

DFCCIL Memory Based Paper

Q1. What is the sum of digits of the least number, which when divided by 15, 18 and 24 leaves the remainder 8 in each case and is also divisible by 13?

- (a) 17
- (b) 16
- (c) 15
- (d) 18

Q2. If the six-digit number $4x4y96$ is divisible by 88, then what will be the value of $(x + 2y)$

- (a) 13
- (b) 10
- (c) 12
- (d) 11

Q3. $\frac{675 \times 675 \times 675 + 325 \times 325 \times 325}{67.5 \times 67.5 + 32.5 \times 32.5 - 67.5 \times 32.5}$ is equal to:

- (a) 100
- (b) 10,000
- (c) 1,000
- (d) 1,00,000

Q4. $9\frac{3}{4} \div \left[2\frac{1}{6} + \left\{ 4\frac{1}{3} - \left(2\frac{1}{2} + \frac{3}{4} \right) \right\} \right]$ is equal to

- (a) 3
- (b) $15\frac{1}{4}$
- (c) 4
- (d) $17\frac{1}{4}$

Q5. 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

Q6. A shopkeeper marks his goods at a price such that after giving a discount of 25%, he gains 20%. If the cost price of the article is Rs 460, what is its marked price?

- (a) Rs 736
- (b) Rs 748
- (c) Rs 725
- (d) Rs 752

Q7. The successive discounts of 20%, 10% and 15% is equivalent to a single discount of:

- (a) 43.5%
- (b) 42.2%
- (c) 38.8%
- (d) 44.5%

Q8. What is the ratio of mean proportional between 1.8 and 3.2 and the third proportional of 5 and 3 ?

- (a) 3 : 5
- (b) 4 : 3
- (c) 3 : 4
- (d) 5 : 3

Q9. 24 persons working 8 hrs a day can complete 2 units of a work in 10 days. How many persons are required to complete 4 units of that work, if they work 6 hours a day for 16 days?

- (a) 48
- (b) 36
- (c) 40
- (d) 32

Q10. 6 men or 5 women earn Rs 14820 in two days. How much will 4 women and 6 men earn in one day?

- (a) Rs 27664
- (b) Rs 26676
- (c) Rs 13338
- (d) Rs 13832

Q11. 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



Q12. 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

Q13. 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

Q14. If a train runs at 60 km/h, it reaches its destination 15 minutes late. But, if it runs at 80 km/h, it is late by 7 minutes only. The right time for the train to cover its journey is

- (a) 18 minutes
- (b) 17 minutes
- (c) 20 minutes
- (d) 21 minutes

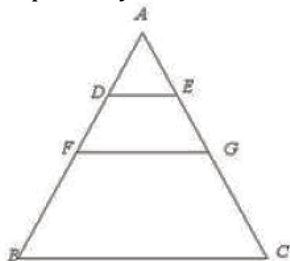
Q15. A goes to a mall from his house on a cycle at 8 km/h and comes back to his house on a cycle at 6 km/h. If he takes 1 hour 10 minutes in all, what is the distance between his house and the mall?

- (a) 8 km
- (b) 4 km
- (c) 5 km
- (d) 6 km

Q16. Triangle PQR is a right-angled at Q. If PQ=6 cm, PR=10 cm, then QR is equal to :

- (a) 9 cm
- (b) 8 cm
- (c) 5 cm
- (d) 7 cm

Q17. In the triangle given below, D and E are mid points of AF and AG respectively, F and G are mid points of AB and AC respectively. If DE = 2.4 cm, then BC is equal to:



- (a) 9.6 cm
- (b) 7.2 cm
- (c) 4.8 cm
- (d) 3.6 cm

Q18. The angles of a triangle are $2x - 3$, $x + 12$, $x - 1$. The largest angle of the triangle is:

- (a) 42
- (b) 83
- (c) 94
- (d) 55

Q19. One side of a rhombus is 6.5 cm and one of its diagonals is 12 cm. What is the area of the rhombus?

- (a) 78 cm^2
- (b) 15 cm^2
- (c) 30 cm^2
- (d) 60 cm^2

Q20. The length of diagonal of a square whose area is 64 m^2 is:

- (a) $4\sqrt{2} \text{ m}$
- (b) $8\sqrt{2} \text{ m}$
- (c) 8m
- (d) 4m

Q21. The area of each square of a chessboard having 64 equal squares is 4 cm^2 . If there is a border on all the sides of the chessboard of 2 cm, then the perimeter of the chessboard is :

- (a) 256 cm
- (b) 70 cm
- (c) 128 cm
- (d) 80 cm

Q22. The value of $\frac{\sin 30^\circ - \cos 60^\circ + \cot^2 45^\circ}{\cos 30^\circ - \tan 45^\circ + \sin 90^\circ}$ is equal to

- (a) $\frac{2\sqrt{3}}{3}$
- (b) $\frac{\sqrt{3}}{2}$
- (c) $\frac{3}{2}$
- (d) $\frac{\sqrt{3}}{4}$

Q23. If $\tan 3x = \cot (30^\circ + 2x)$, then what is the value of x?

- (a) 18°
- (b) 12°
- (c) 10°
- (d) 15°

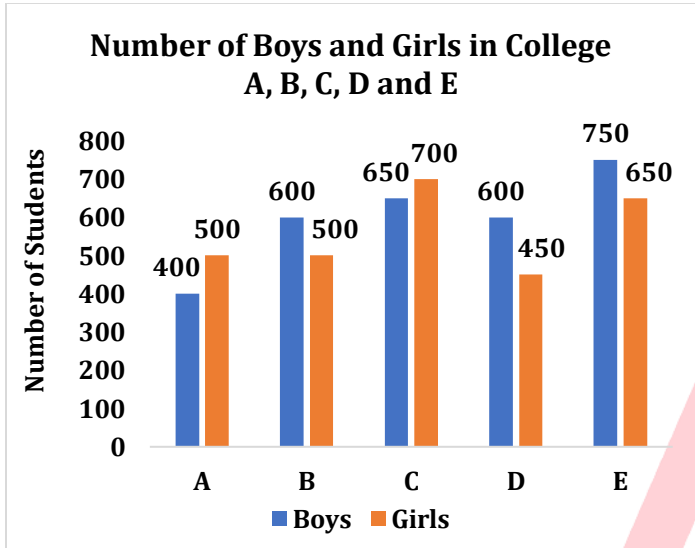
Q24. If $a^3 - b^3 = 208$ and $a - b = 4$, then $(a + b)^2 - ab$ is equal to:

- (a) 52
- (b) 38
- (c) 32
- (d) 42

Q25. If $x + \frac{1}{x} = 5$, then $x^3 + \frac{1}{x^3}$ is equal to:

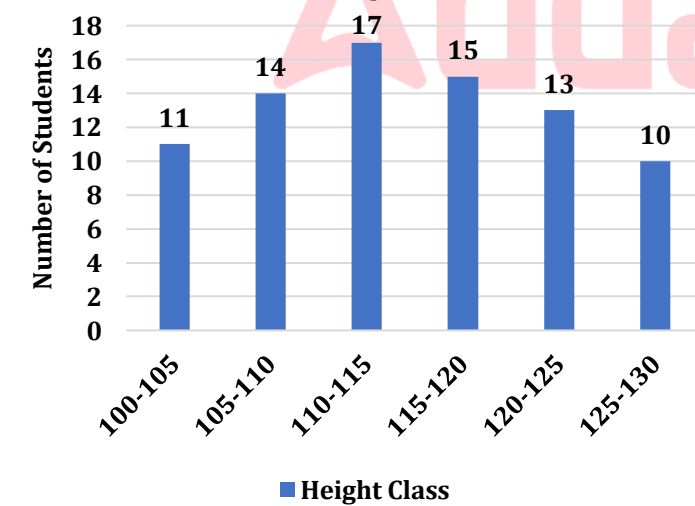
- (a) 110
- (b) 130
- (c) 145
- (d) 125

Q26. In the given bar graph, in which college the difference between the percentage of boys and girls is maximum by taking total number of students as a base for that college?



