{5}} = 110 \text{m}$$

$$\text{Cost} = 110 \times 112.50 = \text{Rs } 12375$$

S215. Ans.(c)

$$\text{Sol. v. of sphere} = \frac{4}{3} \pi r^3$$

$$R = 6$$

$$r = 2$$

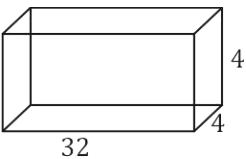
$$\text{No. of Sphere} = \frac{(6)^3}{(2)^3} = \frac{216}{8} = 27$$

S216. Ans.(a)

Sol. Can't be determined

S217. Ans.(b)

Sol.



$$\text{Cuboid length} = 32$$

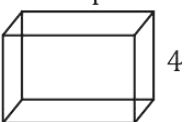
$$\text{Breadth} = 4$$

$$\text{Height} = 4$$

To make cube of 4 cm. length

$$\frac{32}{4} = 8 \text{ cube}$$

$$\text{TSA} = 6a^2$$



$$= 6 \times 4 \times 4$$

$$\text{TSA of 8 cube} = 8 \times 6 \times 4 \times 4 = 768 \text{ cm}^2$$

S218. Ans.(c)

$$\text{Sol. V. of cylinder} = \pi r^2 h.$$

$$\text{A. T. Q} = \frac{22}{7} \times 6 \times r^2 = 231$$

$$r^2 = \frac{49}{4}$$

$$r^2 = \frac{7}{2} = 3.5$$

S219. Ans.(a)

$$\text{Sol. H.C.F.}\{506, 345, 230\} = 23 \text{ cm}$$

S220. Ans.(c)

$$\text{Sol. } a^3 - b^3 = (a - b)(a^2 + b^2 + ab)$$

$$\Rightarrow \frac{3552}{6} = 592$$

S221. Ans.(d)

$$\text{Sol. If } a^3 + b^3 + c^3 - 3abc = 0$$

$$\text{Then, } a + b + c = 0$$

$$x - 3 + 2x - 5 + x - 4 = 0$$

$$4x = 12$$

$$x = 3$$

S222. Ans.(d)

$$\text{Sol. } x - \frac{1}{x} = 4$$

$$x^3 - \frac{1}{x^3} = (4)^3 + 4 \times 3$$

$$= 64 + 12$$

$$= 76$$

S223. Ans.(d)

$$\text{Sol. } x^2 + \frac{1}{x^2} = 11$$

$$x - \frac{1}{x} = \sqrt{11 - 2}$$

$$x - \frac{1}{x} = 3$$

S224. Ans.(c)

$$\text{Sol. } (a + b + c)^2 = a^2 + b^2 + c^2 + 2(ab + bc + ca)$$

$$\text{A. T. Q } (12)^2 = a^2 + b^2 + c^2 + 2(8)$$

$$144 - 16 = a^2 + b^2 + c^2$$

$$a^2 + b^2 + c^2 = 128$$

S225. Ans.(b)

$$\text{Sol. } a^3 - b^3 = (a - b)(a^2 + b^2 + ab)$$

$$(a^2 + b^2 + ab) = \frac{416}{8} = 52 = (a + b)^2 - ab$$

S226. Ans.(b)

$$\text{Sol. } x^2 + \frac{1}{x^2} = (4\sqrt{3})^2 - 2 = 46$$

S227. Ans.(c)

$$\text{Sol. } a^3 + b^3 + c^3 = 3abc$$

$$\therefore a + b + c = 0$$

$$2x - 5 + x - 4 + x - 11 = 0$$

$$4x - 20 = 0$$

$$x = 5$$

S228. Ans.(c)

Sol. $x + \frac{1}{x} = a$

$$x^2 + \frac{1}{x^2} = a^2 - 2$$

$$x + \frac{1}{x} = 2\sqrt{3}$$

$$= 10$$

$$x^2 + \frac{1}{x^2} = (2\sqrt{3})^2 - 2$$

S229. Ans.(c)

Sol. If $a^3 + b^3 + c^3 - 3abc = 0$

Then, $a + b + c = 0$

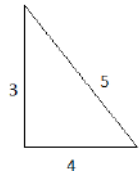
$$2x - 1 + 3x - 4 + x - 7 = 0$$

$$6x = 12$$

$$x = 2$$

S230. Ans.(d)

Sol. $\tan \theta = \frac{3}{4}$



$$\frac{5\left(\frac{3}{5}\right) - 3\left(\frac{4}{5}\right)}{5\left(\frac{3}{5}\right) + 3\left(\frac{4}{5}\right)} = \frac{15-12}{15+12} = \frac{3}{27} = \frac{1}{9}$$

S231. Ans.(c)

Sol. Put $\theta = 45^\circ$

$$(1+1)\left(1 - \frac{1}{2}\right) = 2\left(\frac{1}{2}\right) = 1$$

S232. Ans.(c)

Sol. $x^2 = a^2 \cos^2 \theta + b^2 \sin^2 \theta + 2ab \sin \theta \cos \theta$

$$y^2 = a^2 \sin^2 \theta + b^2 \cos^2 \theta - 2ab \sin \theta \cos \theta$$

$$x^2 + y^2 = a^2 + b^2$$

S233. Ans.(c)

Sol. $4 \times \left(\frac{1}{2}\right)^2 + 3 \times \left(\frac{1}{\sqrt{3}}\right)^2$

$$= 1 + 1 = 2$$

S234. Ans.(a)

Sol. $\frac{\operatorname{cosec} 31^\circ}{\sec 59^\circ} \Rightarrow \sec(90 - 31^\circ) = \sec 59^\circ$

$$\frac{\sec 59^\circ}{\sec 59^\circ} = 1$$

S235. Ans.(a)

Sol. $1 + \frac{(\sec^2 A - 1)}{\sec A + 1}$

$$1 + \frac{(\sec A - 1)(\sec A + 1)}{\sec A + 1}$$

$$\sec A$$

S236. Ans.(b)

Sol. $\sin 18^\circ - \cos 72^\circ$

$$\sin 18^\circ - \cos(90 - 18^\circ)$$

$$\sin 18^\circ - \sin 18^\circ$$

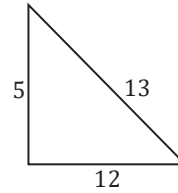
$$= 0.$$

S237. Ans.(b)

Sol. $5 \cos \theta - 12 \sin \theta = 0.$

$$5 \cos \theta = 12 \sin \theta = 0.$$

$$\tan \theta = \frac{5}{12}$$



$$\frac{2 \sin \theta + \cos \theta}{\cos \theta - \sin \theta}$$

Divide numerator and denominator by $\cos \theta.$

$$2 \frac{\sin \theta}{\cos \theta} + 1$$

$$1 - \frac{\sin \theta}{\cos \theta}$$

$$= \frac{2 \tan \theta + 1}{1 - \tan \theta}$$

$$= \frac{2 \times \frac{5}{12} + 1}{1 - \frac{5}{12}}$$

$$= \frac{\frac{22}{12}}{\frac{7}{12}} = \frac{22}{7} = 3 \frac{1}{7}$$

S238. Ans.(c)

Sol. $\frac{1}{2} + \frac{1}{4} - \frac{3}{4} = 0$

S239. Ans.(b)

Sol. Put $\theta = 45^\circ$

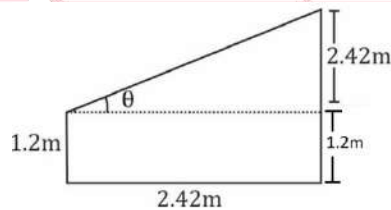
$$1 - \frac{1}{\frac{1}{2}} \Rightarrow 1 - 2 = -1$$

Alternate;

$$\frac{\cos^2 \theta}{\sin^2 \theta} - \frac{1}{\sin^2 \theta} = \frac{\cos^2 \theta - 1}{\sin^2 \theta} = -1$$

S240. Ans.(d)

Sol.

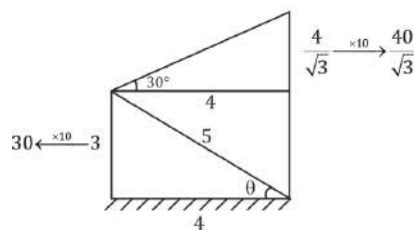


$$\text{total} = \frac{2.42}{2.42} = 1$$

$$\theta = 45^\circ$$

S241. Ans.(b)

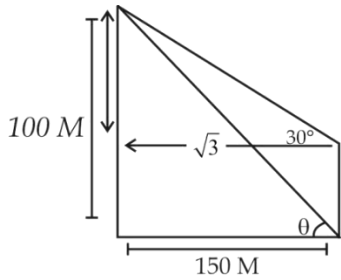
Sol.



$$\begin{aligned} \text{Total height} &= 30 + \frac{40}{\sqrt{3}} = 10 \left(\frac{3\sqrt{3}+4}{\sqrt{3}} \right) \\ &= \frac{17.3}{3} (3 \times 1.73 + 4) \\ &= \frac{17.3}{3} (5.19 + 4) \\ &= 5.76 \times 9.19 \\ &= 52.99 \end{aligned}$$

S242. Ans.(a)

Sol.



$$\tan \theta = \frac{2}{3}$$

$$2 \text{ ----- } 100$$

$$3 \text{ ----- } 150$$

$$\sqrt{3} \text{ --- } 150$$

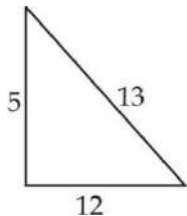
$$\frac{150}{\sqrt{3}} \times \frac{\sqrt{3}}{\sqrt{3}} = 50\sqrt{3}$$

$$\text{Required height of pole} = 100 - 50\sqrt{3}$$

$$= 50(2 - \sqrt{3})\text{m}$$

S243. Ans.(d)

Sol.

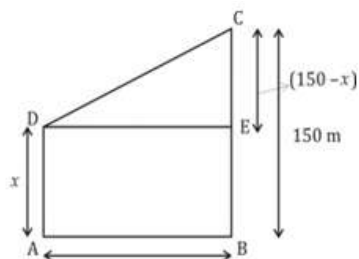


$$12 \text{ ----- } 36$$

$$5 \text{ ----- } 15$$

S244. Ans.(a);

Sol.



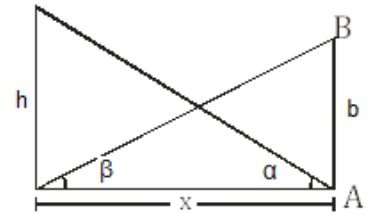
$\Delta CDE,$

$$\tan 30^\circ = \frac{(150-x)}{60}$$

$$x = 116\text{m (approx).}$$

S245. Ans.(c)

Sol.



$$\tan \alpha = \frac{h}{x} \Rightarrow x = \frac{h}{\tan \alpha}$$

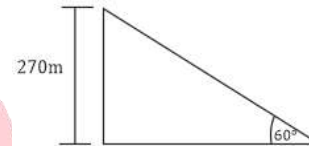
$$\tan \beta = \frac{b}{x} = \frac{b}{\frac{h}{\tan \alpha}}$$

$$\frac{b}{\tan \beta} = \frac{h}{\tan \alpha}$$

$$h = b \tan \alpha \cot \beta$$

S246. Ans.(b)

Sol.

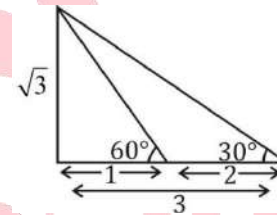


$$\sqrt{3} \rightarrow 270 \text{ m.}$$

$$1 \rightarrow 155.88 \text{ m.}$$

S247. Ans.(b)

Sol.



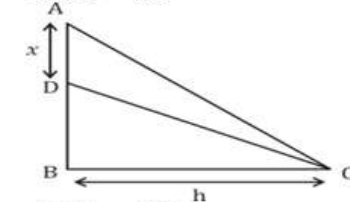
$$2 \text{ ----- } 25$$

$$\sqrt{3} - \frac{25}{2} \times \sqrt{3} = \frac{25}{2} \times \frac{1}{73} = 21.625 \text{ m}$$

S248. Ans.(c);

Sol.

$$\angle ACB = 60^\circ$$



$$\angle DCB = 45^\circ$$

$$AB = 5000 \text{ meter.}$$

$$AD = x \text{ meter.}$$

$$\therefore \text{ from } \Delta ABC,$$

$$\tan 60^\circ = \frac{AB}{BC}$$

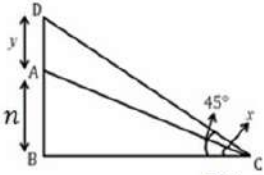
$$\sqrt{3} = \frac{5000}{BC}$$

$$BC = \frac{5000}{\sqrt{3}} \text{ m}$$

from $\triangle DBC$,
 $\tan 45^\circ = \frac{DB}{BC}$
 $DB = BC = \frac{5000}{\sqrt{3}}$
 $\therefore AD = AB - BD$
 $= 5000 - \frac{5000}{\sqrt{3}}$
 $= 5000 \left(\frac{\sqrt{3}-1}{\sqrt{3}} \right) m$

S249. Ans.(b);

Sol.



$\triangle BCD, \tan 45^\circ = \frac{BD}{BC} = 1$

$1 = \frac{n+y}{BC} \Rightarrow BC = n + y \dots\dots\dots(i)$

From $\triangle ABC$,

$\tan x = \frac{AB}{BC} \Rightarrow \tan x = \frac{n}{BC}$

$BC = n \cdot \cot x \dots\dots\dots(ii)$

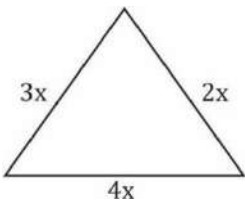
From (i) and (ii)

$n + y = n \cdot \cot x$

$y = (n \cot x - n) \text{ meter}$

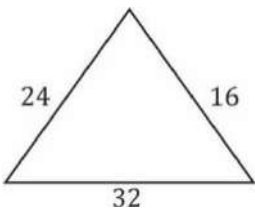
S250. Ans.(a)

Sol.



$9x = 72$

$x = 8$



S251. Ans.(a)

Sol. Angles are in ratio = 2 : 3 : 7

$12x \rightarrow 180$

$x = 15^\circ$

\angle are $30^\circ, 45^\circ$ & 105°

$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C} = k$

$\frac{a}{\sin 30} = \frac{b}{\sin 45} = \frac{c}{\sin 105} = k$

$\rightarrow \frac{c}{\cos 15^\circ}$

$a = \frac{k}{2}$

$b = \frac{k}{\sqrt{2}}$

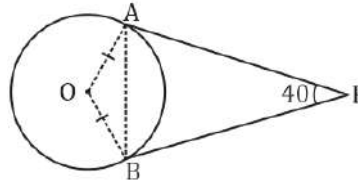
$c = k(\cos 45^\circ - 30^\circ)$

$= k \left(\frac{\sqrt{3}-1}{2\sqrt{2}} \right)$

$a : b : c = \frac{1}{2} : \frac{1}{\sqrt{2}} : \frac{\sqrt{3}-1}{2\sqrt{2}}$

S252. Ans.(b)

Sol.



$\angle AOB = 180 - 40 = 140^\circ$

$OA = OB = r$

$\angle OAB = \angle OBA$

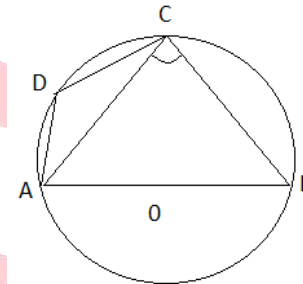
$\angle OAB = \frac{180-140}{2} = 20^\circ$

S253. Ans.(d)

Sol.

$\angle ABC = 180 - 130 = 50^\circ$

$\angle BAC = 180 - (90 + 50) = 40^\circ$



S254. Ans.(c)

Sol. $\angle ORS = y$

$\angle ORP = 90^\circ$

In $\triangle PRS$

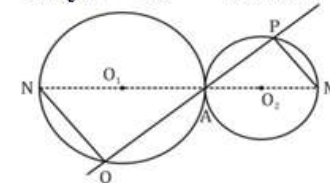
$x + y + 90 + y = 180$

$x + 2y = 90^\circ$

S255. Ans.(b);

Sol.

$\angle AQN = 90^\circ = \angle APM$



$\angle NAQ = \angle MAP$

$\triangle AQN \sim \triangle APM$

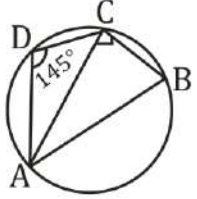
$\frac{AQ}{AP} = \frac{AN}{AM} = \frac{2 \times 8}{2 \times 5} \Rightarrow \frac{AQ}{AP} = \frac{5}{8}$

S256. Ans.(b)

Sol. $\angle ABC = 180^\circ - 145^\circ = 35^\circ$

$\angle BAC = 180^\circ - (90 + 35^\circ)$

$\angle BAC = 55^\circ$



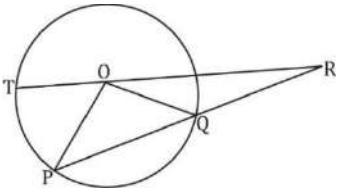
S257. Ans.(b)

Sol. We know this as a standard result

$$r_2 = \sqrt{r_1 r_3}$$

S258. Ans.(a)

Sol.



$QO = QP$

$\therefore \angle QOR = \angle QRO = 15^\circ$

$\angle OQR = 180 - 30 = 150^\circ$

$\angle PQO = 30^\circ$

$OP = OQ$

$\angle QPO = \angle PQO = 30^\circ$

$\angle QOP = 180^\circ - 60 = 120^\circ$

S259. Ans.(c)

Sol. Let $OD = R$

$OC = OE + EC = R + R = 2R$

In $\triangle ODC$,

$R^2 + DC^2 = 4R^2$

$DC = \sqrt{3}R$ (Side of square)

Required ratio = $\frac{R}{4 \times \sqrt{3}R} = \frac{1}{4\sqrt{3}}$



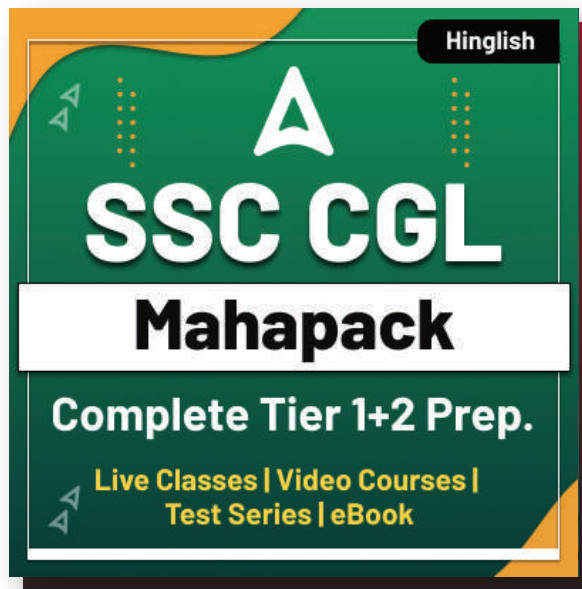
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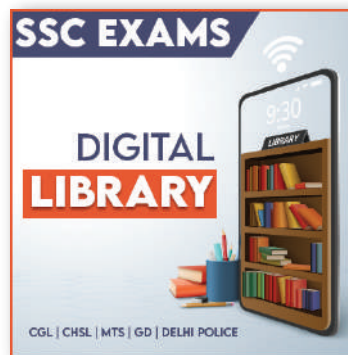


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General Awareness

Q1. Which of the following elements was not found in Lothal as archaeological remains?

