RRB Group D Memory Based Paper (Aug 05, 2026)

Q1. What mass of Sodium Hydroxide (NaOH) is required to prepare 500 mL of a 0.5 M aqueous solution? (Molar Mass of NaOH = 40 g/mol)

(a) 10 g (b) 20 g (c) 5 g (d) 40 g

Q2. Saffron, known as the "golden spice," is primarily cultivated in which of the following regions of India due to its specific climatic requirements?

(a) Nilgiri Hills, Tamil Nadu

(b) Pampore, Jammu & Kashmir

(c) Darjeeling, West Bengal

(d) Khasi Hills, Meghalaya

Q3. Which of the following digestive enzymes is secreted by the gastric glands in the stomach and is responsible for the preliminary digestion of proteins?

(a) Amylase (b) Trypsin (c) Pepsin (d) Lipase

Q4. An object is placed at a distance of 10 cm in front of a convex mirror of focal length 15 cm. Find the position of the image.

(a) +30 cm (b) -6 cm (c) +6 cm (d) -30 cm

Q5. In the reactivity series of metals, which of the following groups of metals is highly reactive and can ONLY be extracted from their ores by electrolytic reduction?

(a) Iron, Zinc, Lead, Copper

(b) Sodium, Potassium, Calcium, Aluminium

(c) Silver, Gold, Platinum, Mercury

(d) Zinc, Aluminium, Copper, Silver

Q6. Which of the following correctly describes the Tyndall effect?

(a) The settling of particles at the bottom of a suspension.

(b) The scattering of a beam of light by colloidal particles.

(c) The random zig-zag motion of molecules in a fluid.

(d) The complete dissolution of a solute in a true solution.

Q7. Identify the incorrect statement regarding arteries and veins in the human circulatory system.

(a) Arteries carry blood away from the heart, while veins carry blood towards the heart.

(b) Veins have valves to prevent the backflow of blood.

(c) Arteries have thin, highly permeable walls compared to veins.

(d) Blood pressure is generally higher in arteries than in veins.

Q8. Dengue fever, a mosquito-borne viral disease, primarily causes a sharp and dangerous decrease in which of the following blood components?

(a) Red Blood Cells (b) White Blood Cells (c) Blood Plasma (d) Platelets

Q9. In chemistry, a reduction reaction can be fundamentally defined as:

(a) The gain of oxygen or loss of hydrogen.

(b) The loss of electrons.

(c) The gain of electrons or addition of hydrogen.

(d) The increase in the oxidation state of an atom.

Q10. A stone is dropped freely from a building of height 20 meters. With what velocity will it strike the ground? (Assume $g = 10\ \mathrm{m/s^2}$)

(a) 10 m/s (b) 20 m/s (c) 40 m/s (d) 15 m/s

Q11. A car having a mass of 1000 kg changes its speed from 10 m/s to 20 m/s uniformly over a period of 5 seconds. What is the magnitude of the force applied by the engine?

(a) 1000 N (b) 2000 N (c) 5000 N (d) 4000 N

Q12. Which of the following displacement reactions will successfully occur in an aqueous solution?

(a) $\mathrm{Cu(s) + FeSO_4(aq) \rightarrow CuSO_4(aq) + Fe(s)}$

(b) $\mathrm{Ag(s) + Cu(NO_3)_2(aq) \rightarrow 2AgNO_3(aq) + Cu(s)}$

(c) $\mathrm{Zn(s) + CuSO_4(aq) \rightarrow ZnSO_4(aq) + Cu(s)}$

(d) $\mathrm{Pb(s) + ZnCl_2(aq) \rightarrow PbCl_2(aq) + Zn(s)}$

Q13. What is the direction of magnetic field lines outside a bar magnet?

(a) From the North Pole to the South Pole.

(b) From the South Pole to the North Pole.

(c) Radially outward from the center.

(d) Parallel to the equator of the magnet.

Q14. The magnetic field produced by a steady current flowing through a straight circular loop depends on which factors?

(a) It is directly proportional to the radius of the loop.

(b) It is directly proportional to the current and inversely proportional to the radius.

(c) It is independent of the current flowing through it.

(d) It decreases when the number of turns in the coil increases.

Q15. A body starting from rest accelerates uniformly at a rate of $4\ \mathrm{m/s^2}$ for 10 seconds. Calculate the total distance covered by the body during this time.

(a) 40 m (b) 400 m (c) 200 m (d) 100 m

Q16. Which distinct property of gases allows large volumes of a gas to be packed into small cylinders (e.g., CNG or LPG)?