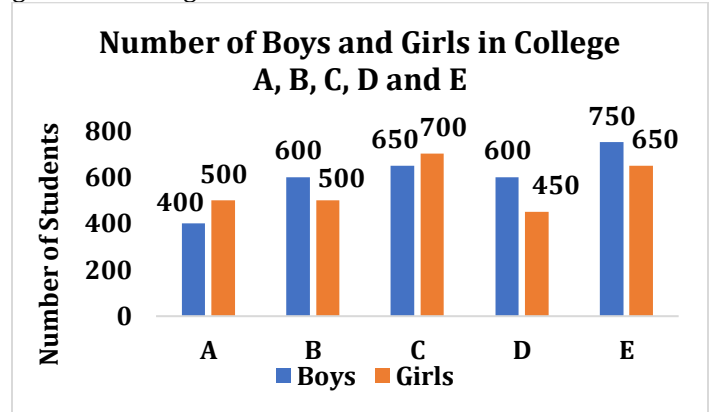
- (a) E
- (b) B
- (c) D
- (d) A

Q27. In the given histogram, what is the mean height of all students correct to one decimal place?



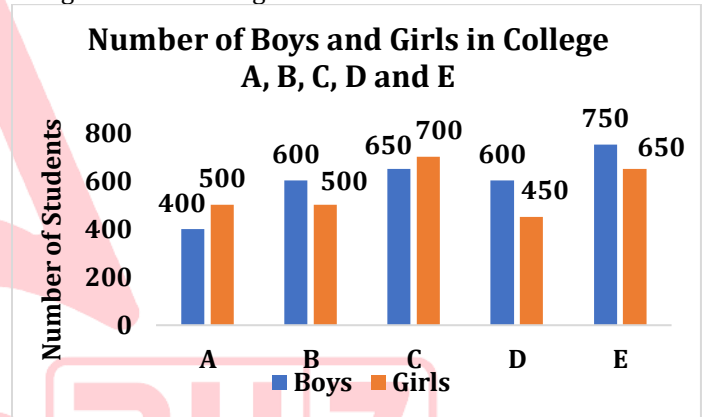
- (a) 116.8 cm
- (b) 114.7 cm
- (c) 116.2 cm
- (d) 115.6 cm

Q28. In the given bar graph, what is the average number of girls in all colleges?



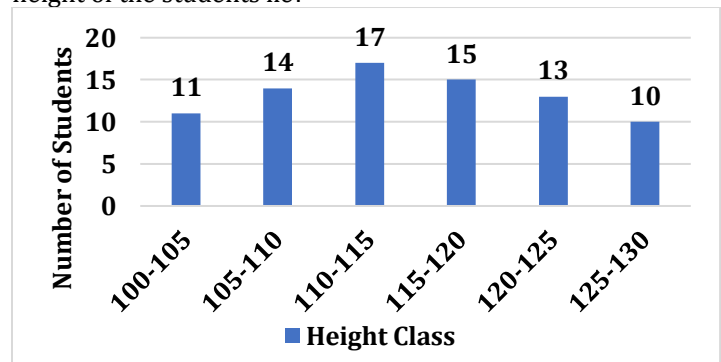
- (a) 560
- (b) 540
- (c) 550
- (d) 600

Q29. In the given bar graph, what is the ratio of the total boys and girls in all 5 colleges?



- (a) 13 : 12
- (b) 14 : 15
- (c) 15 : 14
- (d) 12 : 13

Q30. In the given histogram, in which class does the median height of the students lie?



- (a) 120-125
- (b) 105-110
- (c) 115-120
- (d) 110-115

Q31. Indian Constitution Drafted in Which Date?

- (a) 15th August 1947
- (b) 26th November 1949
- (c) 26th January 1950
- (d) 2nd October 1869

Q32. Article 21 is related to which in the Indian Constitution?

- (a) Right to Equality
- (b) Right to Freedom of Religion
- (c) Right to Life and Personal Liberty
- (d) Right against Exploitation

Q33. Mahatma Gandhi was President of which Congress Session?

- (a) Lahore Session
- (b) Belgaum Session
- (c) Surat Session
- (d) Calcutta Session

Q34. Which of the following languages is not recognized in the 8th schedule of the Indian Constitution?

- (a) Sindhi
- (b) Sanskrit
- (c) Nepali
- (d) English

Q35. Which country is the host for the COP-27 climate change conference?

- (a) France
- (b) Germany
- (c) United Kingdom
- (d) Egypt

Q36. Who is responsible for appointing the Attorney General in India?

- (a) Prime Minister
- (b) Chief Justice of India
- (c) President
- (d) Parliament

Q37. By what means is the majority of rainfall generated in India?

- (a) Western Disturbances
- (b) Retreating Monsoon
- (c) South-West Monsoon
- (d) North-East Monsoon

Q38. Which river is known to form estuaries as it meets the sea?

- (a) Ganga
- (b) Mahanadi
- (c) Narmada
- (d) Yamuna

Q39. What does the acronym SLR represent in the banking sector?

- (a) Statutory Liquidity Ratio
- (b) Standard Lending Rate
- (c) Simple Leverage Rule
- (d) Strategic Long Range

Q40. In a food chain, what type of organism is typically considered a primary consumer?

- (a) Herbivores
- (b) Carnivores
- (c) Omnivores
- (d) Decomposers

Q41. The State Reorganization Act of 1956 led to the creation of how many States and Union Territories in India?

- (a) 14 States and 6 UTs
- (b) 14 States and 5 UTs
- (c) 16 States and 8 UTs
- (d) 12 States and 6 UTs

Q42. Which statement is true concerning the Gandhi-Irwin Pact?

- (a) It led to the suspension of the Civil Disobedience Movement
- (b) It resulted in India's immediate independence
- (c) It was an agreement between Gandhi and Jinnah
- (d) It was signed in 1942

Q43. Which state has the largest number of seats in the Lok Sabha?

- (a) Uttar Pradesh
- (b) Maharashtra
- (c) West Bengal
- (d) Bihar



Q44. Which type of lens is used to correct myopia, or nearsightedness?

- (a) Convex lens
- (b) Concave lens
- (c) Cylindrical lens
- (d) Bifocal lens

Q45. What chemical formula represents Lead Sulphate?

- (a) $PbSO_4$
- (b) Pb_2SO_4
- (c) $Pb(SO_4)_2$
- (d) $Pb_3(SO_4)_2$

Q46. Plane Mirror forms which type of Image?

- (a) Real and Inverted
- (b) Virtual and Inverted
- (c) Real and Erect
- (d) Virtual and Erect

Q47. AIDS disease is caused by which?

- (a) Bacteria
- (b) Virus
- (c) Fungi
- (d) Protozoa

Q48. Why are Raindrops Spherical in shape?

- (a) Surface Tension
- (b) Gravitational Pull
- (c) Air Pressure
- (d) Magnetic Field

Q49. Jellyfish are an example of which type of phylum?

- (a) Annelida
- (b) Mollusca
- (c) Cnidaria
- (d) Arthropoda

Q50. The elements of the groups 3 to 12 are called _____ elements or transition elements.

- (a) Noble
- (b) Halogen
- (c) Lanthanide
- (d) Transition

Q51. On which principle does the hydraulic lift work?

