रेल भर्ती बोर्ड / RAILWAY RECRUITMENT BOARDS
CEN 01/2024 - ALP / सहायक लोको पायलट

Test Date	27/11/2024
Test Time	4:30 PM - 5:30 PM
Subject	ALP Stage 1

* Note
Correct Answer will carry 1 mark per Question.
Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.
2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : **RRB ALP**

Q.1 In this question, a statement is followed by two courses of action, numbered I and II. You must assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the courses of action logically follow(s) for pursuing.

Statement:

Despite the teacher's several warnings, a student was caught cheating in the exam.

Courses of Action:

I. The student should be expelled from the exam, and his paper should be cancelled.

II. The teacher should leave the student with another warning.

Ans ✔ 1. Only I follows.

✘ 2. Only II follows.

✘ 3. Neither I nor II follows.

✘ 4. Both I and II follow.

Q.2 How much venture capital fund would be set up for space economy in India as announced by the Finance Minister in the Annual Financial Statement 2024-25?

Ans ✘ 1. ₹500 crore

✘ 2. ₹1,500 crore

✔ 3. ₹1,000 crore

✘ 4. ₹700 crore

Q.3 An object is placed at distance of 20cm in front of a concave mirror and it's image is formed at a distance of 60cm on the same side as the object, the magnification produced by the mirror will be:

Ans ✘ 1. + 3

✘ 2. - 1/3

✘ 3. + 1/3

✔ 4. - 3

Q.4 1 C charge contains:

Ans
- ✗ 1. 6×10^{19} electrons
- ✓ 2. 6×10^{18} electrons
- ✗ 3. 6×10^{17} electrons
- ✗ 4. 6×10^{20} electrons

Q.5 What sum will earn a simple interest of ₹480 in 3 years at 16% per year rate of interest?

Ans
- ✗ 1. ₹600
- ✓ 2. ₹1,000
- ✗ 3. ₹1,200
- ✗ 4. ₹800

Q.6 IMOL is related to PTVS in a certain way based on the English alphabetical order. In the same way, FJLI is related to MQSP. To which of the following options is KOQN related, following the same logic?

Ans
- ✗ 1. QUWT
- ✓ 2. RVXU
- ✗ 3. RUVX
- ✗ 4. QUWX

Q.7 A shopkeeper bought an article for ₹319.60. Approximately, at what price should he sell the article to make a 25% profit?

Ans
- ✗ 1. ₹450
- ✓ 2. ₹400
- ✗ 3. ₹600
- ✗ 4. ₹500

Q.8 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) 3 Ω 9 # 1 4 6 @ 8 $ 2 & % 7 & * £ 5 (Right)

How many such numbers are there, each of which is immediately preceded by a number and also immediately followed by a symbol?

Ans
- ✗ 1. Zero
- ✗ 2. Two
- ✗ 3. More than two
- ✓ 4. One

Q.9 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

JFH, KGI, LHJ, MIK, ?

Ans
- ✓ 1. NJL
- ✗ 2. JNL
- ✗ 3. JLN
- ✗ 4. NLJ

Q.10 When a thick glass slab is placed over printed matter, they appear to be _____ and this is due to _____ of light.

Ans
- ✗ 1. lowered; reflection
- ✗ 2. lowered; refraction
- ✓ 3. raised; refraction
- ✗ 4. raised; reflection

Q.11 What is the mode of reproduction used in the methods such as layering or grafting to grow many plants like sugarcane, roses, or grapes for agricultural purposes?

Ans
- ✗ 1. Regeneration
- ✗ 2. Fragmentation
- ✗ 3. Spore formation
- ✓ 4. Vegetative propagation

Q.12 Sumit travelled 10 km 120 m by scooter, 1 km 970 m on foot and 15 km 850 m by bus. What is the total distance travelled by Sumit?

Ans
- ✗ 1. 27 km 930 m
- ✗ 2. 27 km 920 m
- ✗ 3. 27 km 950 m
- ✓ 4. 27 km 940 m

Q.13 Based on the English alphabetical order, three of the following four letter cluster pairs are alike in a certain way and thus form a group. Which pair does NOT belong to that group?
(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster)

Ans
- ✓ 1. YD – WD
- ✗ 2. LN – QS
- ✗ 3. TV – YA
- ✗ 4. RT – WY

Q.14 In 2024, what has been the main focus of the pavilions displayed at the India Art, Architecture, and Design Biennale?