(a) High density (b) High compressibility (c) Definite shape (d) Rigidity

Q17. Which component of the complex permanent tissue 'Xylem' is uniquely responsible for the storage of food?

(a) Xylem vessels (b) Tracheids (c) Xylem fibers (d) Xylem parenchyma

Q18. The direct conversion of a solid substance into a gas without passing through the liquid state is known as:

(a) Evaporation (b) Condensation (c) Sublimation (d) Deposition

Q19. Which of the following substances acts as a strong electrolyte and completely dissociates into ions when dissolved in water?

(a) Glucose (b) Ethanol (c) Sodium Chloride (d) Urea

Q20. What is the work done on an object of mass 10 kg to increase its velocity from $2\ \mathrm{m/s}$ to $4\ \mathrm{m/s}$?

(a) 20 J (b) 40 J (c) 60 J (d) 120 J

Q21. A solution is prepared by dissolving 40 g of common salt in 360 g of water. Calculate the mass percentage concentration of this solution.

(a) 11.11% (b) 9.09% (c) 12.5% (d) 10%

Q22. A sound wave traveling through air has a frequency of 500 Hz and a speed of 350 m/s. What is the wavelength of the sound wave?

(a) 0.5 m (b) 1.4 m (c) 0.7 m (d) 1.75 m

Q23. In Mendelian genetics, what is the phenotypic ratio observed in the F2 generation of a standard dihybrid cross?

(a) 3 : 1 (b) 1 : 2 : 1 (c) 9 : 3 : 3 : 1 (d) 1 : 1 : 1 : 1

Q24. Which simple permanent plant tissue allows easy bending in various parts of a plant (like tendrils and stems of climbers) without breaking?

(a) Parenchyma (b) Collenchyma (c) Sclerenchyma (d) Chlorenchyma

Q25. Which of the following parts of the human ear acts as a funnel to collect sound waves from the surroundings?

(a) Tympanic membrane (Eardrum) (b) Cochlea (c) Pinna (d) Auditory nerve

Q26. Arrange the following fractions in strictly ascending order: $\frac{3}{5}, \frac{4}{7}, \frac{5}{9}$.

(a) $\frac{5}{9} < \frac{4}{7} < \frac{3}{5}$
(b) $\frac{4}{7} < \frac{5}{9} < \frac{3}{5}$
(c) $\frac{3}{5} < \frac{4}{7} < \frac{5}{9}$
(d) $\frac{5}{9} < \frac{3}{5} < \frac{4}{7}$

Q27. Simplify the given algebraic expression: $\frac{105\times105\times105-25\times25\times25}{105\times105+105\times25+25\times25}$

(a) 130 (b) 80 (c) 100 (d) 125

Q28. The difference between the Compound Interest (compounded annually) and the Simple Interest on a certain sum of money for 2 years at 5% per annum is ₹ 15. Find the principal sum.

(a) ₹ 6,000 (b) ₹ 5,500 (c) ₹ 4,500 (d) ₹ 7,500

Q29. A shopkeeper marks up the price of his goods by 20% above the cost price and then allows a discount of 10% on the marked price. What is his overall profit percentage?

(a) 10% (b) 12% (c) 8% (d) 14%

Q30. 'A' sells an article to 'B' at a profit of 20%. 'B' then sells it to 'C' at a profit of 25%. If 'C' pays ₹ 1,500 for the article, what was the original cost price for 'A'?

(a) ₹ 1,200 (b) ₹ 1,000 (c) ₹ 900 (d) ₹ 1,100

Q31. If $x + \frac{1}{x} = 4$, find the value of $x^2 + \frac{1}{x^2}$.

(a) 16 (b) 12 (c) 14 (d) 18

Q32. The mean of 10 numbers is 15. If each number is multiplied by 2 and then 3 is added to each product, what will be the new mean of the dataset?

(a) 33 (b) 30 (c) 18 (d) 35

Q33. Find the value of the infinite surd expression: $\sqrt{12+\sqrt{12+\sqrt{12+\ldots\infty}}}$

(a) 3 (b) 4 (c) 6 (d) 12

Q34. The average of 5 consecutive odd numbers is 27. What is the value of the largest number in this series?

(a) 29 (b) 31 (c) 33 (d) 25

Q35. If $\sin\theta = \frac{5}{13}$ and θ is an acute angle, find the value of $\tan\theta + \sec\theta$.

(a) 1.5 (b) 2.0 (c) 1.2 (d) 2.5

Q36. The average age of a class of 20 students is 15 years. When the teacher's age is included, the average age of the class increases by 1 year. What is the age of the teacher?