- (a) Pascal's Principle
- (b) Bernoulli's Principle
- (c) Newton's Third Law
- (d) Archimedes' Principle

Q52. What is the name of the hormone produced by the thymus gland?

- (a) Thyroxine
- (b) Insulin
- (c) Thymosin
- (d) Glucagon

Q53. Xerophthalmia is caused due to the deficiency of vitamin _____

- (a) B
- (b) C
- (c) A
- (d) D

Q54. The gases used in normal welding processes are

- (a) Oxygen and Acetylene
- (b) Hydrogen and Nitrogen
- (c) Oxygen and Nitrogen
- (d) Helium and Argon

Q55. A Theodolite is used for measuring

- (a) Length
- (b) Volume
- (c) Angles
- (d) Density

Q56. Presence of large amounts of nutrients in waters also causes excessive growth of _____ algae

- (a) Green
- (b) Red
- (c) Brown
- (d) Blue-green

Q57. The time taken by a pendulum to complete one oscillation is called it?

- (a) Frequency
- (b) Wave Length
- (c) Period
- (d) Amplitude

Q58. In the Modern periodic table, which element does not obtain a fixed position?

- (a) Hydrogen
- (b) Oxygen
- (c) Sodium
- (d) Carbon

Q59. What occurs to the electric current during a short circuit?

- (a) It increases
- (b) It decreases
- (c) It remains the same
- (d) It fluctuates

Q60. What is the botanical name for the Mango tree?

- (a) Citrus reticulata
- (b) Pyrus malus
- (c) Mangifera indica
- (d) Musa acuminata

Q61. 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

Q62. 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

Q63. 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

Q64. If BACK is coded as 11312 and CAKE is coded as 51113, then how will MADE be coded as ?

- (a) 51413
- (b) 54113
- (c) 31145
- (d) 13145

Q65. In a code language, TEMPLE is written as DKOLDS. How will WORSHIP be written as in that language?

- (a) OHGRQNV
- (b) VNQGHOR
- (c) QJITSPX
- (d) OGHQRVN

Q66. Rahul and Robin are brothers. Pramod is Robin's father. Sheela is Pramod's sister. Prema is Pramod's niece. Shubha is Sheela's granddaughter. How is Rahul related to Shubha?

- (a) Brother
- (b) Cousin
- (c) Uncle
- (d) Nephew

Q67. Which number will replace the question mark (?) in the following series?

5, 8, 20, 34, 76, 142, ?

- (a) 284
- (b) 302
- (c) 296
- (d) 272

Q68. Which number will replace the question mark (?) in the following series?

5, 9, 18, 43, 92, 213, 382, ?

- (a) 328
- (b) 617
- (c) 382
- (d) 671

Q69. Which number will replace the question mark (?) in the following series?

4, 10, 27, 140, ?

- (a) 379
- (b) 973
- (c) 937
- (d) 397

Q70. Select the letter cluster that will come next in the following series.

DOP, FPN, HQL, JRJ, ?

- (a) LSH
- (b) LSI
- (c) KSH
- (d) KTI

Q71. Select the term that will come next in the following series.

FBA, IGE, LLI, OQM, ?

- (a) RVQ
- (b) QVQ
- (c) RVP
- (d) RUP



Q72. Three of the following four words are alike in a certain way and one is different. Pick the odd word out.

- (a) Bag
- (b) Suitcase
- (c) Purse
- (d) Carpet

Q73. 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) 4147
- (b) 8205
- (c) 9368
- (d) 7298

Q74. Three of the following four letter-clusters are alike in a certain way and one is different. Pick the odd one out.

- (a) UQJF
- (b) OKPL
- (c) AWDZ
- (d) IDWS

Q75. 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 conclusion logically follow(s) from the statements.

Statements



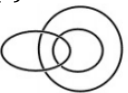

- All rules are machines
- Some machines are costly items

Conclusion

- I. Some rules are costly items
- II. Some costly items are machines
- (a) Neither conclusion I nor II follow
- (b) Both conclusion I and II follow
- (c) Only conclusion II follow
- (d) Only conclusion I follows





Q76. Select the Venn diagram that best illustrates the relationship between the following classes.

Mothers, Women, Pilots

- (a) 
- (b) 
- (c) 
- (d) 

Q77. Select the Venn diagram that best illustrates the relationship between the following classes.

Nurses, Doctors, Pharmacists

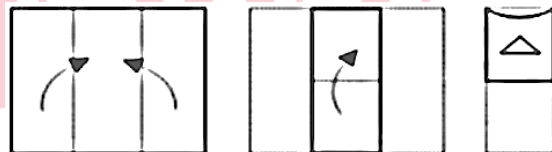
- (a) 
- (b) 
- (c) 
- (d) 

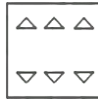



Q78. How many triangles are there in the following figure?



- (a) 14
- (b) 18
- (c) 20
- (d) 16

Q79. A paper is folded and cut as shown in the following figures. How will it appear when unfolded?



- (a) 
- (b) 
- (c) 
- (d) 

Q80. Select the correct mirror image of the given combination when the mirror is placed at 'PQ' as shown below.



- (a) M142K5ZLB
- (b) L142K5ZMB
- (c) M142K5ZLB
- (d) L142K5ZMB

Q81. Select the correct mirror image of the given figure when the mirror is placed to the right of the figure.



- (a)
- (b)
- (c)
- (d)

Q82. Arrange the following words in the same order in which they occur in dictionary.

- (1) Acorn
 - (2) Acoustic
 - (3) Acquaint
 - (4) Acquired
 - (5) Aconitine
- (a) 34512
 - (b) 43512
 - (c) 51432
 - (d) 51234

Q83. In a row of letters, a letter is 5th from left end and 12th from the right end. How many letters are there in a row?

- (a) 15
- (b) 16
- (c) 17
- (d) 18

Q84. Select the word which cannot be formed using the letters of the given word.

- TRADITIONAL
- (a) RADON
 - (b) RATION
 - (c) NATIONAL
 - (d) TRAIN

Q85. Which two signs should be interchanged in the following equation to make it correct?

$$18 + 6 - 6 \div 3 \times 3 = 6$$

- (a) + and -
- (b) + and ÷
- (c) - and ÷
- (d) + and ×

Q86. Select the option that is related to the third term in the same way as the second term is related to the first term.

$$29 : 13 :: 37 : ?$$

- (a) 15
- (b) 21
- (c) 17
- (d) 14

Q87. Select the number-pair in which the two numbers are related in the same way as are the two numbers of the following number-pairs.

$$7 : 32$$

- (a) 3 : 11
- (b) 13 : 98
- (c) 12 : 85
- (d) 16 : 145

Q88. Select the set in which the numbers are related in the same way as are the numbers of the following set.

$$(3, 24, 4)$$

- (a) (6, 35, 11)
- (b) (2, 30, 8)
- (c) (12, 84, 4)
- (d) (4, 72, 9)

Q89. Select the set in which the numbers are related in the same way as are the numbers of the following set

$$(10, 18, 38)$$

- (a) (4, 12, 22)
- (b) (14, 12, 8)
- (c) (12, 22, 46)
- (d) (18, 6, 14)

Q90. Select the set in which the numbers are related in the same way as are the numbers of the following set.

- (8, 12, 24)
(a) (6, 9, 18)
(b) (12, 20, 40)
(c) (6, 10, 18)
(d) (9, 18, 27)

Q91. Headquarter of South Central Zone of Indian Railway Situated in which state?

- (a) Maharashtra
(b) Karnataka
(c) Telangana
(d) Andhra Pradesh

Q92. How Much revenue was received by Goods Train in 2022-23 in India?

