



RRB

Section Controller

Railway Recruitment Board (RRB)

Volume - 3

Practice Sets

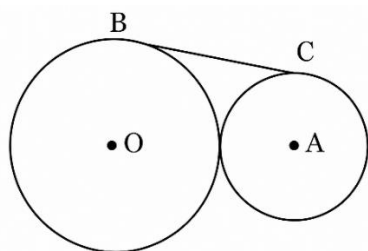


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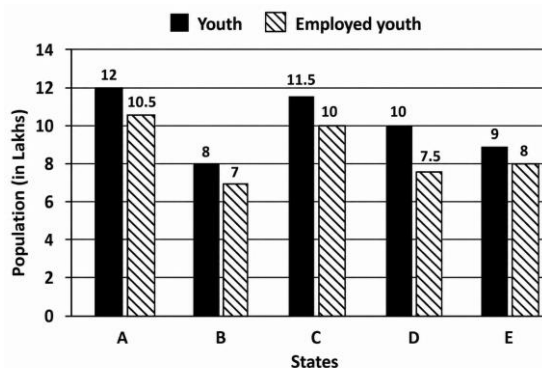
Mock Test - 1

- A man spends 87% of his income. His income increased by 18% and he increased his expenditure by 17%. His savings will then be increased by: (Consider up to two decimals only)
(A) 29.2% (B) 24.69%
(C) 18.54% (D) 27.32%
- $3^5 + 3^6 + 3^7 + 3^8$ is completely divisible by
(A) 10 (B) 14
(C) 17 (D) 11
- By selling an article for Rs. 360, a woman incurred a loss of 10%. At what price should she sell it so that she makes a profit of 20%?
(A) Rs. 520 (B) Rs. 450
(C) Rs. 410 (D) Rs. 480
- Find the sum of $3 + 3^2 + 3^3 + \dots + 3^8$.
(A) 9840 (B) 6561
(C) 6560 (D) 3280
- ₹1,900 is divided among 4 boys, 5 girls and 6 women, such that the shares of a boy, a girl and a woman are in the ratio 9 : 8 : 4. What is the share of a girl?
(A) Rs. 608 (B) Rs. 152
(C) Rs. 760 (D) Rs. 304
- Two circles touch each other externally as shown in the figure above. The radius of the circle with centre O is 49 cm. The radius of the circle with centre A is 16 cm. Find the length (in cm) of their common tangent BC.



- (A) 55 (B) 58
(C) 57 (D) 56

- The following bar graph shows the number of youth (in lakhs) and the number of employed youth (in lakhs) in five states A, B, C, D and E. Which state(s) has employed youth less than 80% of its total youth population?



- (A) D (B) B and D
(C) C and D (D) A
- If the HCF of two numbers (each greater than 17) be 17 and the LCM be 561, then find the sum of the numbers.
(A) 387 (B) 238 (C) 268 (D) 340
 - $(2x + 3y + 4z)(4x^2 + 9y^2 + 16z^2 - 6xy - 12yz - 8xz) = ?$
(A) $8x^3 + 27y^3 + 64z^3 + 72xyz$
(B) $8x^3 + 27y^3 + 64z^3 - 72xyz$
(C) $8x^3 + 27y^3 - 64z^3 + 72xyz$
(D) $8x^3 - 27y^3 - 64z^3 - 72xyz$
 - $\frac{2^3}{3^2} \div \frac{3}{2} + (2^3 - 3^2) = \underline{\hspace{2cm}}$.
(A) $-\frac{11}{27}$ (B) $\frac{27}{11}$
(C) $\frac{2^2}{3^3}$ (D) $\frac{11}{27}$
 - Deepak starts a business with a capital of ₹1,60,000. He incurs a loss of 10% during the first year. But he makes a profit of 5% during the second year on his remaining investment. Finally, he makes a profit of 25% on his new capital during the third year. Find his total profit at the end of three years.
(A) ₹29,500 (B) ₹29,000
(C) ₹28,000 (D) ₹28,500