(a) 35 years (b) 36 years (c) 40 years (d) 41 years

Q37. The average weight of 10 people increases by 2 kg when a person weighing 50 kg is replaced by a new person. Find the weight of the new person.

(a) 52 kg (b) 60 kg (c) 70 kg (d) 80 kg

Q38. The population of a town is 10,000. It increases by 10% during the first year and decreases by 10% during the second year. What is the population of the town after two years?

(a) 10,000 (b) 9,900 (c) 10,100 (d) 9,000

Q39. In a moderately skewed statistical distribution, the Mode exceeds the Mean by 12. By what value will the Mode exceed the Median? (Use empirical formula)

(a) 4 (b) 6 (c) 8 (d) 12

Q40. A family's total monthly budget is ₹ 72,000. If the expenses are represented on a pie chart, the central angle of the sector representing "Food" is 120°. How much money does the family spend on Food?

(a) ₹ 24,000 (b) ₹ 18,000 (c) ₹ 36,000 (d) ₹ 20,000

Q41. Two parallel lines are intersected by a transversal. The interior alternate angles are given as $(3x + 10)^\circ$ and $(2x + 40)^\circ$. Find the value of x.

(a) 20 (b) 25 (c) 30 (d) 35

Q42. Pipe A can fill a tank in 20 minutes and Pipe B can fill it in 30 minutes. Both pipes are opened together, but Pipe A is closed after 8 minutes. How much more time will Pipe B take to fill the remaining part of the tank?

(a) 8 minutes (b) 10 minutes (c) 12 minutes (d) 15 minutes

Q43. A man travels three equal distances at speeds of 10 km/h, 15 km/h, and 30 km/h respectively. What is his average speed for the entire journey?

(a) 15 km/h (b) 18.33 km/h (c) 12 km/h (d) 20 km/h

Q44. Two trains of lengths 100 m and 150 m are moving in opposite directions on parallel tracks at speeds of 40 km/h and 50 km/h respectively. In what time will they completely cross each other?

(a) 8 seconds (b) 12 seconds (c) 10 seconds (d) 15 seconds

Q45. The lengths of the sides of a triangle are 5 cm, 12 cm, and 13 cm. Find the area of the triangle.

(a) 30 cm^2 (b) 60 cm^2 (c) 45 cm^2 (d) 65 cm^2

Q46. Find the least number which when divided by 12, 15, and 20 leaves a remainder of 5 in each case.

(a) 60 (b) 65 (c) 55 (d) 125

Q47. If the 5-digit number 834A2 is completely divisible by 9, what is the value of the digit A?

(a) 0 (b) 1 (c) 8 (d) 2

Q48. 15 men can complete a piece of work in 20 days. How many days will it take for 10 men to complete the same work?

(a) 15 days (b) 25 days (c) 30 days (d) 40 days

Q49. Evaluate: $\frac{0.8\times0.8\times0.8+0.2\times0.2\times0.2}{0.8\times0.8-0.8\times0.2+0.2\times0.2}$

(a) 0.6 (b) 0.8 (c) 1.0 (d) 1.2

Q50. In a partnership, 'A' invests ₹ 50,000 for 12 months, and 'B' invests ₹ 60,000 for 8 months. What will be the ratio of their profit shares at the end of the year?

(a) 5 : 4 (b) 5 : 6 (c) 6 : 5 (d) 3 : 2

Q51. Six friends P, Q, R, S, T, and U are sitting around a circular table facing the center. P is sitting second to the left of Q. R is sitting to the immediate right of Q. S is sitting opposite to Q. Who is sitting between P and S?

(a) T (b) U (c) Either T or U (d) R

Q52. If the letters of the word 'COMPUTER' are arranged in alphabetical order from left to right, the position of how many letters will remain unchanged?

(a) None (b) One (c) Two (d) Three

Q53. Four letter-clusters are given below, out of which three are alike in some manner and one is different. Select the odd letter-cluster.

(a) BDG (b) HJM (c) NPS (d) SUV

Q54. If P denotes '+', Q denotes '-', R denotes '×', and S denotes '÷', then what will be the value of the following expression?

$12\ \mathrm{R}\ 4\ \mathrm{P}\ 6\ \mathrm{S}\ 2\ \mathrm{Q}\ 5$

(a) 46 (b) 51 (c) 35 (d) 48

Q55. In a row of students facing North, Rohan is 15th from the left end and 20th from the right end. How many students are there in the row?

(a) 35 (b) 34 (c) 33 (d) 36

Q56. In a certain code language, 'A + B' means 'A is the father of B', 'A - B' means 'A is the mother of B', and 'A * B' means 'A is the sister of B'. Based on this, how is P related to S in the expression 'P + Q * R - S'?