- (a) Rs. 1 lakh crore
(b) Rs. 1.50 lakh crore
(c) Rs. 1.62 lakh crore
(d) Rs. 2.1 lakh crore

Q93. Under which act was DFCCIL established?

- (a) Companies Act 2013
(b) Companies Act 1956
(c) Companies Act 1947
(d) Companies Act 2001

Q94. First DFCCIL Train is?

- (a) Freight Train
(b) Passenger Train
(c) Metro Train
(d) Monorail

Q95. The motto 'Hungry for Cargo' is associated with which organization?

- (a) FedEx
(b) DHL
(c) Indian Railways
(d) Maersk

Q96. Which foreign nation has contributed to the development of the Dedicated Freight Corridor Corporation of India Limited (DFCCIL)?

- (a) Japan

- (b) Russia
(c) USA
(d) Germany

Q97. How many kilometers of railway line were electrified in India during the fiscal year 2022-23?

- (a) 7030 km
(b) 4050 km
(c) 6,542 km
(d) 8030 km

Q98. The Eastern Dedicated Freight Corridor (EDFC) by DFCCIL primarily connects which two cities?

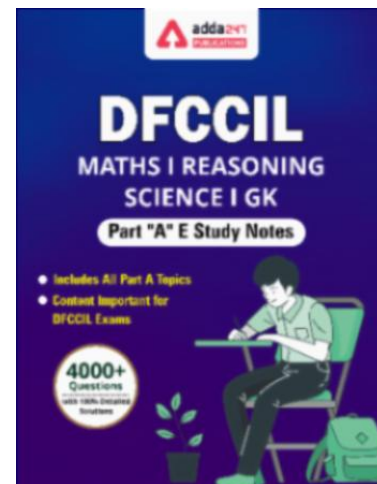
- (a) Mumbai and Chennai
(b) Ludhiana and Dankuni
(c) Delhi and Mumbai
(d) Kolkata and Delhi

Q99. Which type of gauge is being used in the construction of the Dedicated Freight Corridors (DFCs) by DFCCIL?

- (a) Meter Gauge
(b) Broad Gauge
(c) Standard Gauge
(d) Narrow Gauge

Q100. Which one of the following industries will benefit the most from the Dedicated Freight Corridors developed by DFCCIL?

- (a) IT Services
(b) Coal and Mining
(c) Health and Pharmaceuticals
(d) Renewable Energy



Solutions

S1. Ans.(a)

Sol. LCM of (15, 18, 24) = 360

ATQ

$$\frac{360k+8}{13} = 368$$

Put k = 1, 2, 3,

K = 2 is divisible by 13

Number = $360 \times 2 + 8 = 728$

Sum of digits = $7 + 2 + 8 = 17$

S2. Ans.(a)

Sol. $4 \times 4 \times 96$

No. divisible by 88 is also divisible by 8 and 11 divisibility Rule for 8 = last three digit divide by 8.

Divisibility rule for 11 = sum of alternate digits is equal.

$$4+4+9 = x + y + 6$$

$$17 - 6 = x + y$$

$$\boxed{x + y = 11}$$

$$\frac{y96}{8} \Rightarrow y = 2$$

$$x = 9$$

$$x + 2y = 13$$

S3. Ans.(d)

Sol. $\frac{a^3+b^3}{a^2+b^2-ab} = (a + b)$

$$100 (675+325) = 100000$$

S4. Ans.(a)

Sol. $\frac{39}{4} \div \left[\frac{13}{6} + \left\{ \frac{13}{3} - \left(\frac{5}{2} + \frac{3}{4} \right) \right\} \right]$

$$= \frac{39}{4} \div \left[\frac{13}{6} + \frac{13}{12} \right]$$

$$= 3$$

S5. Ans.(c)

Sol. Rate of interest = 8%

for two year = 8×2

$$= 16\%$$

$$16\% = \frac{4}{25} \begin{matrix} \swarrow \text{Interest} \\ \searrow \text{Principal} \end{matrix}$$

$$\text{Amount taken for lone} = 191864 \times \frac{25}{29}$$

$$= 165400 \text{ Rs.}$$

S6. Ans.(a)

Sol.

CP (100-Discount)	MP (100+Profit)
100-25	100+20
75	120

↘ 460

$$\text{M.P.} = \frac{460}{75} \times 120$$

$$= 736 \text{ Rs.}$$

S7. Ans.(c)

Sol.

$$20\% = \frac{1}{5}, 10\% = \frac{1}{10}, 15\% = \frac{3}{20}$$

$$\begin{array}{r} 5 \qquad 4 \\ 10 \qquad 9 \\ \hline 20 \qquad 17 \\ \hline 1000 \qquad 612 \\ \hline \qquad \qquad 388 \end{array}$$

$$\text{Equivalent discount} = \frac{388}{1000} \times 100 = 38.8\%$$

S8. Ans.(b)

Sol.

$$1.8 : X :: X : 3.2$$

$$\text{mean proportion} \Rightarrow x^2 = \sqrt{1.8 \times 3.2}$$

$$x = 2.4$$

$$\text{And } 5 : 3 :: 3 : X$$

Thirdproportion \Rightarrow

$$X = \frac{9}{5}$$

$$\text{Req. ratio} \Rightarrow \frac{12}{5} : \frac{9}{5}$$

$$\Rightarrow 4 : 3$$

S9. Ans.(c)

Sol. $\frac{24 \times 8 \times 10}{2} = \frac{6 \times 16 \times x}{4}$

$$X = 40 \text{ persons.}$$

S10. Ans.(c)

Sol. 6 men = 5 women $-(1)$

A. T. Q

$$5 \text{ women} \times 2 = 14820$$

$$1 \text{ women} = 1482$$

$$(4 \text{ women} + 6 \text{ men}) 1482$$

from $-(1)$

$$(4 \text{ women} + 5 \text{ women}) 1482$$

$$9 \times 1482$$

$$= 13338 \text{ Rs.}$$

S11. Ans.(d)

Sol. Total = 16×48

$$= 768$$

$$\text{Sum of 1st seven numbers} = 7 \times 45$$

$$= 315$$

$$\text{Sum of next six numbers} = 6 \times 52$$

$$= 312$$

$$14 \ 15 \ 16$$

$$X \ x+11 \ x-5$$

$$3x + 6 = 768 - (315 + 312)$$

$$= 141$$

$$3x = 141 - 6$$

$$x = \frac{135}{3} = 45$$

$$\text{Average of 15th and 16th numbers} = \frac{45+11+45-5}{2} = 48$$

S12. Ans.(a)

Sol.

$$40\% \text{ of } 50 = 20 \text{ girls}$$

$$60\% \text{ of } 50 = 30 \text{ Boys}$$

$$\text{Av.} = \frac{30 \times 62 + 58 \times 20}{50} = \frac{3020}{50}$$

$$= 60.4$$

S13. Ans.(d)

Sol.

$$\frac{30}{D} + \frac{24}{V} = \frac{49}{20}$$

$$3 \times \left[\frac{10}{D} + \frac{4}{U} = \frac{37}{60} \right]$$

$$\frac{30}{D} + \frac{12}{U} = \frac{37}{20}$$

$$-\frac{30}{D} \pm \frac{12}{U} = \frac{37}{-20}$$

$$\frac{12}{U} = \frac{12}{20}$$

$$U = 20$$

↓

Upstream Speed

S14. Ans.(b)

Sol.