Ans
- ✗ 1. Interactive technology exhibits
- ✗ 2. Indian film and photography
- ✓ 3. Contemporary art and innovative designs
- ✗ 4. Traditional crafts and modern architecture

Q.15 Based on the English alphabetical order, three of the following four letter cluster pairs are alike in a certain way and thus form a group. Which pair does NOT belong to that group?
(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster)

Ans
- ✓ 1. LH – QM
- ✗ 2. KF – MH
- ✗ 3. QL – SN
- ✗ 4. EZ – GB

Q.16 When there are two parallel lines cut by a transversal, which of the following is true?

　　　　a) Corresponding angles are equal.
　　　　b) Alternate interior angles are supplementary.
　　　　c) Consecutive angles on the same side of the transversal are equal.
　　　　d) Alternate interior angles are equal.

Ans ✗ 1. Only a

✗ 2. b and c

✔ 3. a and d

✗ 4. Only b

Q.17 A's salary is 20% less than B's salary. By what percentage is B's salary more than A's salary?

Ans ✗ 1. 20%

✗ 2. 17%

✔ 3. 25%

✗ 4. 15%

Q.18 In a row of people, all facing north, Bunty is 8th from the left end. Sneha is 15th from the left end. Sneha is exactly between Bunty and Nupur. If Nupur is 7th from the right end of the line, how many people are there in the row?

Ans ✗ 1. 26

✔ 2. 28

✗ 3. 20

✗ 4. 22

Q.19 The value of $(256)^{0.16} \times (256)^{0.09}$ is:

Ans ✗ 1. 64

✗ 2. 256

✗ 3. 16

✔ 4. 4

Q.20 An article is marked at 50% above its cost price. If the marked price of the article is ₹1,500, then the cost price of the article is:

Ans ✗ 1. ₹750

✗ 2. ₹1,200

✔ 3. ₹1,000

✗ 4. ₹800

Q.21 Who among the following was appointed as Minister of Health and Family Welfare in June 2024?

Ans ✗ 1. Sarbananda Sonowal

✗ 2. Shivraj Singh Chouhan

✔ 3. Jagat Prakash Nadda

✗ 4. Manohar Lal

Q.22 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) @ 6 8 $ 9 # 1 * £ 4 7 & 2 & % 3 Ω 5 (Right)

How many such numbers are there, each of which is immediately preceded by a number and also immediately followed by a symbol?

Ans
✗ 1. One
✔ 2. Two
✗ 3. Zero
✗ 4. More than two

Q.23 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

No horses are mirrors.

Some lizards are horses.

Conclusions:

(I) Some horses are not lizards.

(II) Some lizards are not mirrors.

Ans
✗ 1. Neither conclusion (I) nor (II) follows
✗ 2. Both conclusions (I) and (II) follow
✔ 3. Only conclusion (II) follows
✗ 4. Only conclusion (I) follows

Q.24 If the perimeter of one face of a cube is 48 cm, then its volume is:

Ans
✗ 1. 729 cm^3
✔ 2. 1728 cm^3
✗ 3. 512 cm^3
✗ 4. 1024 cm^3

Q.25 If $sec\ 4A = cosec\ (3A - 50°)$, where $4A$ and $3A$ are acute angles, find the value of $cosec\ (A + 25°)$.

Ans
✗ 1. 0
✗ 2. $\frac{1}{\sqrt{2}}$
✗ 3. 1
✔ 4. $\sqrt{2}$

Q.26 What type of reaction takes place when calcium oxide reacts vigorously with water to produce slaked lime?

Ans   ✗ 1. Decomposition reaction

✗ 2. Double displacement reaction

✔ 3. Combination reaction

✗ 4. Displacement reaction

Q.27 According to the 2024-25 Indian Union Budget, the Government has allocated increased funding towards schemes like 'Sambal' from ₹462 crore in the previous fiscal year to _____.

Ans   ✗ 1. ₹523 crore

✗ 2. ₹453 crore

✗ 3. ₹756 crore

✔ 4. ₹629 crore

Q.28 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some snakes are lizards.

All roosters are lizards.

Conclusions:

(I) All lizards are roosters.

(II) No roosters are snakes.

Ans   ✗ 1. Both conclusions (I) and (II) follow.

✗ 2. Only conclusion (I) follows.

✔ 3. Neither conclusion (I) nor (II) follows.

✗ 4. Only conclusion (II) follows.