- (a) Couple Burial
- (b) Persian seals
- (c) Harbour
- (d) Fine variety of barley

Q2. Which of the following elements were not found in the form of archaeological remains from Kalibangan?

- (a) Black bangles
- (b) Fire pit
- (c) Ploughed field
- (d) Couple burial

Q3. Which of the following gives an account of the Balban period?

- (a) Tahqiq-i-Hind
- (b) Tarikh-i-Firoz Shahi
- (c) Shahnameh
- (d) None of the above

Q4. Who defeated Ibrahim Lodi in the first Battle of Panipat?

- (a) Sher Shah
- (b) Babur
- (c) Mohammad Ghori
- (d) Akbar

Q5. Which famous battle did Akbar win against Rana Pratap of Mewar?

- (a) Battle of Haldighati
- (b) Battle of Plassey
- (c) Battle of Panipat
- (d) Battle of Talikota

Q6. Akbar's administration was known for its efficient revenue system called:

- (a) Zamindari System
- (b) Mansabdari System
- (c) Jagirdari System
- (d) Dahsala System

Q7. Sikhism was founded in which of the following centuries?

- (a) 13-14th century
- (b) 11-12th century
- (c) 15-16th century
- (d) 12-13th century

Q8. Who among the following Maratha Ruler Abolished Jagidari System and implemented Ryotwari System?

- (a) Shivaji
- (b) AKbar
- (c) Sambhaji
- (d) None of these

Q9. Who was the Governor-General of British during the Second Anglo-Maratha War?

- (a) Warren Hasting
- (b) Lord Canning
- (c) Lord Wellesley
- (d) William Hardinge

Q10. Who among the following used Hooghly as the base for piracy in the Bay of Bengal?

- (a) The Portuguese
- (b) The French
- (c) The Danish
- (d) The British

Q11. Even though India became independent in 1947 but Daman and Diu remained a European colony till 1961. Which country ruled over it?

- (a) France
- (b) Britain
- (c) Netherland
- (d) Portugal

Q12. Which one of the following European trading companies adopted the "Blue Water Policy" in India?

- (a) Dutch company
- (b) French company
- (c) Portuguese company
- (d) British East India Company

Q13. Who was the President of the Indian National Congress at the time of Indian independence?

- (a) Maulana Abdul Kalam Azad
- (b) J. B. Kriplani
- (c) Jawahar Lal Nehru
- (d) Rajendra Prasad

Q14. Where was the Congress Session held in 1907 at which the first split in Congress took place?

- (a) Calcutta
- (b) Meerut
- (c) Allahabad
- (d) Surat

Q15. Who among the following was NOT known as a moderate in the National Movement?

- (a) Bal Gangadhar Tilak
- (b) Dadabhai Naoroji
- (c) M.G. Ranade
- (d) Gopal Krishna Gokhale

Q16. Which one of the following pairs is not correctly matched?

- (a) Partition of Bengal — 1905
- (b) Foundation of Muslim League — 1906
- (c) Surat Split — 1907
- (d) Transfer of India's Capital from Calcutta to Delhi — 1909

Q17. In which of the following movements, did Mahatma Gandhi make the first use of hunger strike as a weapon?

- (a) Non-cooperation Movement
- (b) Rowlatt Satyagraha
- (c) Ahmedabad Strike
- (d) Bardoli Satyagraha

Q18. The reform movement that advocated for widow remarriage was:

- (a) Brahmo Samaj
- (b) Arya Samaj
- (c) Prarthana Samaj
- (d) Ramakrishna Mission

Q19. In which year Swami Vivekananda established the Ramakrishna Mission at Belur?

- (a) 1885
- (b) 1890
- (c) 1897
- (d) 1901

Q20. Which one of the following is correctly matched?

- (a) Brahmo Samaj - Annie Basant
- (b) Arya Samaj – Swami Dayanand Saraswati
- (c) Ram Krishna Mission - Keshab Chandra Sen
- (d) Theosophical Society – Swami Vivekananda

Q21. Which event is considered the starting point of the Revolt of 1857?

- (a) The annexation of Awadh
- (b) The introduction of the Doctrine of Lapse
- (c) The introduction of the Enfield rifle
- (d) The Battle of Plassey

Q22. Which region witnessed a significant rebellion led by Begum Hazrat Mahal during the Revolt of 1857?

- (a) Awadh
- (b) Punjab
- (c) Bengal
- (d) Madras

Q23. Which Veda depicts the information about the most ancient Vedic age culture?

- (a) Rigveda
- (b) Yajurveda
- (c) Atharvaveda
- (d) Samaveda

Q24. Vaishali was the capital of which of the following Mahajanapadas?

- (a) Vajji
- (b) Kosala
- (c) Kashi
- (d) Magadha

Q25. In ancient India, Nalanda University represented a great center for the study of

- (a) Mahayana Buddhism
- (b) Hinduism
- (c) Hinayana Buddhism
- (d) Jainism

Q26. What is the name of the preaching mudra or gesture, in which the Buddha is depicted delivering his first sermon?

- (a) Abhaya
- (b) Dharmachakra
- (c) Dhyana
- (d) Bhumisparsha

Q27. Which Greek ambassador wrote an account of the Mauryan Empire?

- (a) Herodotus
- (b) Megasthenes
- (c) Pliny the Elder
- (d) Arrian

Q28. Which famous battle was the last battle of Ashoka?

- (a) Battle of Kalinga
- (b) Battle of Hydaspes
- (c) Battle of Plassey
- (d) Battle of Panipat

Q29. Who were the officials appointed by Ashoka to supervise the spread of Dhamma during the Mauryan Empire?

- (a) Samaharta
- (b) Sannidhata
- (c) Dhamma Mahamatras
- (d) Sitadhyaksh

Q30. Which of the following ruler is called as "Rangeela"?

- (a) Muhammad shah
- (b) Bahadur shah
- (c) Akbar II
- (d) Ahmad shah

Q31. Which among the following words is NOT written in the Preamble of our Constitution?

- (a) Secular
- (b) Communist
- (c) Socialist
- (d) Sovereign

Q32. Which among the following has been considered as 'instrument of instructions'?

- (a) Fundamental Rights
- (b) Preamble
- (c) Fundamental Duties
- (d) Directive Principles of State Policy

Q33. In which among the following cases, the Supreme Court of India propounded the theory of the basic structure of the Constitution?

- (a) Minerva Mills
- (b) Gopalan vs State of Madras
- (c) Golak Nath
- (d) Keshvanand Bharati

Q34. Which of the following is called a 'Mini Constitution'?

- (a) Government of India Act, 1935
- (b) 42nd Constitutional Amendment
- (c) 44th constitutional amendment
- (d) Government of India Act, 1919

Q35. Indian constitution took the concept of single citizenship from which country's constitution?

- (a) UK
- (b) Canada
- (c) Russia
- (d) USA

Q36. Which of the following is NOT correctly matched?

- (a) Freedom of Religion - Article 25
- (b) Protection against arrest and detention - Article 23
- (c) Abolition of Untouchability - Article 17
- (d) Protection of Interest of Minorities - Article 29

Q37. Right to Freedom as under Article 19 is automatically suspended when a proclamation of emergency is made under which of the following grounds?

- (a) Armed rebellion
- (b) Loss of election
- (c) War or external aggression
- (d) Internal disturbance

Q38. The number of Lok Sabha seats were raised from 525 to 545 by which of the following amendment?

- (a) 70th Amendment Act
- (b) 31st Amendment Act
- (c) 52nd Amendment Act
- (d) 90th Amendment Act

Q39. The Sindhi language was added by which amendment of the Indian Constitution?

- (a) 10th Amendment Act
- (b) 21st Amendment Act
- (c) 31st Amendment Act
- (d) 24th Amendment Act

Q40. Which one of the following is not stated as a Directive Principle of State Policy in the Constitution of India?

- (a) Uniform civil code for the citizens
- (b) Organisation of village panchayats
- (c) Prohibition of human trafficking and forced labour.
- (d) Separation of Judiciary from Executive

Q41. Which of the following is incorrectly matched?

- (a) Article 49 - Protect every monument or place of artistic or historic interest
- (b) Article 37 - Application of the Directive Principles
- (c) Article 44 - Uniform Civil Code
- (d) Article 40 - Prohibit the slaughter of cows, calves and other milch and draught cattle

Q42. In the Constitution of India, fundamental duties are mentioned in which of the following Article?

- (a) Article 50
- (b) Article 51A
- (c) Article 50
- (d) Article 49

Q43. Which among the following is NOT listed as a Fundamental Duty in the constitution of India?

- (a) To pay taxes
- (b) To protect the sovereignty of India
- (c) To abide by the constitution
- (d) To safeguard public property

Q44. The President of India has the power of pardoning under ____.

- (a) Article 72
- (b) Article 76
- (c) Article 74
- (d) Article 73

Q45. When the offices of the President and Vice-President fall vacant simultaneously, who acts as President?

- (a) Prime Minister of India
- (b) The Chief Justice of India
- (c) The Speaker of Lok Sabha
- (d) The Comptroller and Auditor General of India

Q46. The term of office of the Vice-President of India is -

- (a) 4 years
- (b) 5 years
- (c) 2 years
- (d) 6 years

Q47. The Speaker of Lok Sabha is elected by ____.

- (a) the people directly
- (b) all the members of the Lok Sabha
- (c) all the members of Parliament
- (d) the members of the majority party in the Lok Sabha

Q48. The members of the standing committee are taken from the Lok Sabha and Rajya Sabha in the ratio of

- (a) three and one respectively
- (b) two and one respectively
- (c) four and one respectively
- (d) equal members for both the Houses

Q49. The Prime Minister is appointed by which one of the following?

- (a) Lok Sabha Speaker
- (b) Vice President
- (c) Chief Justice of India
- (d) President

Q50. Who among the following shall communicate to the president all the decisions of the council of ministers under Article 78?

- (a) Prime minister
- (b) Home minister
- (c) Vice President
- (d) Attorney general

Q51. The Chief Minister of a State cannot take part in the election of President if he is a member of?

- (a) Rajya Sabha
- (b) Lok Sabha
- (c) Legislative Assembly of the state
- (d) Legislative Council of the state

Q52. What can be the minimum strength of the Council of Ministers including the Chief Minister in the States?

- (a) 10 %
- (b) 15 %
- (c) 12 %
- (d) 20 %

Q53. According to the Indian Constitution, at one time, a person can be the Governor of a maximum number of how many State/States?

- (a) Three
- (b) Two
- (c) The maximum number is not fixed
- (d) One

Q54. What is the minimum age for becoming a member of the State Legislative Council?

- (a) 18 years
- (b) 25 years
- (c) 30 Years
- (d) 35 years

Q55. How many members represent the state of Uttar Pradesh in the Lok Sabha?

- (a) 58
- (b) 67
- (c) 70
- (d) 80

Q56. Which among the following has been constituted under Article 280 of the constitution?

- (a) Election Commission
- (b) Finance Commission
- (c) Attorney General of India
- (d) Central Vigilance Commission

Q57. Which statement about the Election Commission is not correct?

- (a) It is a permanent and independent body
- (b) Article 324 of the Constitution envisages the provisions relating to the Election Commission
- (c) It is responsible for getting conduct the elections of President, Vice President and Municipal Corporations
- (d) This is an all-India institution

Q58. The Commission to examine Centre-State relations was headed by

- (a) Punchhi commission
- (b) Ashok Mehta
- (c) Sardar Swarn Singh
- (d) Sarkaria Commission

Q59. Which Article of the Indian Constitution has provisions for a financial emergency?

- (a) Article 356
- (b) Article 360
- (c) Article 352
- (d) Article 350

Q60. Which Article in the Constitution on India provides for the post of Comptroller and Auditor General of India(CAG)?

- (a) Article 140
- (b) Article 148
- (c) Article 145
- (d) Article 143

Q61. The weather reports are prepared by the _____ Department of the Government.

- (a) Ecological
- (b) Meteorological
- (c) Economical
- (d) Topological

Q62. How does La Nina affect the Pacific Ocean?

- (a) Decreases salinity of ocean
- (b) Cools downs the temperature of the water
- (c) Maintains the stable temperature of the water
- (d) Increases salinity of ocean

Q63. Which of the following rivers does not have a delta in the eastern coastal plain of India?

- (a) Mahanadi
- (b) Krishna
- (c) Godavari
- (d) Narmada

Q64. Which is the largest island in Japan among the following options?

- (a) Hokkaido
- (b) Honshu
- (c) Shikoku
- (d) Kyushu

Q65. A cyclone is known by different names in different parts of the world. It is called a '_____ ' in Japan and Philippines.

- (a) Hurricane
- (b) Whirlpool
- (c) Twister
- (d) Typhoon

Q66. In which direction do cyclones rotate in the northern hemisphere?

- (a) Clockwise
- (b) Counterclockwise
- (c) It varies depending on the storm
- (d) They do not rotate in the northern hemisphere

Q67. What type of science is seismology?

- (a) Rivers
- (b) Earthquake
- (c) Mountain
- (d) Volcano

Q68. Earthquake tremors are caused by the disturbance deep down inside the uppermost layer of the earth called the _____.

- (a) core
- (b) kernel
- (c) pith
- (d) crust

Q69. Which regional division of the Himalayas is situated between the Kali and Tista rivers?

- (a) Punjab Himalaya
- (b) Nepal Himalaya
- (c) Assam Himalaya
- (d) Kumaon Himalaya

Q70. Whose tributary is the Tawa River?

- (a) Narmada
- (b) Tapi
- (c) Chambal
- (d) Yamuna

Q71. Jog Falls is situated on which river?

- (a) Sharavati
- (b) Cauvery
- (c) Narmada
- (d) Chambal

Q72. 49th Parallel is the boundary line between which two countries?

- (a) USA and Canada
- (b) North and South Vietnam
- (c) Germany and France
- (d) Brazil and Chile

Q73. What is the Prime Meridian?

- (a) The line of longitude that passes through Greenwich, England
- (b) The line of latitude that passes through the equator
- (c) The line of longitude that passes through the North Pole
- (d) The line of longitude that passes through the South Pole

Q74. What are Aus, Aman, and Boro?

- (a) Varieties of Paddy
- (b) Types of millets
- (c) Kharif crops
- (d) Rabi crops

Q75. Which of the following is NOT a crop produced during the Zaid season?

- (a) Watermelon
- (b) Muskmelon
- (c) Cucumber
- (d) Sugarcane

Q76. Which country is the second-largest producer of rice in the world?

- (a) India
- (b) China
- (c) Thailand
- (d) United States

Q77. The topography of the plateau is ideal for

- (a) forestry
- (b) cultivation
- (c) mining
- (d) generation of hydropower

Q78. The highest mountain peak in Peninsular India is

- (a) Dodabetta
- (b) Anai Mudi
- (c) Mahendragiri
- (d) Nilgiris

Q79. Which of the following is the highest plateau in India -

- (a) Chota Nagpur Plateau
- (b) Deccan Plateau
- (c) Ladakh Plateau
- (d) Baghelkhand Plateau

Q80. Which of the following rock form is an igneous rock

- (a) Granite
- (b) Limestone
- (c) Marble
- (d) Slate

Q81. The study of soil science is termed as

- (a) Geology
- (b) Climatology
- (c) Pedology
- (d) Biogeography

Q82. Which of the following is the Colour of loamy soil

- (a) Bluish green
- (b) Greenish brown
- (c) Yellowish-brown
- (d) Blackish brown

Q83. The Grand Trunk(GT) road, originally built by Sher Shah Suri, connected which two cities during the British period?

- (a) Amritsar and Kolkata
- (b) Calcutta and Peshawar
- (c) Delhi and Amritsar
- (d) Delhi and Kolkata

Q84. The National Highways Authority of India(NHAI) was established in which year?

- (a) 1985
- (b) 1995
- (c) 2005
- (d) 2015

Q85. Which tribal group celebrates the festivals Keshlapur Jathra and Madai?

- (a) Bhil
- (b) Gond
- (c) Santhal
- (d) Munda

Q86. Which tribal group primarily speaks the Mundari language?

- (a) Bhil
- (b) Gond
- (c) Santhal
- (d) Munda

Q87. The term Roaring Forties is associated with the

- (a) Planetary winds
- (b) Trade winds
- (c) Westerlies
- (d) Polar winds

Q88. Trade winds blow from the

- (a) Polar high pressure
- (b) Equatorial low pressure
- (c) Subtropical high pressure
- (d) Subpolar low pressure

Q89. Which one of the following is the longest river in the world -

- (a) Yangtze-Kiang
- (b) Amazon
- (c) Nile
- (d) Mississippi-Missouri

Q90. The wide treeless grassy plains in South America are called

- (a) Selvas
- (b) Pampas
- (c) Prairies
- (d) Steppes

Q91. Which of the following is NOT a credit rating agency in India?

- (a) CRISIL
- (b) ICRA
- (c) CARE Rating
- (d) Dow Jones

Q92. What is the difference between a stock and a bond?

- (a) Stocks represent ownership in a company, while bonds represent a loan to a company
- (b) Stocks have fixed returns, while bonds have variable returns
- (c) Stocks have a fixed maturity date, while bonds do not
- (d) Stocks have higher risks than bonds

Q93. Which of the following is the first census of India?

- (a) 1881
- (b) 1872
- (c) 1861
- (d) 1851

Q94. Which state had the highest population in 1881?

- (a) Uttar Pradesh
- (b) Bihar
- (c) Madhya Pradesh
- (d) Maharashtra

Q95. How many Five-Year Plans have been implemented in India till date?