Speed	60	80
time	4	3
	$\xrightarrow{1 \rightarrow 8}$	

$$15 - 7 = 8$$

$$\text{Right Time} = 24 - 7$$

$$= 17 \text{ min.}$$

Hinglish

A

DFCCIL

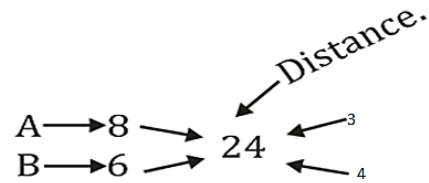
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S15. Ans.(b)

Sol.



total time → 7hr.

A. T. Q

$$7 \rightarrow \frac{7}{6}$$

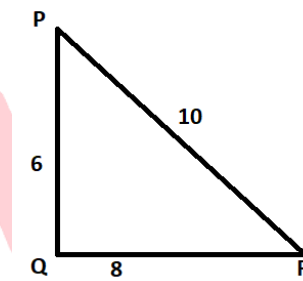
$$24 \rightarrow \frac{7}{6} \times \frac{24}{7}$$

$$\rightarrow 4$$

actual Distance → 4km.

S16. Ans.(b)

Sol.



By Pythagoras theorem,

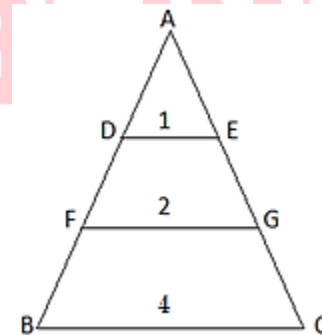
$$PR^2 = PQ^2 + QR^2$$

$$(10)^2 = (6)^2 + QR^2$$

$$QR = 8 \text{ cm}$$

S17. Ans.(a)

Sol.



$$1 - 2.4$$

$$4 - 9.6 \text{ cm}$$

S18. Ans.(b)

Sol.

$$2x - 3 + x + 12 + x - 1 = 180$$

$$4x + 8 = 180$$

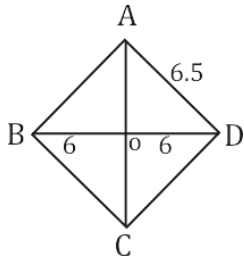
$$4x = 172$$

$$x = 43$$

$$\text{Largest Angle} = 2x - 3 = 86 - 3 = 83$$

S19. Ans.(c)

Sol.



$$OA^2 = AD^2 - OD^2$$

$$OA^2 = (6.5)^2 - (6)^2$$

$$= 42.25 - 36.00$$

$$= 6.25$$

$$OA = \sqrt{6.25}$$

$$OA = 2.5$$

$$\text{Area of rhombus} = \frac{1}{2} \times d_1 \times d_2$$

$$= \frac{1}{2} \times 12 \times 5$$

$$= 30 \text{ cm}^2$$

S20. Ans.(b)

Sol. diagonal of square = $\sqrt{2}a$

A. T. Q

$$a^2 = 64$$

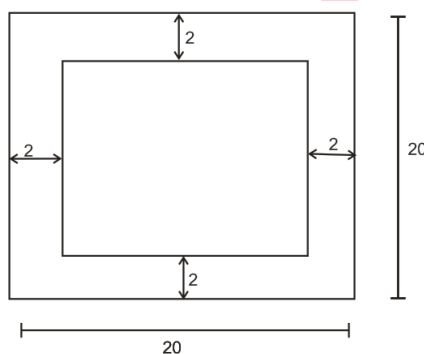
$$a = 8$$

$$\text{Diagonal} = 8\sqrt{2}$$

S21. Ans.(d)

Sol. Side of chessboard = 8×2

$$= 16 \text{ cm.}$$



$$\text{Perimeter of chessboard} = 20 \times 4$$

$$= 80 \text{ cm}$$

S22. Ans.(a)

Sol.

$$\frac{\frac{1}{2} - \frac{1}{2} + 1}{\frac{\sqrt{3}}{2} - 1 + 1} = \frac{1}{\frac{\sqrt{3}}{2}}$$

$$= \frac{2}{\sqrt{3}} = \frac{2\sqrt{3}}{3}$$

$$= \frac{2}{\sqrt{3}} = \frac{2\sqrt{3}}{3}$$

S23. Ans.(b)

$$\text{Sol. } 3x + 30^\circ + 2x = 90^\circ$$

$$5x = 60^\circ$$

$$x = 12^\circ$$

S24. Ans.(a)

$$\text{Sol. } a^3 - b^3 = (a - b)(a^2 + b^2 + ab)$$

$$\Rightarrow \frac{208}{4} = 52$$

S25. Ans.(a)

$$\text{Sol. } x + \frac{1}{x} = a, x^3 + \frac{1}{x^3} = (a^3 - 3a)$$

$$x + \frac{1}{x} = 5x^3 + \frac{1}{x^3} = 125 - 15 = 110$$

S26. Ans.(c)

Sol. Difference between boys and girls is maximum at D

S27. Ans.(b)

Sol. Mean of histogram

$$\Rightarrow \frac{\text{Average of each interval} \times \text{No. students in each line}}{\text{total no. of students}}$$

$$\Rightarrow \frac{(102.5) \times 11 + (107.5) \times 14 + 112.5 \times 17 + (117.5) \times 15 + 122.5 \times 13 + 127.5 \times 10}{11 + 14 + 17 + 15 + 13 + 10}$$

$$= \frac{9175}{80}$$

$$\Rightarrow 114.7 \text{ cm.}$$

S28. Ans.(a)

$$\text{Sol. Average if girls} = \frac{2800}{5} = 560$$

S29. Ans.(c)

Sol.

$$3000 : 2800$$

$$15 : 14$$

S30. Ans.(d)

Sol. Median of histogram

= median of No. comes in which interval while adding

$$= \frac{11 + 14 + 17 + 15 + 13 + 10}{2} = 40$$

It comes in 2nd interval 105 - 110

$$11 + 14 + 17 = 42$$

$$25 \cancel{+ 11} \quad 42 \rightarrow 40 \text{ lies in } (110-115)$$

S31. Ans.(b)

Sol. The Indian Constitution was drafted on 26th November 1949. So the answer is (b).

The Constituent Assembly of India was formed on 9 December 1946. It was tasked with drafting a constitution for the newly independent India. The assembly met for the first time on 11 December 1946. The Drafting Committee was appointed on 29 August 1947 with B.R. Ambedkar as its chairman. The committee submitted the first draft of the constitution on 4 November 1948. The assembly debated and amended the draft constitution for over a year. The constitution was finally adopted on 26 November 1949. It came into force on 26 January 1950, which is celebrated as Republic Day in India.

S32. Ans.(c)

Sol. Article 21 of the Indian Constitution is related to the Right to Life and Personal Liberty. So the answer is (c).

The other fundamental rights mentioned in the options are:

- Article 14: Right to Equality
- Article 25: Freedom of Religion
- Article 23: Right against Exploitation

Article 21 states that "No person shall be deprived of his life or personal liberty except according to procedure established by law." This means that the state cannot take away a person's life or liberty without following due process of law. The right to life includes the right to live with human dignity and the right to a healthy environment. The right to personal liberty includes the right to freedom of movement, the right to freedom of speech and expression, and the right to privacy.

S33. Ans.(b)

Sol. Correct answer is (b)

Mahatma Gandhi was the President of the 26th session of the Indian National Congress, held in Belgaum from December 26 to 30, 1924. This was the only session of the INC that he presided over.

The Belgaum session was a significant one in the history of the Indian independence movement. It was here that Gandhiji introduced the concept of the "constructive programme", which was a set of nonviolent measures that he believed would help to achieve India's freedom. The constructive programme included things like promoting khadi (hand-spun cloth), education, and village upliftment.