Q.29 If ₹2,400 is to be distributed between A and B in the ratio of 7 : 5 , then the share of A is:

Ans   ✔ 1. ₹1,400

✗ 2. ₹1,600

✗ 3. ₹1,300

✗ 4. ₹1,000

Q.30 Which of the following is an example of a heterogeneous mixture?

Ans   ✗ 1. Sugar dissolved in water

✗ 2. Copper sulphate powder dissolved in water

✗ 3. Salt dissolved in water

✔ 4. Oil dissolved in water

Q.31 Which gas is passed through calcium hydroxide to form calcium carbonate and water?

Ans
- ✗ 1. Helium gas
- ✗ 2. Oxygen gas
- ✔ 3. Carbon-dioxide gas
- ✗ 4. Hydrogen gas

Q.32 How many electrons does carbon typically share when bonding with another carbon atom or with atoms of other elements?

Ans
- ✗ 1. 6
- ✗ 2. 2
- ✔ 3. 4
- ✗ 4. 1

Q.33 In a certain code language, 'SOLVE' is coded as '36598', 'STORE' is coded as '39164', and 'WHOLE' is coded as '27689'. What is the code for 'V' in the given code language?

Ans
- ✗ 1. 9
- ✔ 2. 5
- ✗ 3. 8
- ✗ 4. 3

Q.34 Anita starts from her house at Point A and walks 5 m towards South. She takes a right turn, walks 7 m, takes another right and walks 12 m and stops at point P. If a pole is placed 7 m towards East from where she stopped (Point P), how far (shortest distance) and in which direction will her house be from the pole? (All turns are 90 degrees turns only unless specified.)

Ans
- ✗ 1. 12 m towards the South
- ✗ 2. 7 m towards the East
- ✔ 3. 7 m towards the South
- ✗ 4. 5 m towards the North

Q.35 Justify the given statement.

'Plants have low energy needs'.

Ans
- ✗ 1. Plant bodies have a small proportion of dead cells in many tissues.
- ✗ 2. As the plants use relatively fast transport systems.
- ✗ 3. Because plants are autotropic organisms and prepare their own food.
- ✔ 4. Energy needs differ between different body designs. Plants do not move and have a large proportion of dead cells in many tissues.

Q.36 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

TVX, SUW, RTV, QSU, ?

Ans
✗ 1. RPT
✗ 2. PTR
✔ 3. PRT
✗ 4. RTP

Q.37 CKQR is related to FITP in a certain way based on the English alphabetical order. In the same way, WERN is related to ZCUL. To which of the following options is BOLJ related, following the same logic?

Ans
✗ 1. DNOK
✗ 2. DMNJ
✔ 3. EMOH
✗ 4. FNNH

Q.38 Who among the following is the author of the book 'I Have the Streets - A Kutty Cricket Story'?

Ans
✔ 1. Ravichandran Ashwin
✗ 2. Sachin Tendulkar
✗ 3. Sourav Ganguly
✗ 4. Kuldeep Yadav

Q.39 If 'A' stands for '÷', 'B' stands for '×', 'C' stands for '+', and 'D' stands for '−', what will come in place of the question mark '?' in the following equation?

55 C 7 D 54 A 9 B 8=?

Ans
✔ 1. 14
✗ 2. 24
✗ 3. 34
✗ 4. 41

Q.40 What is the primary purpose of the Artara'24 Fine Arts Exhibition and Competition?

Ans
✗ 1. To promote art tourism
✗ 2. To conduct art workshops
✗ 3. To sell artworks
✔ 4. To discover and nurture emerging artistic talents

Q.41 In a certain code language, 'GIRL' is coded as '1539' and 'ROSE' is coded as '6825'. What is the code for 'R' in the given code language?

Ans
✔ 1. 5
✗ 2. 8
✗ 3. 6
✗ 4. 3

Q.42 Which gland secretes Adrenaline?

Ans
- ✗ 1. Thyroid gland
- ✔ 2. Adrenal gland
- ✗ 3. Pineal gland
- ✗ 4. Pituitary gland

Q.43 The average of 10 observations is 46. It was realised later that an observation was misread as 42 in place of 142. Find the correct average.

Ans
- ✔ 1. 56
- ✗ 2. 45
- ✗ 3. 54
- ✗ 4. 65

Q.44 If 6 men and 8 boys can do a piece of work in 10 days while 26 men and 48 boys can do the same work in 2 days, then the time taken by 20 men for doing the same piece of work will be:

Ans
- ✗ 1. 4 days
- ✔ 2. 5 days
- ✗ 3. 2 days
- ✗ 4. 3 days

Q.45 A, B, C, D, E and F are sitting around a circular table facing the centre. A sits second to the right of E. F is the immediate neighbour of D and E. C sits second to the left of B.