- (a) 10
- (b) 11
- (c) 12
- (d) 13

Q96. Which Five-Year Plan is also known as the "Gadgil Yojana"?

- (a) First Five-Year Plan
- (b) Second Five-Year Plan
- (c) Third Five-Year Plan
- (d) Fourth Five-Year Plan

Q97. Which of the following is a flagship scheme launched by the Government of India for rural development?

- (a) Swachh Bharat Abhiyan
- (b) Pradhan Mantri Jan Dhan Yojana
- (c) Digital India Programme
- (d) MGNREGA

Q98. Which of the following schemes is aimed at promoting the digital literacy of citizens?

- (a) Pradhan Mantri Jan Dhan Yojana
- (b) Digital India Programme
- (c) Swachh Bharat Abhiyan
- (d) Atal Pension Yojana

Q99. Which of the following schemes aims to provide financial security to the unorganized sector?

- (a) Pradhan Mantri Jeevan Jyoti Bima Yojana
- (b) Pradhan Mantri Fasal Bima Yojana
- (c) Atal Pension Yojana
- (d) Pradhan Mantri Jan Dhan Yojana

Q100. Which of the following is an example of a tertiary industry?

- (a) Mining
- (b) Construction
- (c) Education
- (d) Manufacturing

Q101. Who was the father of Indian industry?

- (a) JRD Tata
- (b) Jamsetji Tata
- (c) Dhirubhai Ambani
- (d) G.D. Birla

Q102. Which was the first cotton textile mill established in India?

- (a) Bombay Spinning and Weaving Company
- (b) Calico Mills
- (c) Tata Mills
- (d) National Textile Corporation

Q103. The law of demand states that:

- (a) As price increases, Quantity demanded increases
- (b) As price increases, Quantity demanded decreases
- (c) As income increases, demand decreases
- (d) As income increases, demand increases

Q104. A decrease in the supply of a good, ceteris paribus, will result in:

- (a) An increase in price and Quantity demanded
- (b) A decrease in price and Quantity demanded
- (c) An increase in price and a decrease in Quantity demanded
- (d) A decrease in price and an increase in Quantity demanded

Q105. Which of the following is an example of fiscal policy?

- (a) The Federal Reserve changing interest rates
- (b) The government increasing spending on infrastructure projects
- (c) The government reducing regulations on businesses
- (d) The government decreasing taxes on capital gains

Q106. Which Census of India was the first to use electronic data processing?

- (a) 1991 Census
- (b) 2001 Census
- (c) 2011 Census
- (d) 1981 Census

Q107. Which state had the lowest population according to the 2011 Census of India?

- (a) Sikkim
- (b) Goa
- (c) Mizoram
- (d) Tripura

Q108. Which Five-Year Plan is associated with the "Green Revolution" in India?

- (a) Third Five-Year Plan
- (b) Fourth Five-Year Plan
- (c) Fifth Five-Year Plan
- (d) Sixth Five-Year Plan

Q109. When was NITI Aayog established?

- (a) 2012
- (b) 2013
- (c) 2014
- (d) 2015

Q110. As per the recent RBI Guidelines, lending by Small Finance Banks(SFBs) to which institutions are considered as Priority Sector Lending?

- (a) Regional Rural Banks
- (b) Cooperative Banks
- (c) Micro-Finance Institutions
- (d) Payment Banks

Q111. What is the relationship between acceleration and velocity?

- (a) Acceleration is the rate of change of velocity
- (b) Velocity is the rate of change of acceleration
- (c) Acceleration and velocity are unrelated
- (d) Acceleration is the speed of an object

Q112. The SI unit of G, the universal gravitation constant is _____.

- (a) $\text{N m}^2 \text{kg}^2$
- (b) $\text{N m}^2 \text{kg}^{-2}$
- (c) $\text{N m}^{-2} \text{kg}^{-2}$
- (d) $\text{N m}^{-2} \text{kg}^2$

Q113. Find the resistance(in Ω) of a wire of length 20m, cross-sectional area 1 cm^2 and made of a material of resistivity $200 \Omega\text{m}$.

- (a) 40
- (b) 4000
- (c) 80
- (d) 2000

Q114. Find the kinetic energy(in J) possessed by a body of mass 10 kg moving with a velocity of 5 m/s.

- (a) 25
- (b) 125
- (c) 62.5
- (d) 50

Q115. An air bubble in water will act like a:

- (a) Convex mirror
- (b) Convex lens
- (c) Concave mirror
- (d) Concave lens

Q116. Light from the Sun reaches Earth in about:

- (a) 2 minutes
- (b) 4 minutes
- (c) 8 minutes
- (d) 16 minutes

Q117. Which one of the following is used as a moderator in the nuclear reactor?

- (a) Thorium
- (b) Graphite
- (c) Radium
- (d) Ordinary water

Q118. A body of mass 5 kg accelerates from 12 m/s to 20 m/s in 4 seconds due to the application of a force on it. Calculate the magnitude of this force(in N).

- (a) 40
- (b) 10
- (c) 20
- (d) 80

Q119. Which of the following is an example of non-uniform motion?

- (a) A car driving at a constant speed on a straight road
- (b) A ball bouncing off a wall
- (c) A person walking at a constant speed
- (d) A car driving around a circular track

Q120. If the Distance-Time graph is a curve then it represents _____.

- (a) uniform speed
- (b) constant displacement
- (c) uniform momentum
- (d) non-uniform speed

Q121. A force of 200 N displaces a body by 4 m, calculate the work done(in J).

- (a) 40
- (b) 500
- (c) 80
- (d) 800

Q122. The gravitational force of attraction between two bodies is _____ the distance between the two bodies.

- (a) Inversely proportional to the
- (b) Directly proportional to the square of
- (c) Inversely proportional to the square of
- (d) Directly proportional to the

Q123. When we see an object, the image formed on the retina is _____

- (a) Real and inverted
- (b) Real and erect
- (c) Virtual and erect
- (d) Virtual and inverted

Q124. Which one of the following processes is responsible for the glittering of air bubbles rising through water?

- (a) Reflection of light
- (b) Refraction of light
- (c) Total internal reflection of light
- (d) Scattering of light

Q125. What is the phenomenon which established the transverse nature of light?

- (a) Reflection
- (b) Interference
- (c) Diffraction
- (d) Polarization

Q126. To remove the defect of long-sightedness one uses-

- (a) Concave lens
- (b) Convex mirror
- (c) Convex lens
- (d) Concave mirror

Q127. The speed of sound is highest in which of the following gases?

- (a) Oxygen
- (b) Carbon dioxide
- (c) Helium
- (d) Nitrogen

Q128. Which part of the human ear is responsible for amplifying sound vibrations?

- (a) Cochlea
- (b) Eardrum(tympanic membrane)
- (c) Ossicles(middle ear bones)
- (d) Auditory nerve

Q129. Which one of the following SI units is not correctly matched?

- (a) Work-Joule
- (b) Force-Newton
- (c) Mass-kg
- (d) Pressure-Dyne

Q130. The shortest distance measured from the initial to the final position of an object is known as the _____.

- (a) Motion
- (b) Direction
- (c) Velocity
- (d) Displacement

Q131. If a body is moving on a circular path, what is its average velocity if it completes one cycle in one second?

- (a) Average velocity depends upon time taken to complete one cycle
- (b) One
- (c) Average velocity is same as average speed
- (d) Zero

Q132. Which of the following is an example of circular motion?

- (a) A ball rolling down a hill
- (b) A car driving in a straight line
- (c) A merry-go-round spinning
- (d) A bird flying in a straight line

Q133. The value of acceleration due to gravity(g) _____.

- (a) is greater at the poles than at the equator
- (b) is lesser at the poles than at the equator
- (c) is greater at the North Pole than at the South Pole
- (d) is greater at the South Pole than at the North Pole

Q134. Anybody kept in a fluid experiences an upward force called _____.

- (a) Torque
- (b) Moment
- (c) Pressure
- (d) Upthrust

Q135. The product of force and the time for which the force acts on a body is equal to the change in _____ of the body.

- (a) Acceleration
- (b) Torque
- (c) Momentum
- (d) Velocity

Q136. Which of the following substances is an acid?

- (a) Sodium hydroxide
- (b) Ammonia
- (c) Hydrochloric acid
- (d) Calcium carbonate

Q137. Which of the following substances is a base?

- (a) Acetic acid
- (b) Sodium hydroxide
- (c) Hydrogen chloride
- (d) Carbon dioxide

Q138. Which subatomic particle was discovered due to the discrepancy in the expected atomic masses?

- (a) Proton
- (b) Electron
- (c) Neutron
- (d) Positron

Q139. In which year was the neutron discovered?

- (a) 1920
- (b) 1930
- (c) 1932
- (d) 1940

Q140. Which of the following is a ketone?

- (a) Acetone
- (b) Butanone
- (c) Pentanone
- (d) All of the above

Q141. Which compound is responsible for the greenhouse effect?

- (a) Carbon monoxide(CO)
- (b) Carbon dioxide(CO₂)
- (c) Methane(CH₄)
- (d) Ethane(C₂H₆)

Q142. Which of the following is an example of an exothermic chemical reaction?

- (a) Melting ice
- (b) Burning wood
- (c) Boiling water
- (d) Photosynthesis

Q143. Which reaction type involves an element being replaced in a compound by another element?

- (a) Double displacement reaction
- (b) Single displacement reaction
- (c) Decomposition reaction
- (d) Combination reaction

Q144. What is the process by which a liquid change to a gas called?

- (a) Melting
- (b) Evaporation
- (c) Sublimation
- (d) Condensation

Q145. Which of the following factors affect the rate of evaporation of a liquid?

- (a) Temperature
- (b) Surface area
- (c) Humidity
- (d) All of the above

Q146. Which of the following is not an example of oxidation?

- (a) Burning of coal
- (b) Rusting of iron
- (c) Rancidity
- (d) Opening of Soda Bottle

Q147. Which of the following is not an example of reduction?

- (a) Gain of electrons
- (b) Decrease in oxidation number
- (c) Formation of a covalent bond
- (d) Dissociation of a molecule

Q148. What is the result of a neutralization reaction?

- (a) Salt and water
- (b) Gas and salt
- (c) Acid and base
- (d) Water and base

Q149. Which of the following is a single displacement reaction?

- (a) Magnesium burns in oxygen to form magnesium oxide.
- (b) Sodium hydroxide reacts with hydrochloric acid to form sodium chloride and water.
- (c) Carbon dioxide and water react to form carbonic acid.
- (d) Copper sulfate reacts with zinc to form copper and zinc sulfate.

Q150. Which of the following is an example of a non-metallic mineral?

- (a) Iron ore
- (b) Copper ore
- (c) Graphite
- (d) Bauxite

Q151. Which metal is known as the "King of Metals"?

- (a) Gold
- (b) Platinum
- (c) Silver
- (d) Copper

Q152. Which salt is responsible for water hardness?

- (a) Sodium chloride
- (b) Calcium chloride
- (c) Potassium chloride
- (d) Ammonium chloride

Q153. Which acid is present in citrus fruits such as lemons and oranges?

- (a) Citric acid
- (b) Lactic acid
- (c) Acetic acid
- (d) Hydrochloric acid

Q154. Which series of elements is filled with electrons in the 4f orbitals in the sixth period?

- (a) 3d transition series
- (b) 4d transition series
- (c) Lanthanoid series
- (d) Actinoid series

Q155. Potassium is more metallic than sodium because

- (a) both have 1 electron in their outermost shell.
- (b) both are highly electropositive.
- (c) sodium is larger in size than potassium.
- (d) potassium is larger in size than sodium.

Q156. In the names Mangifera indica(mango), Solanum tuberosum(potato), and Panthera leo(lion), the terms Mangifera, Solanum, and Panthera represent the higher level of?

- (a) Taxon
- (b) Taxonomic Hierarchy
- (c) Specific Epithet
- (d) Binomial Nomenclature

Q157. Which of the following is one of the commercial products obtained from Gelidium and Gracilaria and is used to grow microbes and in preparations of ice creams and jellies?

- (a) Agar
- (b) Chlorella
- (c) Spirulina
- (d) Gymnosperms

Q158. Which disease is characterized by high blood sugar levels?

- (a) Hypertension
- (b) Arthritis
- (c) Diabetes mellitus
- (d) Anemia

Q159. Which disease is caused by a deficiency of vitamin C?

- (a) Scurvy
- (b) Rickets
- (c) Malaria
- (d) Tuberculosis

Q160. By which process substances like carbon dioxide or oxygen can move across the cell membrane?

- (a) Plasmolysis
- (b) Sedimentation
- (c) Diffusion
- (d) Transpiration

Q161. Who presented that all plants and animals are composed of cells and that the cell is the basic unit of life?

- (a) M. Schleiden and T. Schwann
- (b) Virchow
- (c) J. E. Purkinje
- (d) Leeuwenhoek

Q162. Which of the following vitamins are classified as fat-soluble vitamins?

- (a) Vitamin B and Vitamin B12
- (b) Vitamin C and Vitamin B
- (c) Vitamin E and Vitamin K
- (d) Vitamin B6 and Vitamin C

Q163. Which vitamin is necessary for blood clotting?

- (a) Vitamin A
- (b) Vitamin C
- (c) Vitamin D
- (d) Vitamin K

Q164. Which of the following is NOT a factor that affects enzyme activity?

- (a) Temperature
- (b) pH
- (c) Substrate concentration
- (d) Gender

Q165. Which of the following hormones reduces cellular glucose uptake and utilization and is responsible for hyperglycemia?

- (a) Insulin
- (b) Thyroxine
- (c) Glucagon
- (d) Adrenaline

Q166. Sexual reproduction in Algae that takes place through a fusion of two dissimilar-size gametes is called?

- (a) Zoospores
- (b) Anisogamous
- (c) Isogamous
- (d) Oogamous

Q167. Biological names are generally derived from which language?

- (a) French
- (b) Latin
- (c) Mexican
- (d) German

Q168. Which phylum includes animals that have a hard exoskeleton and jointed appendages?

- (a) Mollusca
- (b) Arthropoda
- (c) Annelida
- (d) Porifera

Q169. What is the common name for animals in the phylum Chordata?

- (a) Invertebrates
- (b) Vertebrates
- (c) Arthropods
- (d) Molluscs

Q170. The rhythmic contraction of the lining of muscles of the canal to push the food along the gut is called ____.

- (a) Peristalsis
- (b) Facilitation
- (c) Guttation
- (d) No option is correct

Q171. Which of the following is a CORRECT relation between the length of small intestines of an herbivore and a carnivore?

- (a) Herbivore = Carnivore
- (b) Herbivore < Carnivore
- (c) Herbivore > Carnivore
- (d) No option is correct.

Q172. Which disease is transmitted through the bite of an infected mosquito?

- (a) Dengue fever
- (b) Pneumonia
- (c) Osteoporosis
- (d) Diabetes mellitus

Q173. Which of the following diseases is caused by the Plasmodium parasite transmitted through the bite of infected mosquitoes?

- (a) Dengue fever
- (b) Chikungunya
- (c) Malaria
- (d) Zika virus

Q174. Which vitamin is essential for maintaining healthy eyesight?

- (a) Vitamin A
- (b) Vitamin C
- (c) Vitamin D
- (d) Vitamin K

Q175. Which vitamin is essential for collagen synthesis and wound healing?

- (a) Vitamin A
- (b) Vitamin C
- (c) Vitamin D
- (d) Vitamin K

Q176. Blood group was discovered by

- (a) Alexander Fleming
- (b) William Harvey
- (c) Landsteiner
- (d) Paulov

Q177. Which of the following is/are the function(s) of bile juice released from the liver?

- I. Make the food coming from the stomach alkaline.
- II. Conversion of proteins into amino acids.
- III. Breakdown of fats into smaller globules.

- (a) Only I
- (b) Only II and III
- (c) Only I and III
- (d) All I, II and III

Q178. The voluntary muscles are also called ____ muscles.

- (a) Striated
- (b) Smooth
- (c) Cardiac
- (d) Unstriated

Q179. Which mineral is important for proper nerve function and muscle contraction?

- (a) Iron
- (b) Calcium
- (c) Zinc
- (d) Potassium

Q180. Which mineral is a component of many enzymes and is involved in energy metabolism?

- (a) Potassium
- (b) Calcium
- (c) Zinc
- (d) Magnesium

Q181. Hathigumpha inscription is associated with _____.

- (a) Elephanta Caves
- (b) Sittanavasal Caves
- (c) Kanheri Caves
- (d) Udayagiri and Khandagiri Caves

Q182. Which of the following is not the style of singing in Hindustani music?

- (a) Dhrupad
- (b) Dhamar
- (c) Alha
- (d) Khayal

Q183. Name the Indian mountaineer who is the first woman in the world to climb Mount Everest twice.

- (a) Bachendri Pal
- (b) Arunima Saha
- (c) Santosh Yadav
- (d) Anshu Jamsenpa

Q184. Who expanded the cell theory and suggested that all the cells arise from pre-existing cells?

- (a) T. Schwann
- (b) M.Schleiden
- (c) J. E. Purkinje
- (d) Rudolf Virchow

Q185. Who is known as the 'Father of Green Revolution'?

- (a) G. Paul
- (b) Norman Borlaug
- (c) Van Neil
- (d) Dr. Mithchell

Q186. Exercise Agni Warrior is a bilateral exercise between which two armies?

- (a) Singapore and Malaysia
- (b) Singapore and India
- (c) India and China
- (d) Singapore and Indonesia

Q187. Which of the following is a bilateral maritime exercise between India and the United States?

- (a) Malabar
- (b) Tropex
- (c) Indra
- (d) Vajra Prahar

Q188. Which of the following techniques can be used to store a large number of files in a small amount of storage space?

- (a) File adjustment
- (b) File copying
- (c) File compatibility
- (d) File compression

Q189. Which among the following is a software application commonly used to prepare a presentation/slide show?

- (a) Adobe
- (b) PowerPoint
- (c) Outlook Express
- (d) Internet Explorer

Q190. The Indian Space Research Organization(ISRO) is the space agency of the Government of India headquartered in which city?

- (a) Pune
- (b) Bangalore
- (c) Delhi
- (d) Vishakhapatnam

Q191. The Indian Council of Medical Research(ICMR) has headquartered in which of the place?

- (a) New Delhi
- (b) Chandigarh
- (c) Nagpur
- (d) Mysore

Q192. Which of the following is the oldest in India?