The Belgaum session also saw the Congress Party adopt a more radical stance towards the British. The party passed a resolution calling for complete independence from British rule. This was a major shift from the party's previous stance, which had been to seek self-government within the British Empire.

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S34. Ans.(d)

Sol. The correct answer is (d) English

The 8th schedule of the Indian Constitution lists the official languages recognized by the Indian government. English is not included in this list, even though it is extensively used for official and administrative purposes in India. The other languages mentioned in the options, Sindhi, Sanskrit, and Nepali, are indeed recognized languages in the 8th schedule of the Indian Constitution.

S35. Ans.(d)

Sol. The host country for the COP-27 climate change conference is Egypt. So the answer is (d).

The COP-27 climate change conference was held in Sharm El-Sheikh, Egypt from November 6 to 20, 2022. The conference was attended by over 190 countries and was chaired by Egyptian Minister of Foreign Affairs Sameh Shoukry. The main goal of the conference was to accelerate action towards the goals of the Paris Agreement.

The next COP climate change conference, COP-28, will be held in the United Arab Emirates from November 30 to December 12, 2023.

S36. Ans.(c)

Sol. The Attorney General of India is appointed by the **President of India** at the instance of the Union Cabinet. So the answer is (c).

Relevant constitutional provision:

Article 76(1) of the Constitution of India:

The President shall appoint a person who is qualified to be appointed a Judge of the Supreme Court to be Attorney-General for India.

S37. Ans.(c)

Sol. The South-West Monsoon is the main source of rainfall in India. It brings about 80% of the annual rainfall to the country. The Western Disturbances and the North-East Monsoon bring about the remaining 20% of the rainfall. So the answer is (c).

The South-West Monsoon is caused by the difference in air pressure between the Indian Ocean and the landmass of Asia. The warm, moist air from the Indian Ocean is drawn towards the landmass, which is cooler and has lower air pressure. This causes the air to rise and cool, resulting in condensation and precipitation.

S38. Ans.(c)

Sol. The Narmada river is the only river among the options that forms an estuary as it meets the sea. So the answer is (c). The Ganga, Mahanadi, and Yamuna rivers all flow into the Bay of Bengal and form deltas. A delta is a fan-shaped area of land at the mouth of a river where the river's sediment is deposited. An estuary is a partially enclosed coastal body of water with one or more rivers or streams flowing into it, and with a free connection to the open sea. The Narmada river flows into the Arabian Sea and does not form a delta, but instead forms an estuary.

S39. Ans.(a)

Sol. SLR stands for Statutory Liquidity Ratio. It's a measure used by the Reserve Bank of India to control liquidity in the banking system. Banks are required to maintain a certain percentage of their net demand and time liabilities (NDTL) in the form of liquid assets like gold, cash, or approved securities.

S40. Ans.(a)

Sol. Herbivores are primary consumers in a food chain. They consume producers (plants), obtaining energy directly from them. Primary consumers play a vital role in the ecosystem by converting the energy stored in plants into a form that can be used by other animals.

S41. Ans.(a)

Sol. The answer is (a). The State Reorganization Act of 1956 led to the creation of 14 states and 6 union territories in India. The act was passed by the Parliament of India on August 31, 1956, and came into effect on November 1, 1956. It was enacted to reorganize the states of India along linguistic lines. The act merged some states, created new states, and changed the boundaries of existing states.

S42. Ans.(a)

Sol. The Gandhi-Irwin Pact was signed in 1931, and it led to the suspension of the Civil Disobedience Movement. Lord Irwin agreed to release political prisoners, and in return, Gandhi agreed to suspend the movement and participate in the Round Table Conference.

S43. Ans.(a)

Sol. Uttar Pradesh has the largest number of seats in the Lok Sabha, with 80 seats. This reflects the state's large population, as the distribution of seats is based on population proportion.

S44. Ans.(b)

Sol. Myopia, or nearsightedness, is corrected using a concave lens. This lens is thinner at the center and thicker at the edges. It helps to spread out light rays so that they can come to a focus on the retina, enabling the individual to see distant objects clearly.

S45. Ans.(a)

Sol. The chemical formula for Lead Sulphate is $PbSO_4$. It is a white crystalline solid that occurs in nature as the mineral anglesite. It is used in various applications, including as a pigment in paints.

S46. Ans.(d)

Sol. The image formed by a plane mirror is virtual and erect. So the answer is (d).

A real image can be formed on a screen, while a virtual image cannot. The light rays that form a virtual image do not actually intersect, but only appear to do so.

A plane mirror reflects light rays in such a way that the image formed is the same size as the object and is located behind the mirror. The image is also laterally inverted, meaning that it is reversed from left to right.

S47. Ans.(b)

Sol. AIDS disease is caused by a virus. So the answer is (b). AIDS is caused by the Human Immunodeficiency Virus (HIV). This virus attacks the immune system, making the body more susceptible to infections. Transmission can occur through unprotected sexual contact, sharing of needles, or from an infected mother to her child.

S48. Ans.(a)

Sol. The answer is (a) Surface Tension.

- Surface tension is the force that acts on the surface of a liquid, causing it to behave like a stretched membrane. It is caused by the cohesive forces between the water molecules. These forces are strongest when the water molecules are closest together, which is why the surface of a liquid is always curved.
- The shape of a raindrop is determined by the balance of forces between surface tension and gravity. The surface tension of water is trying to make the raindrop as small as possible, while gravity is trying to make it fall to the ground. The size of the raindrop is determined by the point where these two forces are equal.
- For small raindrops, the surface tension is stronger than gravity, so the raindrops are spherical in shape. As the raindrops get larger, gravity becomes stronger and the raindrops start to become more teardrop-shaped. However, even large raindrops are still somewhat spherical due to the surface tension of water.

S49. Ans.(c)

Sol. The correct answer is (c) Cnidaria

Jellyfish belong to the phylum Cnidaria. This group includes animals that have stinging cells used to capture their prey. Members of this phylum are primarily aquatic, and they include organisms such as corals, sea anemones, and hydras as well.

S50. Ans.(d)

Sol. The correct answer is (d) Transition

The elements found in groups 3 to 12 of the periodic table are referred to as transition elements. These elements have partially filled (n-1)d orbitals. They include metals like iron, copper, zinc, etc., and show variable oxidation states, often forming colourful compounds.

Noble gases are elements in group 18 of the periodic table. Halogens are elements in group 17 of the periodic table. Lanthanides are elements in the f-block of the periodic table.

S51. Ans.(a)

Sol. The answer is (a).

The hydraulic lift works on the principle of Pascal's Principle, which states that pressure applied to an enclosed fluid is transmitted equally throughout the fluid. In a hydraulic lift, a small force applied to a small piston is amplified to a large force on a large piston.

Detailed explanation of the principle:

- **Pascal's Principle:** When pressure is applied to an enclosed fluid, the pressure is transmitted equally throughout the fluid in all directions.
- **Hydraulic Lift:** A hydraulic lift is a device that uses Pascal's Principle to amplify a force. It consists of two pistons of different sizes, connected by a tube filled with fluid. When a force is applied to the small piston, the pressure is transmitted to the large piston, which moves up. The amount of force amplified is equal to the ratio of the areas of the two pistons.

For example, if the small piston has an area of 1 square inch and the large piston has an area of 10 square inches, then the force amplified will be 10 times the force applied to the small piston.

S52. Ans.(c)

Sol. The thymus gland produces the hormone thymosin. So the answer is (c).