(a) Paternal Grandfather (b) Maternal Grandfather (c) Uncle (d) Father

Q57. In a certain code language, if 'DELHI' is coded as 'EDMGL', how will the word 'MUMBAI' be coded in the same language?

(a) NVNCBJ (b) NTLZBJ (c) NTNABJ (d) LTLZAH

Q58. Read the information carefully: A is taller than B but shorter than C. D is the tallest among them all. E is shorter than B. Who is the shortest among these five friends?

(a) A (b) B (c) C (d) E

Q59. Select the option that is related to the third letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster.
ABCD : WXYZ :: EFGH : ?

(a) STUV (b) RSTU (c) VUTS (d) TUVW

Q60. Read the given statements and conclusions carefully. Decide which of the conclusions logically follows.
Statements: All books are pens. No pen is a pencil.
Conclusions:
I. No book is a pencil.
II. Some pens are books.

(a) Only conclusion I follows
(b) Only conclusion II follows
(c) Both conclusions I and II follow
(d) Neither conclusion I nor II follows

Q61. Refer to the following alphanumeric series. Counting is from left to right.
F 4 @ K % 9 L # 2 M & 5 C * 7 P $ Q 3
How many symbols are there which are immediately preceded by a letter and immediately followed by a number?

(a) 1 (b) 2 (c) 3 (d) 4

Q62. What will come in place of the question mark (?) if '+' and '×' are interchanged?
$5 + 4 \times 2 - 3 = ?$

(a) 15 (b) 19 (c) 25 (d) 11

Q63. Find the missing number in the given series:
5, 11, 23, 47, 95, ?

(a) 190 (b) 189 (c) 191 (d) 193

Q64. In a certain code language, 'sky is blue' is written as 'ha na pa' and 'blue colour' is written as 'pa ra'. What is the code for the word 'blue'?

(a) ha (b) na (c) pa (d) ra

Q65. Based on the English alphabet, which letter is 5th to the right of the 12th letter from the right end?

(a) T (b) U (c) V (d) W

Q66. Select the missing number in the series:
10, 14, 23, 39, 64, ?

(a) 89 (b) 100 (c) 98 (d) 105

Q67. Raj walks 10 m North, then turns right and walks 5 m, then turns right and walks 10 m, and finally turns left and walks 5 m. In which direction is he now with respect to his starting point?

(a) North (b) South (c) East (d) West

Q68. Four geometric figures are named below. Three of them share a common property while one is different. Find the odd one out.

(a) Cylinder (b) Cuboid (c) Sphere (d) Triangle

Q69. If 'HEAT' is coded as 'JHCW', how will 'COLD' be coded using the same logic?

(a) EQNF (b) EQMF (c) ERNF (d) DPME

Q70. Select the word that is different from the other three.

(a) Square (b) Rectangle (c) Rhombus (d) Cube

Q71. Five people A, B, C, D, and E live on five different floors of a building (numbered 1 to 5 from bottom to top). A lives on the topmost floor. B lives immediately below C. D lives on the lowermost floor. E lives exactly between A and C. On which floor does C live?

(a) 2nd floor (b) 3rd floor (c) 4th floor (d) 1st floor

Q72. In the word 'TABLE', if every consonant is changed to the previous letter in the English alphabet, and every vowel is changed to the next letter, what will be the newly formed string of letters?

(a) SZAKD (b) SAAKF (c) SBAKF (d) UZCMF

Q73. Five friends are sitting in a circle facing the center. A is sitting immediately next to B. C is sitting immediately next to D. E is sitting exactly between A and C. If D is not sitting next to A, who is sitting to the immediate right of B? (Assuming B's right side is towards D).

(a) D (b) C (c) E (d) Cannot be determined

Q74. In a row of boys, Amit is 10th from the left and Sumit is 15th from the right. When they interchange their positions, Amit becomes 15th from the left. What is the total number of boys in the row?

(a) 24 (b) 29 (c) 28 (d) 30

Q75. Identify the next term in the letter series:
BDF, HJL, NPR, ?

(a) SUV (b) TVX (c) TUX (d) SUW

Q76. A group of numbers is coded as per the conditions below:
1=A, 2=B, 3=C, 4=D, 5=E.
Condition I: If the first and last digits are odd, both are coded as 'X'.
What is the code for the number 32415?

(a) CBDAE (b) XBDAE (c) CBDX (d) XBDAX

Q77. A person walks 3 km towards the East and then turns North and walks 4 km. What is the shortest distance between his starting point and his current position?