- (a) Jim Corbett National Park
- (b) Gir National Park
- (c) Kaziranga National Park
- (d) Nilgiri Biosphere Reserve

Q193. Which wildlife sanctuary in Andhra Pradesh is known for its population of Asian elephants?

- (a) Koundinya Wildlife Sanctuary
- (b) Papikonda Wildlife Sanctuary
- (c) Nagarjunsagar-Srisaillam Tiger Reserve
- (d) Coringa Wildlife Sanctuary

Q194. World Bee Day is observed worldwide on _____, to acknowledge the role of bees and other pollinators in the ecosystem-

- (a) May 20
- (b) May 21
- (c) May 22
- (d) May 23

Q195. International Day of UN Peacekeepers is observed globally on-

- (a) May 20
- (b) May 23
- (c) May 16
- (d) May 29

Q196. Who was the Captain of the Indian Men's National hockey team in 1928 when it had won its first gold medal at the Amsterdam Olympics?

- (a) Lal Shah Bokhari
- (b) Jaipal Singh Munda
- (c) Dhyan Chand
- (d) Kishan Lal

Q197. Which sport is known as "the gentleman's game"?

- (a) Cricket
- (b) Boxing
- (c) Ice hockey
- (d) Gymnastics

Q198. Solo element 'Tarangam' belongs to which of the following Classical dance form?

- (a) Sattriya
- (b) Manipuri
- (c) Kuchipudi
- (d) Kathak

Q199. Navroz festival is celebrated by which religion?

- (a) Sikhism
- (b) Persian
- (c) Hinduism
- (d) Christianity

Q200. Computer language COBOL is appropriate for?

- (a) Commercial purpose
- (b) Graphic purpose
- (c) Scientific purpose
- (d) All of the Above

Solutions

S1. Ans.(d)

Sol. Couple Burial, Persian seals and Harbour are the elements found in Lothal. Evidence of the cultivation of rice is found in Lothal.

S2. Ans.(d)

Sol. Kalibangan in Rajasthan has given evidence of the earliest (c. 2800 BC) ploughed agricultural field. At Kalibangan, fire altars have been discovered. Black Copper bangles are also found at Kalibangan. Couple burials are absent in Kalibangan.

S3. Ans.(b)

Sol.

- Tarikh-i-Firoz Shahi is the finest specimen of Indo-Persian historiography produced during the Sultanate period in India.
- It was written by Zia-Ud-Din Barani during the reign of Sultan Firoz Shah Tughlaq.
- It covers the period from the reign of Ghiyas-Ud-Din Balban to the first six years of the reign of Firoz Shah Tughluq and the Fatwa-i-Jahandari.

S4. Ans.(b)

Sol. The correct answer is (b) Babur. Babur, the founder of the Mughal Empire, defeated Ibrahim Lodi in the first Battle of Panipat, which took place on April 21, 1526. This battle marked a significant turning point in Indian history as it led to the establishment of Mughal rule in India. Babur's victory

over Ibrahim Lodi's forces paved the way for the Mughals to establish their dominance in northern India and laid the foundation for the Mughal Empire's subsequent expansion under his descendants, including Akbar.

S5. Ans.(a)

Sol. The correct answer is (a) Battle of Haldighati.

- The Battle of Haldighati was fought between the forces of Akbar, the Mughal Emperor, and Rana Pratap, the Rajput king of Mewar, in 1576. Akbar's forces were led by his trusted general, Man Singh, while Rana Pratap personally led the Rajput army.
- Although the Battle of Haldighati ended in a stalemate and Rana Pratap was able to escape, it is generally considered a strategic victory for Akbar. The Mughal forces were better equipped and had superior military tactics, including the effective use of artillery. Rana Pratap's forces faced significant losses, and the battle marked a turning point in the conflict between the Mughals and the Rajputs. Despite the defeat, Rana Pratap continued his resistance against the Mughals and became a legendary figure in Rajput history.

S6. Ans.(b)

Sol. Akbar implemented the Mansabdari System, an efficient revenue and administrative system. Under this system, officials called Mansabdars were assigned ranks (mansabs) based on their military and administrative capabilities.

S7. Ans.(c)

Sol. The correct answer is 15-16th century. Sikhism was founded in the 15th century by Guru Nanak Dev Ji, who was born in 1469. He was the first of the ten Sikh Gurus and is considered the founder of the Sikh faith. Guru Nanak Dev Ji preached a message of equality, social justice, and devotion to the one supreme reality. His teachings laid the foundation for Sikhism, which continued to evolve under the guidance of the subsequent Gurus.

S8. Ans.(a)

Sol. Shivaji abolished the Jagirdari System and replaced it with Ryotwari System, and changed the position of hereditary revenue officials who was popularly known as Deshmukhs, Deshpande, Patils and Kulkarni.

S9. Ans.(c)

Sol. The correct answer is Lord Wellesley.

- Lord Wellesley was the Governor-General of British India during the Second Anglo-Maratha War, which took place from 1803 to 1805. He served as Governor-General from 1798 to 1805 and played a significant role in expanding British control over India during his tenure.
- The Second Anglo-Maratha War was a conflict between the British East India Company and the Maratha Empire, which was one of the major Indian powers at that time. The war was primarily fought over territorial control and influence in India.

S10. Ans.(a)

Sol. The correct answer is (a) Portuguese.

The Portuguese used Hooghly as the base for piracy in the Bay of Bengal. Hooghly, located in present-day West Bengal, India, was an important port and riverine route during the colonial era. The Portuguese established a trading post in Hooghly in the 16th century and engaged in piracy activities from this base in the Bay of Bengal. They targeted merchant ships and other vessels for plunder and control over trade routes in the region.

S11. Ans.(d)

Sol. The correct answer is (d) Portugal.

Daman and Diu remained under Portuguese rule even after India gained independence in 1947. These territories were part of the Portuguese (State of India) and were not immediately integrated into the newly formed Republic of India. It was only in December 1961 that the Indian Armed Forces launched Operation Vijay and successfully annexed Daman and Diu, ending Portuguese rule over these territories

S12. Ans.(c)

Sol. The bluewater policy is adopted by the Portuguese.

- Bluewater policy is developed by Francisco de Almeida.
- Francisco de Almeida was the first governor and viceroy of the Portuguese State of India.
- Blue Water policy was to be powerful at the sea.
- Portuguese navy is unmatched compare to any other European force at that time.

S13. Ans.(b)

Sol. The correct answer is (b) J. B. Kriplani.

J. B. Kriplani was the President of the Indian National Congress at the time of Indian independence. He served as the President of the Congress from 1946 to 1947. However, it's worth mentioning that Jawaharlal Nehru, who later became the first Prime Minister of independent India, was also an influential leader of the Indian National Congress during that time.

S14. Ans.(d)

Sol. The correct answer is (d) Surat.

The Congress Session held in 1907 at Surat is famously known as the Surat Split or the Surat Session. It was during this session that the first major split occurred within the Indian National Congress. The split was primarily between the extremists led by Bal Gangadhar Tilak and the moderates led by Gopal Krishna Gokhale. The disagreements between the two factions over ideological and tactical differences resulted in a deep division within the Congress.

S15. Ans.(a)

Sol. Among the given options, option (a) - Bal Gangadhar Tilak, was not known as a moderate in the National Movement. Bal Gangadhar Tilak was a prominent leader in the Indian National Congress who advocated for more assertive and radical methods in the fight for independence. He is known for his slogan "Swaraj is my birthright and I shall have it" and his emphasis on direct action and mass mobilization. Tilak's ideology and approach were more aligned with the extremist faction within the Indian National Congress rather than the moderate leaders who pursued a more gradual and constitutional path to achieve their goals.

S16. Ans.(d)

Sol. The pair that is not correctly matched is option (d) - Transfer of India's Capital from Calcutta to Delhi in 1909. The transfer of India's capital from Calcutta (now Kolkata) to Delhi did not occur in 1909. The correct year for the transfer of India's capital from Calcutta to Delhi is 1911. In 1911, during the reign of British Viceroy Lord Hardinge, the decision was made to shift the capital of British India from Calcutta to Delhi. The foundation of New Delhi as the new capital began in 1912 and the transfer was completed by 1931.

- **Partition of Bengal in 1905:** The partition of Bengal was carried out by Lord Curzon in 1905. The province of Bengal was divided into two separate entities - Bengal Presidency and East Bengal and Assam. The partition was met with widespread opposition and protests from Indian nationalists, as it was seen as a divisive move aimed at weakening the growing nationalist movement.
- **Foundation of Muslim League in 1906:** The All-India Muslim League was founded in 1906 in Dhaka, with the objective of safeguarding the political rights and interests of Muslims in India. The foundation of the Muslim League was a response to the perceived marginalization of Muslim interests within the Indian National Congress, and it played a significant role in the political landscape leading up to the eventual partition of India in 1947.
- **Surat Split in 1907:** The Surat Split refers to a significant division within the Indian National Congress that occurred during the Surat session of 1907. The split was mainly between the extremist and moderate factions within the Congress, led by leaders such as Bal Gangadhar Tilak and Gopal Krishna Gokhale, respectively. The differences in ideologies and approaches between the two factions led to a heated confrontation, resulting in the split and weakening of the Congress temporarily.

S17. Ans.(c)

Sol. In 1918, during the Ahmedabad Strike in Gujarat, Mahatma Gandhi undertook a hunger strike as a means of protest. The Ahmedabad Strike was a labor strike led by textile mill workers in Ahmedabad, demanding better working conditions and higher wages. Gandhi, who was supporting the workers' cause, employed the hunger strike as a method to draw attention to their demands and exert pressure on the mill owners. This was the first instance where Gandhi utilized a hunger strike as a weapon in his nonviolent struggle for social justice and freedom.

S18. Ans.(a)

Sol. The reform movement that advocated for widow remarriage was (a) Brahma Samaj. The Brahma Samaj, founded by Raja Ram Mohan Roy in the early 19th century, played a significant role in advocating for social reforms in India. One of its major objectives was to promote widow remarriage and abolish the practice of sati (widow burning). The Brahma Samaj aimed to challenge and reform social customs and traditions that oppressed women and marginalized sections of society.

S19. Ans.(c)

Sol. On his return to India with a small group of Western disciples in 1897, Vivekananda founded the Ramakrishna Mission at the monastery of Belur Math on the Ganges (Ganga) River near Calcutta (now Kolkata).

S20. Ans.(b)

Sol. The correct match is (b) Arya Samaj - Swami Dayanand Saraswati. Swami Dayanand Saraswati was the founder of the Arya Samaj, a Hindu reform movement that emerged in the 19th century in India. The Arya Samaj aimed to promote the ideals of Vedic wisdom, social reform, and the revival of Hinduism based on the principles outlined in the Vedas. Swami Dayanand Saraswati played a pivotal role in advocating for the importance of education, the abolition of social evils, and the empowerment of women. His teachings and the Arya Samaj had a significant impact on Indian society and the Hindu reform movement.

S21. Ans.(c)

Sol. The correct answer is (c) The introduction of the Enfield rifle.

- The Revolt of 1857, also known as the Indian Rebellion of 1857 or the First War of Independence, began with the introduction of the new Enfield rifle cartridges. These cartridges were rumored to be greased with animal fat, specifically beef and pork fat, which offended the religious sensibilities of both Hindu and Muslim soldiers in the British Indian Army.
- To load the rifle, soldiers had to bite off the ends of the cartridges, which caused outrage among the sepoy (Indian soldiers) who believed that the cartridges were deliberately desecrated to undermine their religious beliefs. This discontent over the use of the new Enfield rifles and the associated cartridges acted as a catalyst, sparking widespread resentment and leading to a series of mutinies and uprisings across various parts of India.

S22. Ans.(a)

Sol. The correct answer is (a) Awadh.

The significant rebellion led by Begum Hazrat Mahal took place in the region of Awadh (also known as Oudh). Awadh was a princely state in northern India, with its capital in Lucknow. During the Revolt of 1857, which is also known as the Indian Rebellion of 1857 or the First War of Independence, several regions in India witnessed uprisings against British colonial rule. However, Begum Hazrat Mahal played a prominent role in leading the rebellion in Awadh. She was the wife of Nawab Wajid Ali Shah, the last Nawab of Awadh, and she took charge of the revolt after his exile. Begum Hazrat Mahal organized and fought against the British forces in defense of Awadh's independence.

S23. Ans.(a)

Sol.

- The Rig-Veda is the oldest of the four collections of hymns and other sacred texts known as the Vedas.
- It contains most of the information about the religious and social life of the early Vedic period.

- These works are considered the "sacred knowledge" of the Aryans.
- The Rig-Veda also contains ideas that served as the basis for India's system of castes (Varna).
- According to Brahminic ideology, Varna means hierarchizing society into classes.

S24. Ans.(a)

Sol.

- Vaishali was the capital of Vajji Mahajanapada.
- The kingdom was situated in Bihar to the north of the river Ganga.
- It covered the districts of Vaishali and Muzaffarpur in Bihar.

S25. Ans.(a)

Sol. In ancient India, Nalanda University was indeed a great center for the study of Mahayana Buddhism.

- Mahayana Buddhism is a major branch of Buddhism that emerged around the 1st century CE. It emphasizes the ideal of the bodhisattva, a being who seeks enlightenment not only for oneself but also for the benefit of all sentient beings.
- Nalanda University played a significant role in the development and promotion of Mahayana Buddhist philosophy and teachings. The university attracted scholars from various Buddhist traditions and became a hub for the study and propagation of Mahayana Buddhism.
- Students at Nalanda engaged in the study of Buddhist scriptures, philosophy, logic, meditation, and other related subjects, contributing to the growth and dissemination of Mahayana Buddhist thought.

S26. Ans.(b)

Sol. The name of the preaching mudra or gesture in which the Buddha is depicted delivering his first sermon is Dharmachakra mudra. The Dharmachakra mudra is also known as the "Gesture of Teaching" or the "Gesture of Turning the Wheel of Dharma." In this mudra, the Buddha is depicted with his right hand raised and his thumb and index finger touching, while the other fingers are extended. This gesture symbolizes the Buddha's teaching and the turning of the wheel of Dharma, representing the Buddha's proclamation of the Four Noble Truths and the Eightfold Path to his disciples during his first sermon at Deer Park in Sarnath. The Dharmachakra mudra is one of the most common and recognizable mudras associated with the Buddha's teachings.

S27. Ans.(b)

Sol. Megasthenes wrote a detailed account of his observations and experiences of the Mauryan Empire in a work titled "Indica."

- He was a Greek ambassador and historian, who was sent to the court of the Mauryan Empire by Seleucus Nicator during the reign of Chandragupta Maurya.
- "Indica" provides valuable insights into the society, culture, and administration of the Mauryan Empire.
- Book by Herodotus – Histories (also called Father of History)
- Book by Pliny – Natural Histories (also called Father of History)

S28. Ans.(a)

Sol. The Battle of Kalinga, which took place around 261 BCE, was the last major battle fought by Ashoka the Great, the Mauryan emperor.

- The Battle of Kalinga was a conflict between the Mauryan Empire, led by Ashoka, and the Kalinga kingdom, located in present-day Odisha, India.
- After the Battle of Kalinga, Ashoka experienced a change of heart and renounced further military conquests. He embraced Buddhism and adopted a policy of non-violence, peace, and religious tolerance.
- Rock Edict No. 13, found in Shahbazgarhi and Mansehra, mentions Ashoka's reflection on the loss that Kalinga cost and his conviction that victory over Dharma (righteousness) was the greatest victory.
- The Battle of the Hydaspes was fought between Alexander the Great and Porus in May of 326 BC.

S29. Ans.(c)

Sol. Ashoka appointed Dhamma Mahamatras to supervise the spread of Dhamma during the Mauryan Empire. These officials played a significant role in promoting Buddhism and ensuring its implementation throughout the empire.

- Samaharta was the revenue collector.
- Sannidhta was the treasurer.
- Sitadhyaksha was the head of agriculture.

S30. Ans.(a)

Sol. Muhammad Shah was a great patron of the arts, including musical, cultural and administrative developments. His pen-name was Sada Rangila ("ever joyous") and he is often referred to as "Muhammad Shah Rangila".

S31. Ans.(b)

Sol. Communist words is NOT written in the Preamble of our Constitution.

Communism is a political and economic ideology that seeks to establish a classless society in which the means of production are owned and controlled by the community as a whole, rather than by individuals or private companies.

S32. Ans.(d)**Sol.**

- Articles 36-51 of Part IV of the Indian Constitution deal with Directive Principles of State Policy (DPSP).
- They act as directives to the government to create any law.
- They act as the 'instrument of instructions.'

S33. Ans.(d)**Sol.**

- Kesavananda Bharati vs State of Kerala case outlined the basic structure doctrine of the Constitution.
- The case held in 1973.
- This case made Preamble as an essential and integral part of the Constitution
- This case results in a judgment that basic structure cannot be altered or destroyed by any of the constitutional amendments act passed by the legislation.

S34. Ans.(b)

Sol. 42nd Amendment Act, 1976 is one of the most important amendments to the Indian Constitution. It was enacted by the Indian National Congress headed by Indira Gandhi then. Due to the large number of amendments this act has brought to the Indian Constitution, it is also known as 'Mini-Constitution.'

S35. Ans.(a)**Sol.** The correct answer is (a) UK.

The concept of single citizenship in the Indian constitution was taken from the United Kingdom (UK). The Indian constitution, adopted in 1950, enshrines the principle of single citizenship, which means that every Indian citizen, regardless of the state or territory they belong to, is considered a citizen of the whole country. This concept is in contrast to countries like the United States, where citizens hold dual citizenship, being citizens of both the federal government and their respective states.

S36. Ans.(b)

Sol. Article 23 prohibits traffic in human beings, beggars (forced labour), and other similar forms of forced labour. Any contravention of this provision shall be an offence punishable in accordance with the law.

S37. Ans.(c)

Sol. According to Article 358, when a Proclamation of National Emergency is made, the six Fundamental Rights under Article 19 are automatically suspended.

- The 44th Amendment Act of 1978 restricted the scope of Article 358
- Firstly, the six Fundamental Rights under Article 19 can be suspended only when the National Emergency is declared on the ground of war or external aggression and not on the ground of armed rebellion.

S38. Ans.(b)

Sol. The correct answer is (b) 31st Amendment Act, which was passed in 1973 during the tenure of the Indira Gandhi government.

- The 31st Amendment Act increased the number of seats in the Lok Sabha from 525 to 545. This was done to provide representation to the newly created states of Meghalaya, Manipur, and Tripura, as well as to the Union Territory of Sikkim, which was granted statehood in 1975.
- The amendment also made changes to the Fourth Schedule of the Constitution to reflect the increase in the number of Lok Sabha seats and the allocation of seats to the newly created states and Union Territory.