- The thymus gland produces several hormones, including thymosin, thymopoietin, and thymulin. These hormones are involved in the development and maturation of T cells, which are a type of white blood cell that plays a key role in the immune system.
- Thymosin is the most well-studied thymic hormone. It is a peptide hormone that helps to stimulate the production and differentiation of T cells. Thymosin also helps to regulate the function of T cells.
- Thymopoietin is another important thymic hormone. It is a polypeptide hormone that helps to promote the development of T cells from immature cells. Thymopoietin also helps to regulate the expression of genes that are involved in T cell development.

S53. Ans.(c)

Sol. The answer is (c). Xerophthalmia is caused by the deficiency of vitamin A. So the correct option is (c).

- Xerophthalmia is caused by the deficiency of vitamin A. Vitamin A is essential for the health of the eyes, and its deficiency can lead to a number of eye problems, including night blindness, dry eyes, and corneal ulcers. In severe cases, xerophthalmia can lead to blindness.
- Vitamin A is a fat-soluble vitamin that is found in many foods, including dairy products, fish, eggs, and orange and yellow fruits and vegetables. The body stores vitamin A in the liver, and it can be used for several weeks without being replenished.

S54. Ans.(a)

Sol. The gases used in normal welding processes are oxygen and acetylene. So the answer is (a).

Oxygen is used to provide the heat to melt the metals, while acetylene is used to provide the fuel. The two gases are mixed in a welding torch and ignited, creating a flame that can reach temperatures of up to 3,500 degrees Fahrenheit.

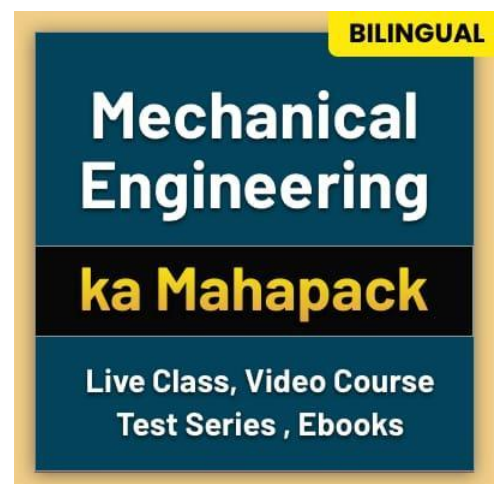
Here are some of the different types of welding processes that use gases:

- Oxyacetylene welding
- Gas metal arc welding (GMAW)
- Gas tungsten arc welding (GTAW)
- Metal inert gas welding (MIG)
- Flux cored arc welding (FCAW)

S55. Ans.(c)

Sol. Theodolite is used for measuring angles. So the answer is (c).

- Length and volume can be measured using a tape measure or a ruler. Density is the ratio of mass to volume, and it can be measured using a balance and a graduated cylinder.



- A theodolite is a surveying instrument that is used to measure horizontal and vertical angles. It is commonly used in construction, engineering, and land surveying. Theodolites can be used to measure the elevation of a point, the direction of a line, and the distance between two points.

S56. Ans.(d)

Sol. The answer is (d).

Blue-green algae, also known as cyanobacteria, are the most common type of algae found in freshwater and marine ecosystems. They are capable of fixing nitrogen, which means they can convert atmospheric nitrogen into a form that plants can use. This makes them very efficient at growing, and they can quickly bloom in bodies of water that are rich in nutrients. Green algae, red algae, and brown algae are also capable of growing in nutrient-rich waters, but they are not as efficient as blue-green algae. Therefore, the presence of large amounts of nutrients in waters is more likely to cause an excessive growth of blue-green algae.

Here are some additional information about blue-green algae:

- They are photosynthetic, meaning they can produce their own food from sunlight.
- They can form mats or blooms that can cover large areas of water.
- Some species of blue-green algae can produce toxins that can be harmful to humans and animals.
- Blue-green algae blooms can deplete the oxygen levels in water, which can kill fish and other aquatic life.

S57. Ans.(c)

Sol. The time taken by a pendulum to complete one oscillation is called its period. So the answer is (c).

- The time taken by a pendulum to complete one oscillation is called its **period**. The period is the time it takes for the pendulum to swing from its highest point to its lowest point and back again. The period of a pendulum is determined by its length and the acceleration due to gravity. The longer the pendulum, the longer the period. The greater the acceleration due to gravity, the shorter the period.
- The frequency of a pendulum is the number of oscillations it completes in one second. The frequency is inversely proportional to the period. So, the longer the period, the lower the frequency.
- The amplitude of a pendulum is the maximum displacement of the pendulum bob from its equilibrium position. The amplitude does not affect the period or frequency of the pendulum.
- So, the answer to your question is (c). The time taken by a pendulum to complete one oscillation is called its period.

S58. Ans.(a)

Sol. Correct answer is (a) Hydrogen

The Modern periodic table is organized based on the increasing atomic number of elements and their properties. Each element is placed in a specific position within the table based on its atomic number and chemical properties. However, one element that does not obtain a fixed position in the periodic table is Hydrogen.

S59. Ans.(a)

Sol. A short circuit leads to an increase in current. It happens when a low-resistance pathway forms between two points in an electric circuit, causing a large amount of current to flow through this new path, bypassing other parts of the circuit.

S60. Ans.(c)

Sol. The scientific name for the Mango tree is *Mangifera indica*. It belongs to the Anacardiaceae family and is native to South Asia.

S61. Ans.(a)

Sol. (+1) pattern follow.

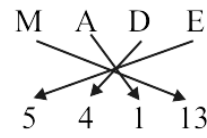
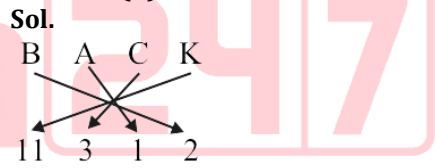
S62. Ans.(d)

Sol. 19: $19+1=20^2=400$
24: $24+1=25^2=625$

S63. Ans.(a)

Sol. Student gets education in school
Same as,
Patient gets treatment in hospital
Chef, judge and teacher give service in their respective.

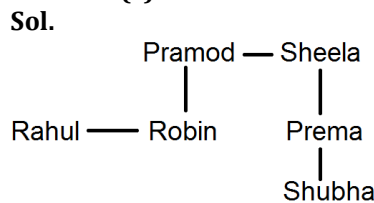
S64. Ans.(b)



S65. Ans.(a)

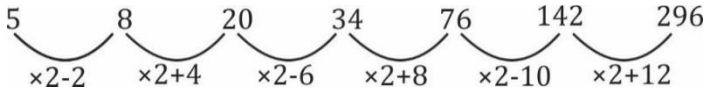
Sol. -1 pattern in reverse order.

S66. Ans.(c)



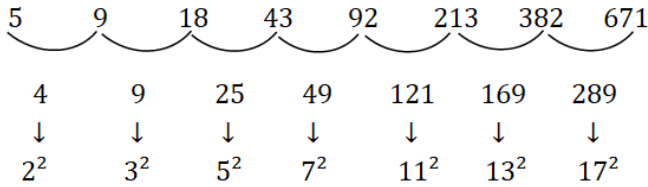
S67. Ans.(c)

Sol.



S68. Ans.(d)

Sol.



S69. Ans.(b)

Sol.

$$4 \times 2 + 2 = 10$$

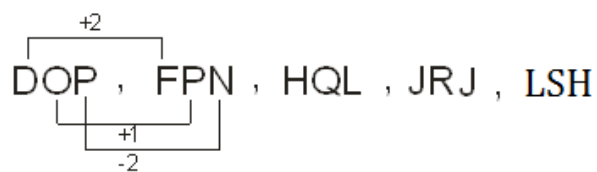
$$10 \times 3 - 3 = 27$$

$$27 \times 5 + 5 = 140$$

$$140 \times 7 - 7 = 973$$

S70. Ans.(a)

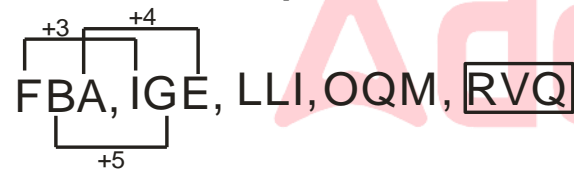
Sol.