(a) 5 km (b) 7 km (c) 1 km (d) 12 km

Q78. If BAT = 23 and CAT = 24, what will be the numerical value of DOG?

(a) 25 (b) 26 (c) 27 (d) 28

Q79. Six people are sitting in a straight row facing North. A sits second to the left of B. C sits at an extreme end and is the immediate neighbor of A. How many people sit to the right of B?

(a) 1 (b) 2 (c) 3 (d) 4

Q80. Pointing to a man in a photograph, a woman says, "He is the brother of my mother's daughter." How is the man related to the woman?

(a) Uncle (b) Father (c) Brother (d) Son

Q81. India recently discovered massive reserves of Lithium, a critical metal for EV batteries, for the first time in which state/union territory?

(a) Gujarat (b) Rajasthan (c) Jammu and Kashmir (d) Kerala

Q82. What is India's rank in the Global Innovation Index (GII) 2023 published by the World Intellectual Property Organization (WIPO)?

(a) 40th (b) 52nd (c) 63rd (d) 81st

Q83. Which eminent agricultural scientist and "Father of India's Green Revolution" was posthumously awarded the Bharat Ratna in 2024?

(a) Norman Borlaug (b) Verghese Kurien (c) M.S. Swaminathan (d) C.N.R. Rao

Q84. Which Article of the Indian Constitution directs the State to secure a Uniform Civil Code (UCC) for the citizens throughout the territory of India?

(a) Article 40 (b) Article 44 (c) Article 50 (d) Article 51A

Q85. Which city in Uttar Pradesh is being developed as India's first "AI City" to foster tech innovation and startups?

(a) Noida (b) Kanpur (c) Lucknow (d) Varanasi

Q86. The famous revolutionary essay "Why I am an Atheist" was written by which Indian freedom fighter while in jail?

(a) Chandrashekhar Azad (b) Subhas Chandra Bose (c) Bhagat Singh

(d) B.R. Ambedkar

Q87. Which city hosted the 2024 Summer Olympic Games?

(a) Los Angeles (b) Tokyo (c) Paris (d) London

Q88. The joint military exercise named 'Surya Kiran' is conducted regularly between India and which neighboring country?

(a) Bangladesh (b) Sri Lanka (c) Nepal (d) Bhutan

Q89. What was the name of the robotic rover deployed by ISRO's Chandrayaan-3 mission on the lunar surface?

(a) Vikram (b) Pragyan (c) Aditya (d) Vayumitra

Q90. Satwiksairaj Rankireddy and Chirag Shetty, who were honored with the Major Dhyan Chand Khel Ratna Award in 2023, are associated with which sport?

(a) Table Tennis (b) Badminton (c) Tennis (d) Squash

Q91. The "PM Vishwakarma" scheme launched by the Government of India is primarily aimed at supporting and providing financial aid to:

(a) Information Technology startups

(b) Women self-help groups

(c) Traditional artisans and craftspeople

(d) Farmers adopting organic farming

Q92. 'Sattriya' is a classical dance form that originated in which Indian state?

(a) Odisha (b) Assam (c) Manipur (d) Kerala

Q93. Who is the author of the monumental book "The Discovery of India"?

(a) Mahatma Gandhi (b) Sardar Vallabhbhai Patel (c) Jawaharlal Nehru

(d) Rabindranath Tagore

Q94. The 'Thomas Cup' is a prestigious international trophy associated with which sport?

(a) Golf (b) Football (c) Tennis (d) Badminton

Q95. Who is the current Governor of the Reserve Bank of India (RBI) as of 2024?

(a) Urjit Patel (b) Raghuram Rajan (c) Shaktikanta Das (d) T.V. Somanathan

Q96. What is the name of India's fastest and largest AI supercomputer, which was ranked among the top 100 globally in 2023?

(a) PARAM Ganga (b) AIRAWAT (c) Pratyush (d) Mihir

Q97. Where is the headquarters of the New Development Bank (NDB), established by the BRICS states, located?

(a) Beijing, China (b) Moscow, Russia (c) Shanghai, China (d) New Delhi, India

Q98. While India hosted the G20 Summit in 2023, which country assumed the G20 presidency for the year 2024?

(a) South Africa (b) Indonesia (c) Brazil (d) Italy

Q99. Who was awarded the Nobel Prize in Literature in 2023 for his innovative plays and prose?

(a) Annie Ernaux (b) Jon Fosse (c) Abdulrazak Gurnah (d) Louise Glück

Q100. Which of the following vitamins is water-soluble and needs to be consumed regularly in the diet?

(a) Vitamin A (b) Vitamin D (c) Vitamin E (d) Vitamin C