S39. Ans.(b)

Sol. The Twenty-first Amendment of the Constitution of India, officially known as The Constitution (Twenty-first Amendment) Act, 1967, amended the Eighth Schedule to the Constitution so as to include Sindhi as one of the languages, thereby raising the total number of languages listed in the schedule to fifteen.

S40. Ans.(c)

Sol. Prohibition of human trafficking and forced labour is not a DPSP it is a Fundamental Right. Article 23 of the Indian Constitution explicitly prohibits and criminalises human trafficking and forced labour.

S41. Ans.(d)

Sol. Article 48 of the Indian constitution state that prohibits the slaughter of cows, calves and other milch and draught cattle to improve their breeds.

S42. Ans.(b)

Sol. Article 51A of the Constitution of India enumerates the Fundamental Duties of citizens. These duties were added to the Constitution in 1976 through the 42nd Amendment Act. The inclusion of Fundamental Duties was aimed at promoting a sense of responsibility, patriotism, and active participation among Indian citizens.

S43. Ans.(a)

Sol. To pay taxes is not a Fundamental Duty in the constitution of India.

11 Fundamental Duties are:

1. Abide by the Constitution and respect the national flag & National Anthem
2. Follow the ideals of the freedom struggle
3. Protect the sovereignty & integrity of India
4. Defend the country and render national services when called upon
5. Sprit of common brotherhood
6. Preserve composite culture

7. Preserve the natural environment
8. Develop a scientific temper
9. Safeguard public property
10. Strive for excellence
11. Duty for all parents/guardians to send their children in the age group of 6-14 years to school.

S44. Ans.(a)

Sol. Under Article 72, the President of India can grant a pardon or reduce the sentence of a convicted person, particularly in cases involving capital punishment.

There are five different types of pardoning that are mandated by law: Pardon, Commutation, Reprieve, Respite, and Remission.

S45. Ans.(b)

Sol. When the offices of the President and Vice-President of India fall vacant simultaneously, the Chief Justice of India acts as the President. This provision is outlined in Article 65(1) of the Constitution of India. The Chief Justice of India assumes the responsibilities of the President until a newly elected President takes office.

S46. Ans.(b)

Sol. The correct answer is (b) 5 years.

In India, the Vice-President holds office for a term of 5 years. The Vice-President is elected by an Electoral College consisting of members of both houses of Parliament, including the Rajya Sabha (Council of States) and the Lok Sabha (House of the People). The Vice-President is eligible for re-election and can serve multiple terms if re-elected.

S47. Ans.(b)

Sol. In the Lok Sabha (Lower House of the Indian Parliament) both Presiding Officers —the Speaker and the Deputy Speaker are elected from among the members of Lok Sabha by a simple majority of members present and voting in the House.

The speaker is elected generally in the first meeting of the Lok Sabha following general elections. Serving for a term of five years, the speaker is chosen from sitting members of the Lok Sabha (House of the People) and is by convention a member of the ruling party or alliance.

S48. Ans.(b)

Sol. The members of the standing committee are taken from the Lok Sabha and Rajya Sabha in the ratio of two and one respectively.

S49. Ans.(d)

Sol. Article 75 states that the Prime Minister is appointed by the President of India and other ministers shall be appointed by the President of India with the advice of the Prime Minister.

S50. Ans.(a)

Sol. Article 78 of the Constitution deals with the duties of the Prime Minister with respect to the furnishing of information to the President.

S51. Ans.(d)

Sol. Members of legislative councils in the states where there are bicameral legislatures cannot participate in the election of the President.

S52. Ans.(c)

Sol. The minimum strength of the council of ministers in a state as per the Constitution is 12 Percent and the maximum is 15 per cent of the Legislative Assembly.

S53. Ans.(c)

Sol. According to the Indian Constitution, at one time, a person can be the Governor of a maximum of any number of states, the maximum number is not fixed.

S54. Ans.(c)

Sol. Not less than 30 years (as per Article 173 of the Indian Constitution) to be a member of the Legislative Council.

S55. Ans.(d)

Sol. The state of Uttar Pradesh is currently represented by the strength of 80 members in the Lok Sabha.

S56. Ans.(b)

Sol. The Finance Commission has been constituted under Article 280 of the Constitution of India. The Finance Commission is a constitutional body that is appointed every five years or as specified by the President to recommend the distribution of financial resources between the central government and the state governments. Its primary function is to make recommendations regarding the distribution of tax revenues between the Union (central) government and the states, as well as any other matter referred to it by the President in the interest of sound finance. The Finance Commission plays a crucial role in fiscal federalism in India.

S57. Ans.(c)

Sol.

- The statement (c) is not correct. The Election Commission of India is not responsible for conducting the elections of President, Vice President, and Municipal Corporations.
- The Election Commission of India is a permanent and independent body established under Article 324 of the Constitution of India (statement b). It is responsible for conducting free and fair elections to the Parliament, State Legislative Assemblies, and the offices of the President and Vice President of India (statement a). Municipal Corporation elections are typically conducted by the State Election Commissions, which are separate bodies established at the state level.
- Therefore, statement (c) is incorrect in relation to the responsibilities of the Election Commission of India.

S58. Ans.(d)

Sol. Sarkaria Commission was set up in 1983 by the central government of India. The Sarkaria Commission's charter was to examine the central-state relationship on various portfolios and suggest changes within the framework of the Constitution of India.

S59. Ans.(b)

Sol. The correct answer is (b) Article 360 of the Indian Constitution. Article 360 provides for the proclamation of a financial emergency in India. This article empowers the President of India to declare a financial emergency if the financial stability or credit of the nation or any part of its territory is threatened. The President can take various measures during a financial emergency, including the reduction of salaries of government officials, the reduction of allowances and grants to states, and giving directions to the states regarding the financial matters.

S60. Ans.(b)

Sol. The correct answer is (b) Article 148 of the Constitution of India. Article 148 establishes the post of the Comptroller and Auditor General of India (CAG). It outlines the qualifications, appointment, and duties of the CAG. The CAG is an independent constitutional authority responsible for auditing the accounts of the Union government, state governments, and other bodies or authorities that are financed by the government. The CAG plays a vital role in ensuring transparency, accountability, and financial prudence in the functioning of the government.

S61. Ans.(b)

Sol. The weather reports are prepared by the India Meteorological Department (IMD) of the Government.

- It is responsible for collecting and analyzing weather data, issuing weather forecasts and warnings, and providing other weather-related services to the public.

S62. Ans.(b)

Sol. During a period of La Nina, the sea surface temperature across the equatorial Eastern Central Pacific Ocean will be lower than normal by 3 to 5 °C. Thus, it cools down the temperature of the water.

- This can have significant impacts on weather patterns around the world, including increased rainfall in some areas and drought in others.
- It can affect ocean currents, marine ecosystems, and fisheries.
- This cooling of the ocean can also lead to an increase in the upwelling of nutrient-rich waters from deeper in the ocean, which can have both positive and negative effects on marine life.

S63. Ans.(d)

Sol. Narmada River does not form a delta in the eastern coastal plain.

- The Narmada River is a major west-flowing river in central India. It passes through the states of Madhya Pradesh, Maharashtra, and Gujarat.
- The deltas of the rivers Mahanadi, Krishna, and Godavari are present in the eastern coastal plain. These deltas are known for their fertility and agricultural productivity.
- The Mahanadi River is located in the eastern part of India and flows through the states of Chhattisgarh and Odisha. It forms a delta in the eastern coastal plain of India, where it meets the Bay of Bengal.
- The Krishna River is another important river in India, flowing through the states of Maharashtra, Karnataka, and Andhra Pradesh. It also forms a delta in the eastern coastal plain of India, where it empties into the Bay of Bengal.
- The Godavari River is the second-longest river in India, flowing through the states of Maharashtra, Telangana, Andhra Pradesh, and Odisha. It forms the largest river delta in the eastern coastal plain of India, known as the Godavari Delta or the Konaseema Delta, before entering the Bay of Bengal.

S64. Ans.(b)

Sol. Honshu is the largest island of Japan.

- It is also the most populous island in the country and is home to major cities such as Tokyo, Osaka, and Kyoto.
- Hokkaido is the second-largest island, followed by Kyushu and Shikoku.

S65. Ans.(d)

Sol. It is called a Typhoon in Japan and the Philippines.

Area	Cyclone Names
Atlantic Ocean	Hurricanes and Tropical Storms
Eastern Asia and Western North Pacific Ocean	Typhoons
Northwestern Pacific Ocean, specifically in the regions surrounding Japan and the Philippines	Typhoons
Indian Ocean	Cyclones
Australia and the South Pacific Ocean	Willy Willy

S66. Ans.(b)

Sol. In the Northern Hemisphere, Cyclone rotates in the anti or counter clockwise direction.

- The Coriolis Effect causes the flow of air to deflect to the right of its path of motion. This causes the air to spiral counterclockwise around a low-pressure center, which is the defining characteristic of a cyclone.

- The rotation of a cyclone is also influenced by its latitude. The closer a cyclone is to the equator, the weaker its rotation will be due to the weaker Coriolis Effect. As a result, tropical cyclones near the equator may not rotate or may rotate very weakly.
- As a cyclone moves further away from the equator towards the mid-latitudes, the Coriolis Effect becomes stronger, resulting in a more pronounced counterclockwise rotation.
- It's important to note that in the Southern Hemisphere, the direction of cyclonic rotation is reversed due to the opposite direction of the Coriolis Effect.

S67. Ans.(b)

Sol. Seismology is the scientific study of earthquakes and the propagation of elastic waves through the Earth or through other planet-like bodies.

Seismologists use seismometers and other instruments to measure and record seismic waves, which can provide information about the Earth's internal structure and dynamics, as well as the location and characteristics of earthquakes.

- Rivers are a part of the science of hydrology, which is the study of water in the Earth's system. Hydrologists study the movement, distribution, and quality of water on Earth, including rivers, streams, lakes, and groundwater.
- The study of mountains is a part of geology, which is the study of the Earth's physical structure, properties, and processes. Geologists who specialize in studying mountains are called geomorphologists.
- Volcanology is the study of volcanoes and volcanic phenomena, such as lava flows, eruptions, and volcanic gases. Volcanologists use a range of techniques to monitor and study volcanoes, including seismic monitoring, gas measurements, and field observations.

S68. Ans.(d)

Sol. Earthquake tremors are caused by the disturbance deep down inside the uppermost layer of the earth called the crust.

The crust is a relatively thin layer of solid rock that forms the outer shell of the Earth, and it is broken into several large tectonic plates that move and interact with each other. When two plates move against each other, pressure builds up and causes rocks to deform and break, resulting in an earthquake.

- **The core** is the central region of the Earth, located beneath the mantle. It is composed of two layers, an inner core of solid iron and nickel, and an outer core of liquid metal.
- **"Kernel"** is not a commonly used term in geology or Earth science, and it does not refer to any specific layer or structure within the Earth.
- **"Pith"** is a term used in botany to refer to the spongy tissue in the center of a plant stem.

S69. Ans.(b)

Sol. Nepal Himalayas is the region that lies between the Kali and Teesta rivers, including the highest peaks in the world, such as Mount Everest, Lhotse, and Makalu.

- Punjab Himalayas is the region that lies between the Indus and Sutlej rivers, including peaks like Nanga Parbat and Rakaposhi.
- Kumaon Himalayas is the region that lies between the Sutlej and Kali rivers, including peaks like Nanda Devi and Kamet.
- Assam Himalayas is the region that lies between the Teesta and Dihang (also called the Brahmaputra) rivers and includes peaks like Kangto, Nyegi Kangsang, and Gorichen.

S70. Ans.(a)

Sol. The Tawa River is a tributary of the Narmada River of Central India.

- It rises in the Satpura Range of Betul and flowing north and west, joins the Narmada at the village of Bandra Bhan in Hoshangabad District of Madhya Pradesh.
- The Narmada River originates in the Amarkantak hills in Madhya Pradesh and flows westward through the states of Madhya Pradesh, Maharashtra, and Gujarat before emptying into the Arabian Sea.

S71. Ans.(a)

Sol. Jog Falls is created by the Sharavathi River dropping 253 m (830 ft), making it the second-highest plunge waterfall in India after the Nohkalikai Falls with a drop of 335 m (1100 ft) in Meghalaya.

- Located on the Sharavati River in the Sagara taluk of Karnataka's Shivamogga district.
- The Sharavati River is a river flowing through the Western Ghats range in Karnataka. The river originates in the Ambutirtha hills near Nonabur in Shimoga district and flows in a westward direction before emptying into the Arabian Sea at Honnavar in Uttara Kannada district.

S72. Ans.(a)

Sol. The 49th Parallel is the boundary line between the United States of America and Canada. It is also known as the Canada–United States border or the International Boundary, and it stretches from the Pacific Ocean to the Great Lakes.

- The USA-Canada border is the longest international border in the world, and it is heavily monitored and patrolled by both countries.

Countries	Boundary Line	Length
USA, Canada	International Boundary / 49th Parallel	8,891 km / 5,525 mi
North and South Vietnam	17th Parallel	Approximately 1,000 km / 620 mi
Germany, France	Rhine River	Approximately 451 km / 280 mi
Brazil, Chile	Andes Mountains	Approximately 861 km / 535 mi

S73. Ans.(a)

Sol. The Prime Meridian is the line of longitude that passes through Greenwich, England, and it is the starting point for measuring longitude. It is an imaginary line of longitude that runs from the North Pole to the South Pole, passing through the Royal Observatory in Greenwich, London, England. It is the line of 0 degrees longitude.

The Prime Meridian was established by an international conference in 1884 as the reference line for longitude.

The Standard or Prime Meridian of India passes through the city of Mirzapur in Uttar Pradesh.

**S74. Ans.(a)**

Sol. Aus, Aman, and Boro are varieties of rice(paddy) that are grown in certain regions of India, particularly in states like Assam, West Bengal, and Odisha.

- They represent different crop cycles or seasons of rice cultivation. Aus is grown during the summer or pre-monsoon season, Aman during the monsoon or rainy season, and Boro during the winter or dry season. These varieties ensure continuous rice production throughout the year in these regions.

S75. Ans.(d)

Sol. Sugarcane is a Kharif crop.

- Crops such as watermelon, muskmelon, cucumber, vegetables, and fodder crops are Zaid crops.
- The Zaid season is a short season that falls between the rabi and kharif seasons and occurs during the summer months.
- Sugarcane is a Kharif crop and a long-duration crop that takes almost a year to grow.

S76. Ans.(a)

Sol. India is the second-largest producer of rice in the world, following China.

- Rice is a staple food crop for a significant portion of the population in India.
- The country has favorable Agro-climatic conditions for rice cultivation, including high temperatures above 25°C and high humidity.

S77. Ans.(c)

Sol. Plateaus are generally rich in minerals and due to the availability of minerals, they are best for mining.

Plateaus are also suitable, for forestry but it depends on the ecology and climate of the plateau. Plateaus are at a larger height potential energy of water increases there and more electricity is generated. So, plateaus are also suitable for generating hydroelectricity.

S78. Ans.(b)

Sol. The highest peak of Peninsular India is Anai Mudi (2695 m) in Anaimalai Hills. It is situated in Kerala in the Western Ghats.

- Anai Mudi is also the highest peak of Western Ghat.
- Nilgiri Mountains is the highest peak of Eastern Ghat.

S79. Ans.(b)

Sol. The highest plateau region in India is the Deccan plateau.

- The Deccan Plateau is one of the oldest plateaus of India.
- It covers a large part of central and southern India and is characterized by its elevated terrain and volcanic rock formations.
- The plateau is known for its rich biodiversity and is an important agricultural and mineral resource region in the country.

S80. Ans.(a)

Sol. Granite is an example of an igneous rock, which is formed from the solidification of molten rock material, such as magma or lava. It is a coarse-grained rock that is composed mainly of feldspar, quartz, and mica.

- Limestone, marble, and slate, on the other hand, are examples of sedimentary and metamorphic rocks.
- Limestone is formed from the accumulation of marine organisms.
- Marble is formed from the metamorphism of limestone.
- Slate is formed from the metamorphism of shale or mudstone.

S81. Ans.(c)

Sol.

Field	Definition
Geology	Study of the Earth's structure, history, and processes
Climatology	Study of climate
Pedology	Study of soil
Biogeography	Study of distribution of living organisms

S82. Ans.(d)

Sol. The color of loamy soil is typically blackish brown.

- Loamy soil is a type of soil that is a mixture of sand, silt, and clay particles in roughly equal proportions.
- It is often described as being dark in color, with a blackish-brown hue.
- This color is due to the presence of organic matter, such as decomposed plant and animal materials, which gives the soil its dark coloration.

S83. Ans.(b)

Sol. The Grand Trunk Road was built by Sher Shah Suri in the 16th century and connects the cities of Calcutta (now Kolkata) in India and Peshawar in Pakistan. It is one of Asia's oldest and longest major roads and has been in use for at least 2,500 years.

Sher Shah Suri built the Shahi (Royal) road to strengthen and consolidate his empire from the Indus Valley to the Sonar Valley in Bengal. This road was renamed the Grand Trunk (GT) road during the British period, connecting Calcutta and Peshawar.

At present, it extends from Amritsar to Kolkata. It is bifurcated into 2 segments: (a) National Highway (NH)-1 (Now, NH -44) from Delhi to Amritsar, and (b) NH- 2 (Now, NH -19) from Delhi to Kolkata. Therefore, at present - The Indian sections of the Grand Trunk Road coincide with NH 19 and NH 44 of the National Highways in India and it connects - the cities of Amritsar in the north to Kolkata in the south. The road passes through several major cities in India, including Delhi, Agra, and Varanasi.

S84. Ans.(b)

Sol. The National Highways Authority of India or NHAI is an autonomous agency of the Government of India, set up in 1995, under the National Highways Authority of India Act, 1988.

It is responsible for the management of a network of over 50,000 km of National Highways out of 1,32,499 km in India. It is a nodal agency of the Ministry of Road Transport and Highways.

Santosh Kumar Yadav is currently the chairperson of NHAI since December 2022.

Note - In June 2022, the NHAI created a Guinness World record by building 75 km of highway between Amravati and Akola in Maharashtra in a span of just 5 days.

S85. Ans.(b)

Sol. The festivals Keslapur Jathra and Madai are celebrated by the Gond tribal group.