Follow sequence of +2, +1, -2

S71. Ans.(a)

Sol. follow +3, +5, +4 sequences



S72. Ans.(d)

Sol.

Carpet is not used to keep something inside it

S73. Ans.(d)

Sol.

$$\frac{4 \times 7}{2} = 14$$

$$\frac{8 \times 5}{2} = 20$$

$$\frac{9 \times 8}{2} = 36$$

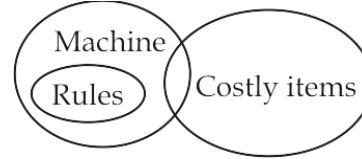
$$\frac{7 \times 8}{2} = 28 \neq 29$$

S74. Ans.(d)

Sol. Pair of opposite letters except option (d).

S75. Ans.(c)

sol.

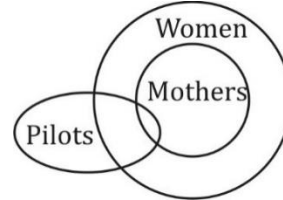


I. ×

II. ✓

S76. Ans.(C)

Sol.



S77. Ans.(b)

Sol.



S78. Ans.(b)

Sol. There are 18 triangles

S79. Ans.(b)

S80. Ans.(a)

S81. Ans.(c)

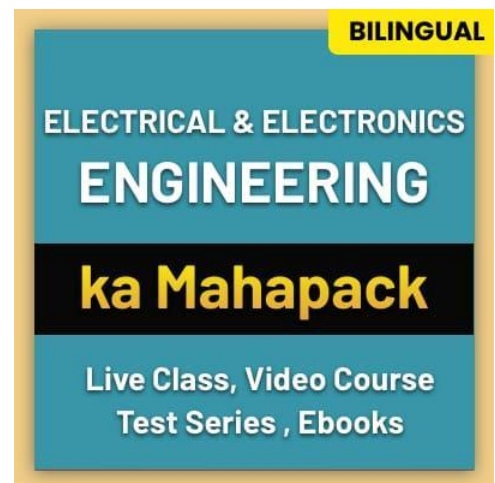
S82. Ans.(d)

Sol. 5, 1, 2, 3, 4

S83. Ans.(b)

Sol.

Numbers of letters in a Row = $5 + 12 - 1 = 16$



S84. Ans.(c)**S85. Ans.(b)**

Sol. $18 + 6 - 6 \div 3 \times 3 = 6$
 on interchanging + and \div
 $18 \div 6 - 6 + 3 \times 3$
 $3 - 6 + 9 = 6 = \text{RHS}$

S86. Ans.(c)

Sol. $(29-3) \div 2 = 13$
 Similarly,
 $(37-3) \div 2 = 17$

S87. Ans.(b)

Sol. $7 \times 4 + 4 = 32$
 Same as $13 \times 7 + 7 = 98$

S88. Ans.(d)

Sol. $(3, 24, 4) \rightarrow 3 \times 4 \times 2 = 24$
 similarly, option (d)
 $(4, 72, 9) \rightarrow 4 \times 9 \times 2 = 72$

S89. Ans.(c)

Sol. $\times 2 - 2, \times 4 - 2$ pattern

S90. Ans.(a)

Sol. $(4 \times 2, 4 \times 3, 4 \times 6) = (8, 12, 24)$
 Same as $\rightarrow (3 \times 2, 3 \times 3, 3 \times 6) = (6, 9, 18)$

S91. Ans.(c)

Sol. The answer is (c)
 The headquarters of the South Central Zone of the Indian Railways is situated in the state of Telangana. This zone plays a crucial role in connecting various parts of the country and facilitating efficient rail transportation

S92. Ans.(c)

Sol. The answer is (c)
 The Indian Railways earned a revenue of Rs. 1.62 lakh crore from goods traffic in the financial year 2022-23. This is a growth of nearly 15% from the previous year. The railways also ran an average of 9,141 goods trains per day in the same financial year.
 The top five commodities transported by goods trains in India in 2022-23 were:

1. Coal: 427.3 million tonnes
2. Iron ore: 177.7 million tonnes
3. Cement: 118.3 million tonnes
4. Petroleum products: 66.7 million tonnes
5. Foodgrains: 58.6 million tonnes

S93. Ans.(b)

Sol. The answer is (b).
 The Dedicated Freight Corridor Corporation of India Limited (DFCCIL) was established in October 2006 under the Indian Companies Act 1956. It is a wholly-owned subsidiary of the Ministry of Railways. The DFCCIL is a special purpose vehicle (SPV) that is responsible for the planning, development, construction, operation, and maintenance of the dedicated freight corridors in India.

S94. Ans.(a)

Sol. The first DFCCIL train is a freight train. So the answer is (a).
 The Dedicated Freight Corridor Corporation of India Limited (DFCCIL) is a public sector undertaking that constructs and operates dedicated freight corridors in India. The first freight train on the Western Dedicated Freight Corridor (WDFC) was flagged off by Prime Minister Narendra Modi on January 7, 2021. The train ran from New Ateli to New Kishangarh, a distance of 190 kilometers.

S95. Ans.(c)

Sol. The answer is (c).
 The motto 'Hungry for Cargo' is indeed associated with Indian Railways. This initiative reflects Indian Railways' efforts to improve their cargo services and enhance the ease of doing business for their customers. The focus is on delivering services at competitive prices and catering to both conventional and non-conventional commodity streams.

S96. Ans.(a)

Sol. Japan has been instrumental in the development of DFCCIL, providing financial and technical support. This collaboration aims to enhance freight transportation in India, leading to more efficient, environmentally friendly logistics.

S97. Ans.(c)

Sol. The answer is (c). 6,542 km.
 The Indian Railways electrified 6,542 route kilometers (RKM) of railway lines in India during the fiscal year 2022-23. This is the highest ever electrification in a single financial year. The previous record was 6,366 RKM in 2021-22.
 With this, the total length of electrified railway lines in India has increased to 59,096 RKM, which is 90.43% of the total broad-gauge network. The Indian Railways is targeting to complete the electrification of its entire broad-gauge network by December 2023.

S98. Ans.(b)

Sol. The Eastern Dedicated Freight Corridor (EDFC) primarily connects Ludhiana in Punjab to Dankuni in West Bengal. So the answer is (b).

The EDFC is a 1337 km long railway line that is being constructed in two phases. The first phase, which is currently under construction, connects Ludhiana to Khurja in Uttar Pradesh. The second phase will connect Khurja to Dankuni. The EDFC is designed to carry heavy freight traffic, such as coal, steel, and fertilizers. It is expected to reduce the transportation time and cost of these commodities.

S99. Ans.(b)

Sol. The answer is (b)

The Dedicated Freight Corridors (DFCs) are being constructed using Broad Gauge. Broad Gauge is the most widely used gauge in the Indian Railways system, with a track width of 1,676 mm. Utilizing Broad Gauge for the DFCs ensures compatibility with the existing network and allows for heavier loads.

S100. Ans.(b)

Sol. The answer is (b)

The coal and mining industry will benefit significantly from the Dedicated Freight Corridors (DFCs) developed by DFCCIL. The DFCs will enable more efficient and rapid transportation of bulk goods like coal and minerals. This will reduce logistics costs and streamline the supply chain for industries heavily dependent on these materials.