What is the position of F with respect to C?

Ans
- ✗ 1. Third to the right
- ✗ 2. Immediate right
- ✔ 3. Second to the left
- ✗ 4. Third to the left

Q.46 Which of the following statements regarding an atom is correct?

Ans
- ✗ 1. Atoms are not electrically neutral.
- ✗ 2. An atom does not contain any positive charge
- ✔ 3. Atoms as a whole are electrically neutral.
- ✗ 4. Atoms are partially electrically neutral.

Q.47 A cubic wooden block of side 2 m is lying on a tabletop. If the mass of the wooden block is 10 kg, then the pressure exerted by the wooden block on the tabletop is: (consider $g = 10 \text{ m/s}^2$)

Ans
- ✔ 1. 25 N m^{-2}
- ✗ 2. 30 N m^{-2}
- ✗ 3. 20 N m^{-2}
- ✗ 4. 15 N m^{-2}

Q.48 A 3-digit number is such that the units' digit, the tens' digit and the hundreds' digit are in the ratio 1 : 2 : 3. The sum of this number and the number obtained by writing its digits in reverse order is 1332. Find the number.

Ans ✗ 1. 123

✗ 2. 246

✓ 3. 963

✗ 4. 414

Q.49 Which of the following teams was the winner of the 10th season of Pro Kabaddi League?

Ans ✗ 1. Pink Panthers

✗ 2. Patna Pirates

✓ 3. Puneri Paltan

✗ 4. Haryana Steelers

Q.50 Which of the following is the unit of acceleration?

Ans ✗ 1. ms

✗ 2. $m\,s^2$

✓ 3. m/s^2

✗ 4. m/s

Q.51 Seven people, A, B, C, D, E, F and G are sitting in a row, facing north. Only two people sit to the right of C. Only two people sit between D and C. A sits to the immediate right of D. E sits to the immediate left of G. B sits second to the left of A.

How many people sit between B and F?

Ans ✗ 1. Three

✓ 2. Two

✗ 3. One

✗ 4. Four

Q.52 5118 is divisible by:

Ans ✓ 1. 6

✗ 2. 7

✗ 3. 8

✗ 4. 5

Q.53 The average of the first twelve multiples of 11 is:

Ans ✗ 1. 70.5

✗ 2. 69.5

✗ 3. 68.5

✓ 4. 71.5

Q.54 What happens when we increase the temperature of solids?

Ans
- ✗ 1. The kinetic energy of the particles will decrease.
- ✗ 2. The shape of the solid will remain same.
- ✓ 3. The kinetic energy of the particles will increase.
- ✗ 4. No effect of temperature on solids.

Q.55 The pattern of the magnetic field lines produced by a current carrying conductor:

Ans
- ✗ 1. depends on the length of the conductor
- ✓ 2. depends on the shape of the conductor
- ✗ 3. is independent of anything related to the conductor
- ✗ 4. depends on the thickness of the conductor

Q.56 _____ has been awarded the title of India's Fastest Growing Sustainable Brand for 2023-24.

Ans
- ✗ 1. Suzlon Energy
- ✗ 2. Adani Green Energy
- ✓ 3. Gruner Renewable Energy
- ✗ 4. Tata Renewable Energy

Q.57 If the radius of a sphere is increased by 50%, find the percent increase in the surface area.

Ans
- ✓ 1. 125%
- ✗ 2. 95%
- ✗ 3. 100%
- ✗ 4. 115%

Q.58 Under the NPS Vatsalya scheme, subsequent contribution of what minimum amount is required per annum with no maximum limit?

Ans
- ✗ 1. ₹2,500
- ✗ 2. ₹500
- ✗ 3. ₹5,000
- ✓ 4. ₹1,000

Q.59 In 2024, the Royal Australian Air Force debuted its combat aircraft in India during Exercise Tarang Shakti at which location?

Ans
- ✗ 1. Air Force Station, Pune
- ✗ 2. Air Force Station, Gwalior
- ✗ 3. Air Force Station, Agra
- ✓ 4. Air Force Station, Jodhpur

Q.60 Where does the following reaction take place in a cell? The breakdown of glucose, a six-carbon molecule, into a three-carbon molecule.