- The Gonds are known for their valor and are the second-biggest tribe in India.
- They reside in the Chhindwara district of Madhya Pradesh and in parts of Maharashtra, Orissa, and Andhra Pradesh.
- Keslapur Jathra is a 10-day tribal festival held in Keslapur village, Telangana. It is the second biggest tribal carnival and is celebrated by the Mesaram clan of Gond tribes.
- Madai is a festival celebrated by the Gonds of Telangana and Andhra Pradesh. It is a harvest festival that marks the beginning of the new year.

S86. Ans.(d)

Sol. The Munda tribal group primarily speaks the Mundari language. Munda people in Tripura are also known as Mura.

- The Mundari language is spoken by over 2 million people in India, Bangladesh, and Nepal. It is a member of the Austroasiatic language family, which also includes languages such as Vietnamese, Khmer, and Thai.
- The Mundas are found in Jharkhand and parts of Chattisgarh, Bihar, Odisha, and West Bengal.
- While they were hunters in the past, they have now transitioned to working as laborers in farms.

S87. Ans.(c)

Sol. The term "Roaring Forties" is associated with the westerly winds found in the Southern Hemisphere between approximately 40- and 50-degrees latitude. These winds are known for their strength and consistency, and they earned the name "Roaring Forties" due to the powerful gusts and rough seas encountered by sailors in this region.

- Planetary winds refer to the global wind patterns that are influenced by the rotation of the Earth and other atmospheric factors. They include the trade winds, prevailing westerlies, and polar easterlies.
- Trade winds are a specific wind pattern that occurs in tropical regions, blowing from east to west between approximately 30 degrees north and south of the Equator.
- Polar winds generally refer to the cold and strong winds that blow near the polar regions.

S88. Ans.(c)

Sol. Trade Wind flows outward down the pressure gradient away from the subtropical high pressure.

- This force causes the winds in the Northern Hemisphere to move from the east in the direction of the west below the subtropical high, & from the west in the direction of the east above the subtropical high.
- As it does so, it encounters the Coriolis Effect caused by the rotation of the Earth.
- The opposite is true in the Southern Hemisphere.
- Above the subtropical high winds move from east to west, & below the subtropical high winds move from west to east.

S89. Ans.(c)

Sol. The Nile is a major north-flowing river in northeastern Africa, generally regarded as the longest river in the world.

- It flows through northeastern Africa, starting from Lake Victoria in Uganda and flowing northward through Sudan and Egypt, eventually emptying into the Mediterranean Sea.
- The length of the Nile is approximately 6,650 kilometers (4,130 miles).
- The Yangtze River is the longest river in Asia and the third-longest river in the world.
- The Amazon River in South America is the largest river by discharge volume of water in the world

S90. Ans.(b)

Sol. The wide treeless grassy plains in South America are called Pampas.

- The Pampas are fertile South American lowlands, covering more than 750,000 km² (289,577 sq mi), that include the Argentine provinces of Buenos Aires, La Pampa, Santa Fe, Entre Ríos and Córdoba, most of Uruguay, and the southernmost Brazilian State, Rio Grande do Sul.
- Selvas is the dense tropical rainforest found in the Amazon basin and other parts of South America.
- Prairies are the large, flat grasslands found in North America.
- Steppes is the vast grassland plains found in Eurasia, particularly in Central Asia, characterized by a semi-arid climate and sparse vegetation.

S91. Ans.(d)

Sol. Dow Jones is not a credit rating agency in India. CRISIL, ICRA, and CARE Ratings are all credit rating agencies that operate in India. However, Dow Jones is a financial information and news company that provides a variety of financial products and services, including stock market indices and financial news, but it does not provide credit ratings.

S92. Ans.(a)

Sol. Stocks represent ownership in a company, while bonds represent a loan to a company.

Stocks have the potential for higher returns, but also come with higher risks, while bonds have more predictable returns but typically offer lower returns.

Stocks	Bonds
Represent ownership in a company	Represent a loan to a company or government entity
Stockholders have a claim on the company's assets and earnings	Bondholders receive regular interest payments and the principal amount of the loan is repaid at a later date
Do not have a fixed maturity date	Have a fixed maturity date
Do not offer a fixed return	Offer a fixed return (in the form of interest payments) until the maturity date
Generally considered riskier	Generally considered less risky
Value can fluctuate widely based on market conditions and company performance	Value is less affected by market conditions and company performance
Potential for higher returns	Potential for lower returns

S93. Ans.(b)

Sol. The first census of India was conducted in 1872 under the rule of Lord Mayo. The First Official Census in India was done in 1881 AD under Lord Rippon. It was called the First synchronized census.

The last census was held in 2011, whilst the next was to be held in 2021. But it has been postponed due to the COVID-19 pandemic in India.

- Over half the population resided in the six most populous states of Uttar Pradesh, Maharashtra, Bihar, West Bengal, Andhra Pradesh, and Madhya Pradesh.

S94. Ans.(a)

Sol. The state with the highest population in 1881 was the United Provinces (now Uttar Pradesh). The United Provinces had a population of 52,239,999 in 1881. The next most populous state was Bengal, with a population of 41,918,458. The third most populous state was Bombay, with a population of 21,333,202.

The population of Uttar Pradesh in 2023 is estimated to be 235.6 million (23.56 Crores). This is an increase of over 17% from the 2011 census figure of 199.8 million. The growth rate of Uttar Pradesh is higher than the national average of 12%.

S95. Ans.(c)

Sol. India has implemented 12 Five-Year Plans till date. The First Five-Year Plan was launched in 1951 and the Twelfth Five-Year Plan was implemented from 2012-13 to 2016-17.

- After the Twelfth Five-Year Plan, the concept of Five-Year Plans was discontinued, and the government launched a new strategy called the National Institution for Transforming India (NITI) Aayog in 2015 to guide the country's development.

S96. Ans.(b)

Sol. The Second Five-Year Plan (1956-61) is also known as the "Gadgil Yojana". The plan was named after its chief architect, K. T. Gadgil, who was a prominent Indian economist and politician.

- The plan focused on the development of heavy industries and emphasized the importance of scientific and technological progress.
- The plan aimed to achieve a higher rate of growth compared to the First Five-Year Plan and also aimed to reduce disparities in income and wealth among different sections of society.

S97. Ans.(d)

Sol. Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is a flagship scheme launched by the Government of India for rural development. It aims to provide at least 100 days of wage employment in a financial year to every rural household whose adult members volunteer to do unskilled manual work.

- Mahatma Gandhi National Rural Employment Guarantee Act 2005 or MGNREGA is an Indian labour law and social security measure that aims to guarantee the 'right to work'. This act was passed on 23 August 2005 under the UPA government of Prime Minister Manmohan Singh.

Scheme Name	Description	Launch Year or Date	Related Ministry
Swachh Bharat Abhiyan	A cleanliness campaign aimed at improving sanitation facilities and eliminating open defecation.	2014	Ministry of Housing and Urban Affairs
Pradhan Mantri Jan Dhan Yojana	A financial inclusion scheme aimed at providing basic banking services to unbanked and under-banked individuals.	2014	Ministry of Finance
Digital India Programme	An initiative aimed at transforming India into a digitally empowered society and knowledge economy.	2015	Ministry of Electronics and Information Technology

S98. Ans.(b)

Sol. Digital India Programme is a scheme launched by the Government of India aimed at promoting the digital literacy of citizens. It aims to provide various digital services such as e-governance, digital infrastructure, and digital empowerment to citizens.

- Digital India was launched by the Prime Minister of India Narendra Modi on 1 July 2015, with an objective of connecting rural areas with high-speed Internet networks and improving digital literacy.

Scheme Name	Description	Launch Year or Date	Related Ministry
Digital India Programme	An initiative aimed at transforming India into a digitally empowered society and knowledge economy by providing digital infrastructure, services, and literacy to citizens.	2015	Ministry of Electronics and Information Technology
Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA)	A scheme aimed at promoting digital literacy in rural areas by providing access to digital services and training to individuals.	2017	Ministry of Electronics and Information Technology

Scheme Name	Description	Launch Year or Date	Related Ministry
Digital Saksharta Abhiyan (DISHA)	A scheme aimed at promoting digital literacy in urban areas by providing access to digital services and training to individuals.	2014	Ministry of Electronics and Information Technology

S99. Ans.(c)

Sol. The Atal Pension Yojana (APY) is a Government of India Scheme which was launched on 9th May, 2015, with the objective of creating a universal social security system for all Indians, especially the poor, the under-privileged and the workers in the unorganized sector.

- There are five pension plan slabs available under the scheme namely, Rs. 1000, Rs. 2000, Rs. 3000, Rs. 4000, and Rs. 5000 guaranteed by Government of India to the subscriber at the age of 60 years. On death of subscriber, same pension to spouse is guaranteed by Government of India.
- APY is a pan India scheme open to all citizen of the country and not catering to any specific group.

Scheme Name	Description	Launch Year or Date	Related Ministry
Pradhan Mantri Jeevan Jyoti Bima Yojana	A life insurance scheme aimed at providing life insurance coverage to people in the age group of 18-50 years.	2015	Ministry of Finance
Pradhan Mantri Suraksha Bima Yojana	An accident insurance scheme aimed at providing accidental death and disability coverage to individuals.	2015	Ministry of Finance
Pradhan Mantri Jan Dhan Yojana	A financial inclusion scheme aimed at providing basic banking services to unbanked and under-banked individuals.	2014	Ministry of Finance
Pradhan Mantri Vaya Vandana Yojana	A pension scheme aimed at providing financial security to senior citizens.	2017	Ministry of Finance
Pradhan Mantri Fasal Bima Yojana	A crop insurance scheme aimed at providing insurance cover to farmers against crop loss due to natural calamities, pests, and diseases.	2016	Ministry of Agriculture and Farmers Welfare

S100. Ans.(c)

Sol. Education is an example of a tertiary industry. It involves the provision of services that support other industries, such as the training and development of human resources.

S101. Ans.(b)

Sol. Jamsetji/Jamshedji Tata is regarded as the legendary "Father of Indian Industry". He was so influential in the world of industry that Jawaharlal Nehru referred to Tata as a One-Man Planning Commission. He is considered the father of the Indian industry for his pioneering efforts in establishing the Tata Group, one of the largest and most successful business conglomerates in India.

JRD Tata was a prominent industrialist and the former chairman of Tata Sons, Dhirubhai Ambani was the founder of Reliance Industries, and G.D. Birla was a well-known industrialist and the founder of the Birla Group.

S102. Ans.(a)

Sol. Bombay Spinning and Weaving Company. It was established in 1854 and was the first cotton textile mill in India. The Calico Mills and Tata Mills were also important cotton textile mills in India, while the National Textile Corporation is a government-owned company that was established in 1968 to manage several sick textile mills in India.

History of the Cotton Textile Industry in India:

The first cotton mill in India was established in 1818 at Fort Gloster near Kolkata but was a commercial failure. The second cotton mill in India was established by KGN Daber in 1854 and was named Bombay Spinning and Weaving Company. This mill is said to mark the true foundation of the modern cotton industry in India. In Ahmedabad - also referred to as the 'Manchester of India' - the opening of the Shahpur mill in 1861 and the Calico mill in 1863 marked the city's spectacular rise as one of the world's prime cotton manufacturing locales.

However, the real expansion of the cotton textile industry in India took place in the 1870s. During this period, the number of mills rose to 47 - of which over 60 % were in Mumbai.

S103. Ans.(b)

Sol. As price increases, quantity demanded decreases. The law of demand states that there is an inverse relationship between price and quantity demanded, ceteris paribus. In other words, as price increases, consumers are less willing to buy the good, leading to a decrease in the quantity demanded.

S104. Ans.(c)

Sol. An increase in price and a decrease in quantity demanded. When the supply of goods decreases, the market equilibrium price will increase and the equilibrium quantity will decrease.

S105. Ans.(b)

Sol. The government increasing spending on infrastructure projects. Fiscal policy refers to the use of government spending and taxation to influence the economy. The other options are examples of monetary policy, regulatory policy, and tax policy, respectively.

S106. Ans.(a)

Sol. The 1991 Census of India was the first to use electronic data processing (EDP). This was a major step forward for the census, as it allowed for much faster and more accurate data processing.

The 2001 Census of India was the first to use a computer-assisted personal interview (CAPI) system. This system allowed enumerators to enter the census data directly into a computer, which helped to speed up the data processing and reduce errors.

The 2011 Census of India was the first to use a tablet-based data collection system. This system allowed enumerators to enter the census data directly into a tablet, which helped to further speed up the data processing and reduce errors.

S107. Ans.(a)

Sol. According to the 2011 Census of India, Sikkim is the least populous and second smallest among the Indian states. Sikkim is India's least populous state, with 610,577 inhabitants according to the 2011 census.

Goa - It is India's *smallest* state by area and *fourth-smallest* by population.

Mizoram - According to a 2011 census, in that year Mizoram's population was 1,091,014. It is the 2nd least populous state in the country.

Tripura - The third-smallest state in the country, it covers 10,491 km² (4,051 sq mi); and the seventh-least populous state with a population of 36.71 lakhs (3.67 million).

S108. Ans.(c)

Sol. The Third Five Year Plan (1961-66) is associated with the "Green Revolution" in India. The plan focused on the modernization of agriculture and the use of high-yielding varieties of seeds, fertilizers, and irrigation to increase agricultural productivity. This Plan was based on John Sandy and Sukhamoy Chakraborty's model. The rupee value devalued for the first time in 1966, during this Five-Year Plan.

S109. Ans.(d)

Sol. NITI Aayog, or the National Institution for Transforming India, was established on January 1, 2015, to replace the Planning Commission of India. NITI Aayog is a policy think-tank that provides strategic and technical advice to the government of India on various policy matters.

With the Prime Minister as the Chairperson, presently NITI Aayog consists of:

Vice Chairperson: Suman Bery

Chief Executive Officer (CEO): B. V. R. Subrahmanyam

Governing Council: All Chief Ministers of States (and Delhi and Puducherry), Lieutenant Governor of Andaman & Nicobar Islands, and Special Invites.

S110. Ans.(c)

Sol. As per the recent RBI Guidelines, lending by Small Finance Banks (SFBs) to Micro-Finance Institutions (MFIs) are considered as Priority Sector Lending.

Small Finance Banks (SFBs) are a type of niche banks that were granted licenses by the Reserve Bank of India (RBI) in 2015. These banks primarily cater to the unserved and underserved segments of the population, such as small farmers, micro and small industries, and other unorganized sector entities.

S111. Ans.(a)

Sol. Acceleration and velocity are both concepts used to describe the motion of an object. Velocity refers to the rate at which an object changes its position with respect to time, while acceleration refers to the rate at which an object's velocity changes with respect to time.

In other words, acceleration is the rate of change of velocity over time. If an object's velocity is changing, then it is said to be accelerating. The direction of the acceleration is determined by the direction of the change in velocity.

Mathematically, acceleration is defined as the derivative of velocity with respect to time:

$$a = dv/dt$$

where "a" is acceleration, "v" is velocity, and "t" is time.

S112. Ans.(b)

Sol. SI unit of $G = Nm^2kg^{-2}$.

As per universal law of gravitation,

$$F = \frac{GMm}{d^2}$$

$$G = \frac{Fd^2}{Mm}$$

where:

F: Gravitational force, whose SI unit is Newton (N)

d: Distance between the masses, whose SI unit is metre (m)

M, m: Masses whose SI unit is kg.

Therefore, the SI unit of G is: Nm^2kg^{-2} .

S113. Ans.(a)

Sol. We know that

$$Resistance, R = \rho(l/A)$$

Where ρ is the resistivity, l is the length of wire and A is the cross-sectional area

$$R = 200 \times 20 / 100 = 40 \text{ ohm.}$$

S114. Ans.(b)

Sol. The kinetic energy (KE) of an object is given by the formula:

$$KE = 1/2 \times m \times v^2$$

- Where m is the mass of the object and v is its velocity.
- Using this formula and the values given in the question, we can calculate the kinetic energy as:

$$KE = 1/2 * 10 \text{ kg} * (5 \text{ m/s})^2$$

$$KE = 125 \text{ J}$$

Therefore, the kinetic energy possessed by a body of mass 10 kg moving with a velocity of 5 m/s is 125 Joules.

S115. Ans.(d)

Sol.

- When light passes from a denser medium (water) to a rarer medium (air), it undergoes refraction. The refractive index of water is higher than that of air. As light enters the air bubble in water, it bends away from the normal, which is the line perpendicular to the surface of the water.
- Due to this refraction, the light rays converge after passing through the air bubble. When these converging rays are extended backward, they appear to originate from a point in front of the air bubble, creating a virtual image. This behavior is similar to how a concave lens forms an image. Therefore, an air bubble in water behaves like a concave lens.

S116. Ans.(c)

Sol. The correct answer is (c) 8 minutes.

Light from the Sun takes approximately 8 minutes to reach Earth. This value is often rounded to 8 minutes and 20 seconds for simplicity. The exact time it takes for light to travel from the Sun to Earth can vary slightly due to the elliptical shape of Earth's orbit and the varying distance between the two bodies throughout the year. However, on average, it takes about 8 minutes for sunlight to reach our planet.

S117. Ans.(b)

Sol. The correct answer is (b) Graphite.

Graphite is commonly used as a moderator in nuclear reactors. A moderator is a material that slows down fast-moving neutrons produced during nuclear fission reactions. By slowing down the neutrons, the probability of their interaction with other fissile atoms, such as uranium-235 or plutonium-239, increases. This facilitates the sustained chain reaction necessary for the efficient operation of a nuclear reactor.

Graphite is an excellent moderator because it contains carbon atoms, which have a relatively low atomic mass and can effectively slow down neutrons. Other materials, such as heavy water (which contains the isotope deuterium) or ordinary water (when used in conjunction with enriched uranium fuel), can also act as moderators, but graphite is a more common choice in many types of reactors.

S118. Ans.(b)

Sol. We know that

$$Acceleration = (Final Velocity - Initial Velocity) / time$$

$$\text{i.e. } a = (v - u) / t$$

$$= (20 - 12) / 4$$

$$= 2 \text{ m/sec}^2$$

Now, Force = Mass \times Acceleration

$$F = ma$$

$$= 5 \times 2 = 10 \text{ N.}$$

S119. Ans.(d)

Sol. A car driving around a circular track. Non-uniform motion is motion with a changing velocity, and a car driving around a circular track is an example of non-uniform motion because its velocity is constantly changing.

S120. Ans.(d)

Sol. If the Distance-Time graph is a curve then it represents non-uniform speed. The slope of distance-time graph represents its velocity.

S121. Ans.(d)

Sol. work done = force x distance.
=200x4 =800 joule

S122. Ans.(c)

Sol. Newton's law of universal gravitation states that every point mass in the universe attracts every other point mass with a force that is directly proportional to the product of their masses, and inversely proportional to the square of the distance between them.

S123. Ans.(a)

Sol. When we see an object, the image formed on the retina is real and inverted.

- The image formed on the retina of our eye is produced through the process of refraction. Light from an object enters the eye, passes through the lens, and converges onto the retina, which is a light-sensitive layer located at the back of the eye. The lens of the eye helps focus the incoming light onto the retina.
- In this process, the image formed on the retina is real, meaning it is formed at the actual location where the light converges. The image is also inverted, meaning it appears upside down compared to the actual object. Therefore, option (a) real and inverted is the correct choice.

S124. Ans.(c)

Sol.

- The glittering or sparkling of air bubbles rising through water is primarily caused by (c) total internal reflection of light.
- Total internal reflection occurs when light traveling from a denser medium (water) to a less dense medium (air) reaches the boundary between the two at an angle greater than the critical angle. In the case of air bubbles rising through water, light rays entering the bubble from the water undergo multiple internal reflections within the bubble's curved surface due to the change in refractive index.
- These internal reflections cause the light to scatter in various directions, resulting in the sparkling or glittering effect observed. The phenomenon is similar to how light is reflected within a prism or a diamond, creating a display of colors and reflections.

Therefore, option (c) total internal reflection of light is the process responsible for the glittering of air bubbles rising through water.

S125. Ans.(d)

Sol. The phenomenon that established the transverse nature of light is polarization.

- Polarization refers to the orientation of the electric field vector associated with a light wave. It was observed and studied extensively by French physicist Augustin-Jean Fresnel in the early 19th century. Through his experiments and analysis, Fresnel established that light consists of transverse waves, meaning the oscillations of the electric and magnetic fields are perpendicular to the direction of propagation.
- When light is polarized, its electric field oscillates in a specific direction, and the wave vibrations occur in a plane perpendicular to that direction. This phenomenon was crucial in understanding the wave nature of light and differentiating it from other types of waves.

Therefore, option (d) polarization is the phenomenon that established the transverse nature of light.

S126. Ans.(c)

Sol. To correct the defect of long-sightedness, one uses a convex lens.

- Long-sightedness, also known as hypermetropia or farsightedness, is a condition where a person has difficulty seeing nearby objects clearly. In long-sightedness, the focal point of the eye's lens falls behind the retina instead of directly on it.
- To correct long-sightedness, a convex lens is used. A convex lens is thicker at the center and thinner at the edges, and it converges light rays to a focal point. By using a convex lens, the light entering the eye is refracted in such a way that it converges on the retina, allowing for clear vision of nearby objects.

Therefore, option (c) convex lens is the correct choice for correcting the defect of long-sightedness.

S127. Ans.(c)

Sol. Helium has a lower molecular weight compared to other gases, resulting in faster sound propagation. Hence, the speed of sound is highest in helium.

S128. Ans.(c)

Sol. The ossicles, consisting of the malleus, incus, and stapes, amplify sound vibrations from the eardrum and transmit them to the inner ear.

S129. Ans.(d)

Sol. Pascal is the unit of pressure in the international system of Units (SI). Dyne is unit of force in CGS system. Clearly, option (d) is not correctly paired.

S130. Ans.(d)

Sol. The shortest distance measured from the initial to the final position of an object is known as the displacement.

- **Direction** - Distance refers to the total path travelled by an object in motion. It is a scalar quantity, which means it has only magnitude (size) and no direction.
- **Velocity** - Velocity is a physical quantity that describes the rate of change of an object's position with respect to time. It is a vector quantity, which means it has both magnitude (speed) and direction.

S131. Ans.(d)

Sol. When a body is moving on a circular path its average velocity when it completes one cycle in one second is zero.

S132. Ans.(c)

Sol. A merry-go-round spinning. Circular motion is motion in a circular path around a central point, and a merry-go-round spinning is a classic example of circular motion.

S133. Ans.(a)

Sol. The value of g on Earth is maximum at the poles and decreases as we go from the poles to the equator and is minimum at the equator.

S134. Ans.(d)

Sol. The upward force exerted by the water on the bottle is known as upthrust or buoyant force. In fact, all objects experience a force of buoyancy when they are immersed in a fluid.

S135. Ans.(c)

Sol. The product of force and the time for which the force acts on a body is equal to the change in momentum of the body.

S136. Ans.(c)

Sol. The correct answer is (c) Hydrochloric acid. Hydrochloric acid is a strong acid and is commonly used in laboratory experiments and industrial processes. Sodium hydroxide and ammonia are examples of bases, while calcium carbonate is a salt.

- Hydrochloric acid, also known as muriatic acid or spirits of salt, is an aqueous solution of hydrogen chloride with the chemical formula HCl.

S137. Ans.(b)

Sol. The correct answer is (b) Sodium hydroxide. Sodium hydroxide is a strong base and is commonly used in household cleaning products and industrial processes. Acetic acid and hydrogen chloride are examples of acids, while carbon dioxide is a gas.

Sodium hydroxide is sometimes called caustic soda or lye.

Chemical Formula – NaOH.

S138. Ans.(c)

Sol. The discrepancy in the expected atomic masses suggested the presence of neutral particles with a mass comparable to that of protons in the atom. Sir James Chadwick discovered these particles, called neutrons, in 1932.

- The neutron is a subatomic particle that, along with protons, makes up the atomic nucleus. Neutrons have no electric charge, which is why they are called neutral particles.
- They have a slightly greater mass than protons, but the difference is quite small. The mass of a neutron is approximately 1.6749×10^{-27} kg, while the mass of a proton is about 1.6726×10^{-27} kg.
- Neutrons are also involved in various nuclear processes, such as nuclear decay and nuclear reactions, including nuclear fission and fusion.

S139. Ans.(c)

Sol. Sir James Chadwick discovered the neutron in 1932. This neutral particle has a mass comparable to that of a proton and is present in the atom.

- The neutron is a subatomic particle that, along with protons, makes up the atomic nucleus. Neutrons have no electric charge, which is why they are called neutral particles.
- They have a slightly greater mass than protons, but the difference is quite small. The mass of a neutron is approximately 1.6749×10^{-27} kg, while the mass of a proton is about 1.6726×10^{-27} kg.

Particle	Symbol	Mass/ kg	Actual Charge / C	Relative charge
Electron	e	9.109389×10^{-31}	$-1.602177 \times 10^{-19}$	-1
Proton	p	1.672623×10^{-27}	1.602177×10^{-19}	+1
Neutron	n	1.674928×10^{-27}	0	0

S140. Ans.(d)

Sol. A ketone is a type of organic compound that contains a carbonyl group (C=O) bonded to two other carbon atoms. Acetone, butanone, and pentanone are all ketones.

Acetone is the simplest ketone, with the chemical formula CH_3COCH_3 . It is a colorless, flammable liquid that is used as a solvent in many products, such as nail polish remover and paint thinner.

Butanone is a colorless, flammable liquid with the chemical formula $\text{CH}_3\text{COCH}_2\text{CH}_3$. It is used as a solvent in many products, such as lacquers and varnishes.

Pentanone is a colorless, flammable liquid with the chemical formula $\text{CH}_3\text{COCH}_2\text{CH}_2\text{CH}_3$. It is used as a solvent in many products, such as inks and adhesives.

Ketones are used in a variety of products, such as solvents, adhesives, and inks. They are also used in the production of plastics and other materials.

S141. Ans.(b)

Sol. The compound responsible for the greenhouse effect is Carbon dioxide (CO₂).

While all the options mentioned (a) Carbon monoxide (CO), (b) Carbon dioxide (CO₂), (c) Methane (CH₄), and (d) Ethane (C₂H₆) are greenhouse gases, carbon dioxide (CO₂) is the primary greenhouse gas contributing to the greenhouse effect. It plays a significant role in trapping heat in the Earth's atmosphere and contributing to global warming.

Note - Carbon dioxide is not the only greenhouse gas, but it is the most important one. Other greenhouse gases include methane, nitrous oxide, and water vapor. However, carbon dioxide is the most abundant greenhouse gas in the atmosphere, and it is the one that is increasing the most rapidly.

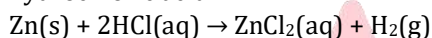
S142. Ans.(b)

Sol. An exothermic reaction is a chemical reaction that releases heat. Burning wood is an exothermic reaction because it releases heat as the wood reacts with oxygen.

The other options are not exothermic reactions. Melting ice is a physical change, not a chemical reaction. Boiling water is also a physical change, not a chemical reaction. Photosynthesis is a chemical reaction, but it is an endothermic reaction, not an exothermic reaction.

S143. Ans.(b)

Sol. In a single displacement reaction, one element (usually a metal) replaces another element in a compound. This is often seen in reactions of metals with acids or with salts of less reactive metals. For example, the reaction of zinc metal with hydrochloric acid:



Here, zinc displaces hydrogen from hydrochloric acid to form zinc chloride and hydrogen gas.

- The other options are not single displacement reactions. A double displacement reaction is a type of chemical reaction in which two compounds exchange ions to form two new compounds.
- A decomposition reaction is a type of chemical reaction in which a compound breaks down into two or more simpler compounds.
- A combination reaction is a type of chemical reaction in which two or more elements or compounds combine to form a new compound.

S144. Ans.(b)

Sol. Evaporation is the process by which a liquid change to a gas.

- Melting: The process of a solid changing into a liquid by gaining heat energy.
- Sublimation: The process of a solid changing directly into a gas without passing through the liquid state.
- Condensation: The process of a gas changing into a liquid by losing heat energy.

S145. Ans.(a)

Sol. The rate of evaporation is affected by temperature, surface area, and humidity.

- Temperature: The rate of evaporation increases with temperature because the heat energy causes the particles of the liquid to move faster and escape the surface more easily.
- Surface area: The rate of evaporation increases with the surface area because more particles are exposed to the air, increasing the chances of them escaping.
- Humidity: The rate of evaporation decreases with humidity because the air already has a high-water vapor content, reducing the chances of more water particles escaping into the air.

Therefore, all of these factors (temperature, surface area, and humidity) can affect the rate of evaporation of a liquid.

S146. Ans.(d)

Sol. Oxidation is a chemical reaction that involves the loss of electrons. It is the opposite of reduction, which involves the gain of electrons.

The burning of coal is an example of oxidation because the carbon in the coal reacts with oxygen to form carbon dioxide. Rusting of iron is an example of oxidation because the iron reacts with oxygen to form iron oxide. Rancidity is an example of oxidation because the fats and oils in food react with oxygen to form aldehydes and ketones, which give food a rancid taste and smell.

Opening a soda bottle is not an example of oxidation because it does not involve the loss of electrons. When a soda bottle is opened, the dissolved carbon dioxide gas in the soda escapes into the air. This is a physical change, not a chemical change. Therefore, opening a soda bottle is not an example of oxidation.

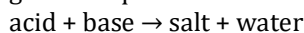
S147. Ans.(d)

Sol. Reduction is a chemical reaction that involves the gain of electrons. It is the opposite of oxidation, which involves the loss of electrons.

- The gain of electrons is an example of reduction because the atom or ion that gains electrons is reduced.
- A decrease in oxidation number is an example of reduction because the atom or ion that has a decrease in oxidation number is reduced.
- The formation of a covalent bond is an example of reduction because the atoms that form a covalent bond share electron, and the atom that gains electrons is reduced.
- The dissociation of a molecule is not an example of reduction because it does not involve the gain of electrons. In a dissociation reaction, a molecule breaks down into two or more smaller molecules or ions. The smaller molecules or ions do not have a net charge, so they are not reduced.

S148. Ans.(a)

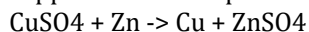
Sol. A neutralization reaction is a chemical reaction in which an acid and a base react in equal quantities to form salt and water. The reaction can be represented by the following general equation:



The neutralization reaction is a type of double displacement reaction. In a double displacement reaction, two compounds exchange ions to form two new compounds. In the neutralization reaction, the acid and base exchange hydrogen ions (H⁺) and hydroxide ions (OH⁻) to form water.

S149. Ans.(d)

Sol. A single displacement reaction is a type of chemical reaction in which one element is replaced by another in a compound. The reaction between copper sulfate and zinc is an example of a single displacement reaction. In this reaction, the zinc atom replaces the copper atom in the copper sulfate compound. The overall reaction is as follows:



The other reactions are not single displacement reactions. The reaction between magnesium and oxygen is a combination reaction, in which two or more substances combine to form a new substance.

The reaction between sodium hydroxide and hydrochloric acid is a neutralization reaction, in which an acid and a base react to form a salt and water.

The reaction between carbon dioxide and water is an equilibrium reaction, in which the reactants and products are in equilibrium with each other.

S150. Ans.(c)

Sol. Graphite is an example of a non-metallic mineral. It is a form of carbon with a layered structure. Graphite is known for its softness, black color, and excellent electrical conductivity. It is commonly used as a lubricant, in batteries, as a material for electrodes, and in various other industrial applications.

Iron ore and copper ore are examples of metallic minerals as they contain significant amounts of metals like iron and copper, respectively. Bauxite is an ore from which aluminum is extracted and is also considered a metallic mineral.

S151. Ans.(a)

Sol. Gold is often referred to as the "King of Metals" due to its high value, rarity, and historical significance. It is also the most malleable and ductile metal, which means that it can be easily shaped and stretched.

Metal	Description	Applications
Gold	Rare, beautiful, and durable	Jewelry, coins, electronics, decorative purposes
Platinum	Rare, resistant to corrosion	Catalytic converters, electrical contacts, jewelry
Silver	Shiny, highly conductive	Electronics, photography, jewelry, currency
Copper	Reddish-brown, highly conductive	Electrical wiring, plumbing, industrial uses

S152. Ans.(b)

Sol. The correct answer is (b) Calcium chloride. Water hardness is caused by the presence of dissolved mineral ions, such as calcium and magnesium ions. Calcium chloride is a common salt that can contribute to water hardness, while sodium chloride, potassium chloride, and ammonium chloride do not typically contribute to water hardness.

Calcium chloride is an inorganic compound, a salt with the chemical formula CaCl₂. It is a white crystalline solid at room temperature, and it is highly soluble in water.

S153. Ans.(a)

Sol. The correct answer is (a) Citric acid. Citric acid is a weak organic acid that is naturally present in citrus fruits, including lemons and oranges. Lactic acid is present in dairy products, acetic acid is present in vinegar, and hydrochloric acid is a strong mineral acid that is not typically found in food.

Citric acid is an organic compound with the chemical formula HOC(CH₂CO₂H)₂.

S154. Ans.(c)

Sol. The Lanthanoid series is the series of elements filled with electrons in the 4f orbitals in the sixth period. This series begins with the element cerium (Z = 58) and ends with the element lutetium (Z = 71). The lanthanoid series is also known as the 4f-inner transition series, as the electrons are being filled into the inner 4f subshell. These elements are also called lanthanides and are part of the transition metals group.

- **3d transition series:** This series of elements refers to the transition metals that start filling up the 3d orbitals after the 4s orbital is filled. These elements are found in the fourth period of the periodic table, from scandium (Z = 21) to zinc (Z = 30).
- **4d transition series:** This series of elements refers to the transition metals that start filling up the 4d orbitals after the 5s orbital is filled. These elements are found in the fifth period of the periodic table, from yttrium (Z = 39) to cadmium (Z = 48).
- **Actinoid series:** This series of elements refers to the elements that fill up the 5f orbitals in the seventh period of the periodic table, from thorium (Z = 90) to lawrencium (Z = 103). These elements are also part of the f-block and are all radioactive.

S155. Ans.(d)

Sol. Potassium is more metallic than sodium because Potassium has one more energy level than sodium, which means it has a larger atomic radius. As a result, the valence electron in potassium is farther from the nucleus and experiences less attraction to the nucleus than the valence electron in sodium. This leads to lower ionization energy and electronegativity, making potassium more metallic than sodium.

S156. Ans.(a)

Sol. In the names *Mangifera indica* (mango), *Solanum tuberosum* (potato), and *Panthera leo* (lion), the terms *Mangifera*, *Solanum*, and *Panthera* represent the higher level of Taxon.

S157. Ans.(a)

Sol. Agar is one of the commercial products obtained from *Gelidium* and *Gracilaria* and is used to grow microbes and in preparations of ice creams and jellies.

S158. Ans.(c)

Sol. Diabetes mellitus is a disease characterized by high blood sugar levels, also known as hyperglycemia. It occurs when the body either doesn't produce enough insulin or cannot effectively use the insulin it produces. Insulin is a hormone that regulates blood sugar levels and allows cells to utilize glucose for energy.

- Hypertension is a condition characterized by high blood pressure. While diabetes can be a risk factor for hypertension, they are separate conditions.
- Arthritis refers to inflammation of the joints and can have various causes.
- Anemia is a condition characterized by a deficiency of red blood cells or hemoglobin, which impairs the ability of the blood to carry oxygen.

S159. Ans.(a)

Sol. Scurvy is a disease that is caused by a deficiency of vitamin C (ascorbic acid).

- Vitamin C plays a crucial role in the synthesis of collagen, a protein important for the health of connective tissues, blood vessels, and bones. Without adequate vitamin C, the body is unable to produce or maintain healthy collagen, leading to various symptoms associated with scurvy.
- Rickets is a disease caused by vitamin D, calcium, or phosphate deficiency, leading to impaired bone development and weak or deformed bones.
- Malaria is a parasitic infection caused by the bite of infected mosquitoes.
- Tuberculosis is a bacterial infection caused by *Mycobacterium tuberculosis* and is not directly associated with vitamin deficiencies.

S160. Ans.(c)

Sol. By process of **diffusion**, substances like carbon dioxide or oxygen can move across the cell membrane.

- **Plasmolysis** is a process in which the plasma membrane of a plant cell shrinks away from the cell wall due to water loss.
- **Sedimentation** is the process by which heavier particles in a solution settle to the bottom due to gravity.
- **Transpiration** is the process by which water is lost from the leaves of plants through small openings called stomata.

S161. Ans.(a)

Sol. M. Schleiden and T. Schwann presented that all plants and animals are composed of cells and that the cell is the basic unit of life in the 1830s.

- Matthias Schleiden was a German botanist, and Theodor Schwann was a German physiologist.
- Their work formed the basis for the cell theory, which is one of the fundamental principles of biology.
- **Rudolf Virchow** later added the third component to the cell theory, stating that all cells arise from pre-existing cells.
- **J. E. Purkinje** coined the term "protoplasm" for the fluid substance of a cell in 1839.