Ans
- ✗ 1. In the mitochondria
- ✗ 2. In the nucleus
- ✗ 3. In the Golgi apparatus
- ✓ 4. In the cytoplasm

Q.61 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 - Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 523 :: 9 : Y

Ans

✗ 1. X = 9, Y = 294

✗ 2. X = 13, Y = 250

✗ 3. X = 15, Y = 286

✔ 4. X = 11, Y = 225

Q.62 In a certain code language,

'A + B' means 'A is the mother of B',

'A − B' means 'A is the brother of B',

'A x B' means 'A is the wife of B' and

'A ÷ B' means 'A is the father of B'.

How is M related to T if 'M − N ÷ P + S x T'?

Ans

✔ 1. Wife's mother's father's brother

✗ 2. Wife's father's brother

✗ 3. Wife's mother's mother's father

✗ 4. Wife's father's father's brother

Q.63 What is the product of (x + a) and (x + b)?

Ans

✗ 1. $x^2 + (a - b)x + ab$

✗ 2. $x^2 + (a + b)x - ab$

✗ 3. $x^2 + (a - b)x - ab$

✔ 4. $x^2 + (a + b)x + ab$

Q.64 Which of the following options should come in place of the question mark (?) in the given series?

14 15 18 23 30 ?

Ans

✗ 1. 37

✔ 2. 39

✗ 3. 40

✗ 4. 41

Q.65 A train travelling at a speed of 45 km/h crosses a pole in 24 sec. What is the length of the train?

Ans
✗ 1. 125 m
✓ 2. 300 m
✗ 3. 30 m
✗ 4. 1.5 m

Q.66 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 - Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 711 :: 146 : Y

Ans
✗ 1. X = 218, Y = 456
✓ 2. X = 252, Y = 393
✗ 3. X = 237, Y = 418
✗ 4. X = 269, Y = 379

Q.67 What is used to make drinking water free from germs?

Ans
✗ 1. Washing soda
✗ 2. Sodium hydroxide
✗ 3. Baking soda
✓ 4. Bleaching powder

Q.68 Which of the following controls bladder pressure?

Ans
✗ 1. Kidneys
✗ 2. Heart
✓ 3. Nervous system
✗ 4. Blood Pressure

Q.69 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) 7 8 & S & 2 @ % 4 6 3 Ω £ 5 1 9 # * (Right)

How many such numbers are there, each of which is immediately preceded by a symbol and also immediately followed by a symbol?

Ans
✓ 1. One
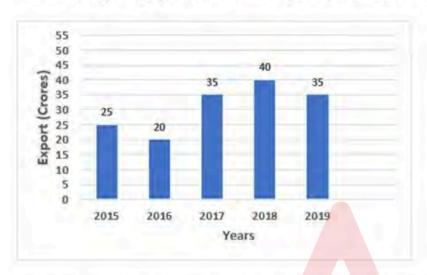✗ 2. More than two
✗ 3. Two
✗ 4. Zero

Q.70 The monthly income of a person is ₹13,500, and his monthly expenditure is ₹9,000. Approximately what percentage of his monthly income does he save monthly?

Ans ✗ 1. 21%

✗ 2. 25%

✗ 3. 28.57%

✔ 4. 33.33%

Q.71 Study the following graph and answer the given question.

The following bar graph shows annual exports (in crore) of a company during the period 2015 to 2019.

What is the average export (in crore) of the year 2016 and 2018?

Ans ✔ 1. 30

✗ 2. 70

✗ 3. 90

✗ 4. 60

Q.72 Identify one example of change taking place at puberty that can signify sexual maturation.

Ans ✗ 1. Mood swings

✗ 2. Behaving differently

✔ 3. New hair-growth patterns

✗ 4. Increase in height

Q.73 The sum of the ages of a mother, son and daughter is 70 years. If the mother is thrice as old as her son, and the daughter is 5 years older than her brother, how old is the mother?

Ans ✗ 1. 35 years

✗ 2. 45 years

✔ 3. 39 years

✗ 4. 42 years

Q.74 A body of mass m is taken from the ground to a height h, the gravitational potential energy of the body will be:

Acceleration due to gravity is g.

Ans ✔ 1. mgh

✘ 2. mg/h

✘ 3. m x h

✘ 4. m x g

Q.75 If A means +, B means −, C means ×, D means ÷, then what will come in place of the question mark (?) in the following equation?

10 B 27 D 9 A 4 C 3 = ?

Ans ✘ 1. 20

✘ 2. 17

✔ 3. 19

✘ 4. 18

2024/12/02-21:20:51