S162. Ans.(c)

Sol. Vitamin E and Vitamin K are classified as fat-soluble vitamins. Fat-soluble vitamins can dissolve in dietary fats and are stored in the body's fatty tissues. They require dietary fat for absorption and can be stored in the body for longer periods.

Sources of Vitamin E: Nuts, seeds, vegetable oils (such as sunflower oil), green leafy vegetables, avocado, and fortified cereals.

Sources of Vitamin K: Green leafy vegetables (like kale and spinach), cruciferous vegetables, herbs (such as parsley and basil), fermented foods (like natto), and animal-based sources like liver and eggs.

S163. Ans.(d)

Sol. Vitamin K is necessary for blood clotting.

- It plays a crucial role in the coagulation process, helping to form blood clots to prevent excessive bleeding. Vitamin K is involved in the activation of certain proteins involved in clotting, specifically the production of prothrombin and other clotting factors. Without sufficient Vitamin K, blood clotting may be impaired, leading to an increased risk of bleeding disorders. Good dietary sources of Vitamin K include green leafy vegetables, cruciferous vegetables, herbs, fermented foods, and animal-based sources like liver and eggs.

S164. Ans.(d)

Sol. The factor that is NOT a factor that affects enzyme activity is Gender.

- Enzyme activity can be affected by several factors, including temperature, pH, substrate concentration, enzyme concentration, and the presence of inhibitors or activators but not gender.

S165. Ans.(c)

Sol. Glucagon reduces cellular glucose uptake and utilization, leading to hyperglycemia.

- The main role of glucagon is to maintain glucose homeostasis in the body, ensuring that there is a constant supply of glucose to meet the energy demands of the body. When blood glucose levels drop, such as during fasting or exercise, glucagon is released to stimulate the liver to break down glycogen into glucose, which is then released into the bloodstream.
- In contrast, insulin is a hormone produced by the beta cells in the pancreas that lowers blood glucose levels.

S166. Ans.(b)

Sol. Anisogamy (also called heterogamy) is a form of sexual reproduction that involves the union or fusion of two gametes, which differ in size and/or form. Sexual reproduction in Algae that takes place through the fusion of two dissimilar size gametes is called Anisogamous.

S167. Ans.(b)

Sol. Binomial nomenclature is a formal system of naming species of living things by giving each a name composed of two parts, both of which use Latin grammatical forms.

S168. Ans.(b)

Sol. Arthropods, such as insects and crustaceans, have a hard exoskeleton and jointed appendages.

- Mollusca is a phylum of animals that have soft bodies.
 - Annelida includes animals with segmented bodies
- Porifera includes animals with porous bodies.

S169. Ans.(b)

Sol. Vertebrates. Animals in the phylum Chordate have a spinal column or backbone.

- Chordata includes animals that have a notochord, a dorsal nerve cord, pharyngeal slits, and a post-anal tail at some point in their development, and vertebrates are a subgroup of Chordata that have a backbone or spinal column.
- Invertebrates are animals that do not have a backbone or spinal column, while Arthropods and Molluscs are specific phyla of invertebrates.

S170. Ans.(a)

Sol. Peristalsis is a particular, wave-like kind of muscle contraction because its purpose is to move solids or liquids along within the tube-like structures of the digestive and urinary tracts.

- Facilitation is the process of making something easier or more possible. It is not related to the movement of food in the gut.
- Guttation is the process by which water is exuded from the pores or hydathodes on the leaves of plants. It is not related to the digestive system.

S171. Ans.(c)

Sol. Herbivores require a longer digestive tract to break down the cellulose in plant matter, which is more difficult to digest than the protein and fat found in animal matter.

- The small intestine is a major site of nutrient absorption in the digestive system, so herbivores typically have longer small intestines than carnivores to extract as much nutrition as possible from their food.
- In contrast, carnivores require a shorter digestive tract because animal protein and fat are more easily digestible, and they need to expel undigested material quickly to avoid putrefaction in their short intestines.

S172. Ans.(a)

Sol. Dengue fever is a viral disease that is primarily transmitted through the bite of infected mosquitoes, particularly the *Aedes aegypti* mosquito. The virus responsible for dengue fever belongs to the Flaviviridae family.

Pneumonia is a respiratory infection caused by bacteria, viruses, or fungi.

Osteoporosis is a condition characterized by weakened and brittle bones.

Diabetes mellitus is a metabolic disorder characterized by high blood sugar levels.

S173. Ans.(c)

Sol. Malaria is a disease caused by the Plasmodium parasite, which is transmitted to humans through the bite of infected female Anopheles mosquitoes. It is characterized by recurrent fever, chills, and flu-like symptoms.

- Dengue fever and Chikungunya are viral diseases transmitted by infected mosquitoes.
- The Zika virus is another viral disease transmitted by mosquitoes, specifically the *Aedes* mosquito. It is not caused by the Plasmodium parasite and is associated with neurological complications and birth defects in newborns.

S174. Ans.(a)

Sol. Vitamin A is essential for maintaining healthy eyesight. It plays a vital role in the functioning of the retina and helps prevent night blindness and other vision-related issues.

- Vitamin A can be found in foods such as liver, fish oil, egg yolks, dairy products (milk, cheese, butter), carrots, sweet potatoes, pumpkin, mangoes, apricots, spinach, kale, and fortified foods like cereals and margarine.

S175. Ans.(b)

Sol. Collagen is a protein that plays a crucial role in the structure and strength of connective tissues, including skin, tendons, and blood vessels. Vitamin C is required for the enzymatic reactions involved in collagen synthesis. It also acts as an antioxidant and aids in the absorption of iron, which is necessary for wound healing. Adequate vitamin C intake is important for maintaining healthy skin and promoting proper wound-healing processes.

Good dietary sources of vitamin C include citrus fruits, berries, kiwi, peppers, and leafy greens.

S176. Ans.(c)

Sol. Karl Landsteiner discovered the blood group.

- Karl Landsteiner was an Austrian immunologist and pathologist who discovered the ABO blood group system in 1901.
- He found that there are different blood types, based on the presence or absence of specific antigens on the surface of red blood cells. His discovery made it possible to perform safe blood transfusions without the risk of a transfusion reaction.

- Landsteiner was awarded the Nobel Prize in Physiology or Medicine in 1930 for his discovery.
 - Alexander Fleming – a Scottish microbiologist, discovered Penicillin.
 - William Harvey – an English physician, described the circulation of blood in the body in the 17th century.
 - Pavlov - Russian physiologist known for his work on classical conditioning.

S177. Ans.(c)

Sol. Bile juice released from the liver has two primary functions:

1. Make the food coming from the stomach alkaline.
2. Breakdown of fats into smaller globules. Thus, Statement I & III is correct.
 - Bile juice does not convert proteins into amino acids. Protein digestion occurs mainly in the stomach and small intestine through the action of enzymes such as pepsin and trypsin. Thus, Statement II is incorrect.

Note: Bile breaks down large fat globules into smaller globules in the small intestine so that the pancreatic enzymes can easily act on them. This process is known as emulsification of fats.

S178. Ans.(a)

Sol. The voluntary muscles are also called Striated muscles.

- Striated muscles are so named because they have a striped appearance due to the presence of alternating light and dark bands (or striations) under the microscope.
- These muscles are called voluntary muscles because they are under conscious control and can be contracted or relaxed at will, allowing us to perform movements such as walking, running, and lifting weights.
- Smooth muscles, on the other hand, are involuntary muscles found in the walls of internal organs such as the stomach, intestines, and blood vessels. They do not have striations and are not under conscious control.
- Cardiac muscles are a type of striated muscle found only in the heart, and they are also involuntary.

S179. Ans.(d)

Sol. Potassium is a mineral that plays a vital role in proper nerve function and muscle contraction. It is an electrolyte that helps transmit electrical signals in the nervous system, enabling nerve impulses to travel efficiently and ensuring smooth muscle contraction.

- Regarding muscle contraction, potassium ions are involved in depolarization and repolarization processes that occur during muscle contractions. It helps regulate the balance of other electrolytes like sodium and calcium, ensuring proper muscle function and preventing muscle cramps or weakness.

S180. Ans.(d)

Sol. Magnesium is a mineral that serves as a component of many enzymes in the body and is involved in various metabolic processes, including energy metabolism.

- It plays a crucial role in converting food into energy by helping to break down carbohydrates, proteins, and fats.
- Additionally, magnesium is involved in muscle and nerve function, DNA synthesis, and the maintenance of a healthy immune system. Good dietary sources of magnesium include green leafy vegetables, nuts, seeds, whole grains, and legumes.

S181. Ans.(d)

Sol. The correct answer is (d) Udayagiri and Khandagiri Caves.

- The Hathigumpha inscription is associated with the Udayagiri and Khandagiri Caves, which are located in the state of Odisha, India. These caves are a significant historical and archaeological site that dates back to the reign of Emperor Kharavela of the Mahameghavahana dynasty in the 2nd century BCE.
- The Hathigumpha inscription is an ancient inscription carved on a cave wall in Udayagiri. It is written in Brahmi script and Prakrit language and provides valuable information about the achievements, military campaigns, and religious activities of Emperor Kharavela. The inscription is highly significant as it provides insights into the political and cultural history of ancient Odisha and the Kalinga region.

Therefore, the Hathigumpha inscription is associated with the Udayagiri and Khandagiri Caves in Odisha, India.

S182. Ans.(c)

Sol. The style of singing in Hindustani music that is not listed among the options provided is Alha. Alha is not a recognized style of singing in Hindustani music. The other options, Dhrupad, Dhamar, and Khayal, are indeed styles of singing in Hindustani classical music.

S183. Ans.(c)

Sol. Santosh Yadav is an Indian mountaineer. She is the first woman in the world to climb Mount Everest twice.

Name	Achievement
Bachendri Pal	First Indian woman to reach the summit of Mount Everest in 1984
Arunima Saha	First female amputee to climb Mount Everest in 2013
Santosh Yadav	First woman to climb Mount Everest twice, achieved in 1992 and 1993
Anshu Jamsenpa	First woman in the world to summit Mount Everest twice in a single season, accomplished in 2011 and 2013

S184. Ans.(d)

Sol. The correct answer is (d) Rudolf Virchow. Rudolf Virchow, a German physician, and pathologist, is credited with expanding the cell theory and proposing that all cells arise from pre-existing cells. Virchow's principle, "omnis cellula e cellula," meaning "every cell originates from another cell," was a significant contribution to our understanding of cellular biology.

S185. Ans.(b)

Sol. The correct answer is (b) Norman Borlaug. Norman Borlaug, an American agronomist and humanitarian, is widely recognized as the "Father of the Green Revolution." He is renowned for his efforts in developing high-yielding and disease-resistant varieties of wheat, which significantly increased agricultural productivity and helped alleviate hunger and famine in various parts of the world. Borlaug's contributions to agricultural science and his impact on global food production earned him the Nobel Peace Prize in 1970.

S186. Ans.(b)

Sol. Exercise Agni Warrior is an annual bilateral exercise between the Singapore and Indian Army.

The exercise is held annually and is designed to improve interoperability between the two armies. The exercise typically includes a joint planning process, a computer war game, and a live-fire exercise.

The 12th edition of Exercise Agni Warrior was held from 13 to 30 November 2022 at the Field Firing Ranges in Devlali, Maharashtra. The exercise involved over 100 personnel from both armies. The exercise was conducted in two phases –

1. Joint planning process, which was followed by a computer war-game.
2. A live-fire exercise, which involved the use of artillery guns and howitzers.

Other exercises conducted between India and Singapore:

Bold Kurukshetra: between the Singapore and Indian Army's armored forces.

Garuda Shield: between the Singapore and Indian Air Force's air defense forces.

Exercise Malabar: between the navies of India, the United States, and Japan. Singapore has participated in the exercise since 2007.

S187. Ans.(d)

Sol. Vajra Prahar is a bilateral army exercise between India and the United States. The exercise is held annually and is designed to improve interoperability between the two armies in counter-terrorism and special operations. The exercise typically includes a joint planning process, a computer war-game, and a live-fire exercise.

The 13th Edition of India - USA Joint Special Forces Exercise VAJRA PRAHAR 2022 culminated at Bakloh (HP) on 28 August 2022. This annual exercise is hosted alternatively between India and the United States.

Malabar - a trilateral maritime exercise, between the navies of India, the United States, and Japan. Singapore has also participated in the exercise since 2007.

Tropex - Theatre Level Operational Readiness Exercise (TROPEX) is an inter-service military exercise involving the participation of the Indian Army, Air Force, Navy, and Coast Guard.

Indra - a bilateral exercise between the militaries of India and Russia.

S188. Ans.(d)

Sol. File compression is the technique used to store a large file in a small storage space. It compresses the content of the file in such a way that there is no harm done to the file content and quality.

S189. Ans.(b)

Sol. PowerPoint is used to make presentations/slide shows.

S190. Ans.(b)

Sol. The Indian Space Research Organization has headquartered in Bangalore, Karnataka.

The Indian Space Research Organization (ISRO) is the space agency of the Government of India established on August 15, 1969.

- The choice of Bangalore as the headquarters is strategic, as the city is known as the "Silicon Valley of India" and has a vibrant technological ecosystem.
- Bangalore houses several key facilities and centers of ISRO, including the Satish Dhawan Space Centre (SDSC) SHAR, which is the spaceport for launching satellites.

S191. Ans.(a)

Sol. The Indian Council of Medical Research (ICMR) has its headquarters in New Delhi.

- The Indian Council of Medical Research (ICMR) is the apex body for the promotion and coordination of biomedical research in India established in 191.
- It operates under the Department of Health Research, Ministry of Health and Family Welfare, Government of India.

S192. Ans.(a)

Sol. Jim Corbett National Park is the oldest national park in India.

- Established in 1936 as Hailey National Park.
- It is located in the Nainital district of Uttarakhand and is known for its population of Bengal tigers.

S193. Ans.(a)

Sol. Koundinya Wildlife Sanctuary is located in Andhra Pradesh and is known for its population of Asian elephants.

- It is the only sanctuary in the state that has a significant number of these elephants. The sanctuary is covered by southern tropical dry deciduous and thorn forests, providing a suitable habitat for these magnificent creatures.
- The sanctuary is named after the famous sage Koundinya and is an important conservation area for wildlife in Andhra Pradesh.

S194. Ans.(a)

Sol. World Bee Day is observed worldwide on May 20, to acknowledge the role of bees and other pollinators in the ecosystem.

- This year Food and Agriculture Organization (FAO) celebrated World Bee Day through a virtual event, under the theme 'Bee Engaged: Celebrating the diversity of bees and beekeeping systems.'
- World Bee Day was first inaugurated on 20th May 2018 and is celebrated every year ever since.
- This day commemorates the birth of Anton Jansa in 1734. She is considered the pioneer of beekeeping.

S195. Ans.(d)

Sol. International Day of UN Peacekeepers is observed globally on 29th May.

- The International Day of United Nations Peacekeepers also offers a chance to honour around 4,200 peacekeepers who lost their lives serving under the UN flag since, including 135 who lost the battle last year.
- The theme for this year's Day is "People. Peace. Progress. The Power of Partnerships."

S196. Ans.(c)

Sol. Dhyan Chand, also known as "The Wizard," was the Captain of the Indian Men's National hockey team in 1928 when it won its first gold medal at the Amsterdam Olympics.

- In the final match against the Netherlands, Dhyan Chand's skills were on full display as he scored three goals to lead India to a resounding 3-0 victory and secure the gold medal.

S197. Ans.(a)

Sol. Cricket is often referred to as "the gentleman's game." This term is attributed to the long-standing traditions and etiquette associated with the sport. Cricket is known for its spirit of fair play, respect for opponents, and adherence to a code of conduct known as "the spirit of cricket."

- Football (Soccer): "The Beautiful Game"
- Boxing: "The Sweet Science" or "The Noble Art"

S198. Ans.(c)

Sol. The solo element "Tarangam" belongs to the Kuchipudi classical dance form.

Kuchipudi is a classical dance form from the Indian state of Andhra Pradesh. It is known for its graceful movements, intricate footwork, and expressive storytelling. One of the popular elements of Kuchipudi is "Tarangam," which is a solo performance where the dancer performs rhythmic patterns and movements on a brass plate or "tarangam" while balancing it on the edges of their feet. The dancer showcases their skill and control by creating rhythmic sounds and patterns using their feet on the plate, often accompanied by singing and musical instruments.

So, the solo element "Tarangam" is associated with the Kuchipudi classical dance form.

S199. Ans.(b)

Sol. The Navroz festival, also known as Nowruz, is primarily celebrated by people of Persian and Zoroastrian descent. It is an ancient festival that marks the Persian New Year and is associated with the arrival of spring. Nowruz is observed by various communities and ethnic groups, including Persians, Kurds, Tajiks, Afghans, and other Central Asian communities. Therefore, the correct answer is (b) Persian.

S200. Ans.(a)

Sol. COBOL (Common Business Oriented Language) is a programming language that reads like regular English and is often used for business and administrative purposes.

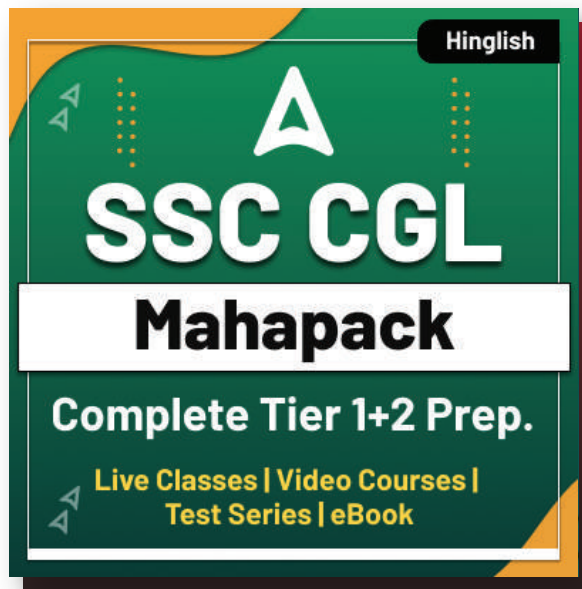
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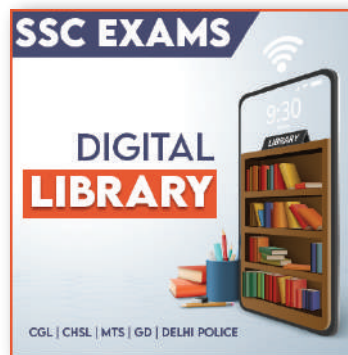


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