12. 10 years ago, a man's age was 5 times of his son's age. 2 years hence, twice his age will be equal to 4 times the age of his son. What is the present age (in years) of the son?
 (A) 16 (B) 14
 (C) 18 (D) 20
13. A boat can go 40 km downstream and 25 km upstream in 7 hours 30 minutes. It can go 48 km downstream and 36 km upstream in 10 hours. What is the speed (in km/h) of the boat in still water?
 (A) 6 (B) 12
 (C) 9 (D) 15
14. The length and the breadth of the floor of a rectangular hall are 126 feet and 90 feet, respectively. What will be the area (in square feet) of each of the largest identical square tiles that can be used to tile this floor in a way that no part of the floor remains uncovered?
 (A) 484 (B) 256
 (C) 324 (D) 196
15. Which of the following numbers will replace the question mark (?) in the given series?
 3, 7, 6, 14, 12, 28, 24?
 (A) 56 (B) 60
 (C) 51 (D) 54
16. 'A' and 'B' are two stations 494 km apart. A train starts from station 'A' at 3 p.m. and travels towards station 'B' at 83 km/h. Another train starts from station 'B' at 4 p.m. and travels towards station 'A' at 54 km/h. At what time do they meet?
 (A) 7 p.m. (B) 7 a.m.
 (C) 8 p.m. (D) 9 a.m.
17. Find the missing term in the below series:
 B2, C3, E5, G7, __, M13, Q17.
 (A) I10 (B) K11
 (C) J10 (D) H7
18. A batsman in his 11th inning scores 88 runs, thereby increasing his average score by 4. What is his average after the 11th innings?
 (A) 49 (B) 47
 (C) 48 (D) 46
19. Count the total number of days from 10 April 2020 to 25 July 2020, by including both the days.
 (A) 105 (B) 107
 (C) 106 (D) 108
20. A and B enter into a partnership with capital in the ratio 5: 6. After 4 months, A withdraws $\frac{1}{5}$ of his capital, while B increases his capital by $33\frac{1}{3}$. What is the share of B (in Rs. lakhs) in the annual profit of Rs. 6.3 lakhs?
 (A) 2.34 (B) 2.61
 (C) 3.69 (D) 3.96
21. From the given options, select the letter that is different from the other three on the basis of the letter clusters given below:
 ABCDE FGHIJ KLMNO PQRST
 UVWXY
 (A) Y (B) W
 (C) M (D) H
22. A 70 cm wide path is made around a circular garden having a diameter of 14 metres. What is the area of the path (in m^2)?
 (A) 10.29π (B) 8.29π
 (C) 11.29π (D) 13.29π
23. Selena is the sister of James and James is the father of Eden. Marco is James' sister's son. Eden's husband Robert has a friend, Ileana, who is Selena's aunt. How is Robert related to James?
 (A) Son
 (B) Sister's son
 (C) Daughter's husband
 (D) Wife's father

24. 12 men can do a work in 8 days while 4 boys can do it in 40 days. In how many days 9 boys and 3 men together will complete the same work?

(A) 10 days
(B) 280/13 days
(C) 80/7 days
(D) 260/17 days

25. In a certain code language
'123' means 'good to taste'
'456' means 'see you soon'
'789' mean 'be right back'

Which of the following numbers stands for 'be' in that language?

(A) 9 (B) 1
(C) 4 (D) 7

26. A question and three statements labelled (I), (II) and (III) are given. You have to decide which statement(s) is/are sufficient to answer the question.

Question: Who is the shortest among A, B, C, D and E?

Statements:

- I. A is taller than E but shorter than D.
II. B is shorter than C but taller than E.
III. D is taller than C and A is taller than B.

(A) Statements I and III together are sufficient.
(B) Statements I and II together are sufficient.
(C) Statements I, II and III are sufficient.
(D) Statements I, II and III are insufficient.

27. In triangle PQR, $\angle P$ is the largest angle and $\angle P = 80^\circ$. If the ratio of the angle is 4: 3: 2, then what will be the smallest angle?

(A) 40° (B) 30°
(C) 50° (D) 45°

28. Select the set in which the numbers are related in the same way as are the numbers of the following sets. (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/deleting/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.)

(53, 102, 151)

(74, 123, 172)

(A) (56, 105, 161) (B) (69, 119, 159)

(C) (84, 57, 190) (D) (48, 97, 146)

29. A cistern can be filled by two pipes in 8 minutes and 10 minutes, separately. Both the pipes are opened together for a certain time, but due to an obstruction, only $\frac{5}{8}$ of the full quantity of water flowed through the former pipe and $\frac{3}{5}$ through the latter pipe. However, the obstruction was suddenly removed, and the cistern was filled in 3 minutes from that moment. How long did it take before the full flow began?

(A) $3\frac{1}{16}$ min (B) $2\frac{6}{17}$ min

(C) $9\frac{6}{7}$ min (D) $2\frac{30}{37}$ min

30. 'STAUNCH' is related to 'WXEYRGL' in a certain way based on the English alphabetical order. In the same way, 'BLISS' is related to 'FPMWW'. To which of the following is 'COWARD' related, following the same logic?

(A) GSAEVH (B) GTAEVH

(C) GSAFVH (D) GSZEVH

31. A dice is thrown 150 times, with the frequencies for the outcomes 1, 2, 3, 4, 5 and 6 being as given in the following table. How many times is the number appearing on the dice a prime number?

Outcome	1	2	3	4	5	6
Frequency	23	43	33	13	10	28

(A) 88 (B) 109

(C) 86 (D) 66

32. 1 bar of chocolate costs Rs. 80 but a box containing 6 bars of the same chocolate costs Rs. 400. What is the effective discount (in %) on the box?

- (A) 20 (B) 16.67
(C) 25 (D) 15

33. If West is called South, South is called East, East is called North and North is called West, then from which direction does the sun rise?

- (A) West (B) North
(C) East (D) South

34. Compute the expression $(299)^2$ using algebraic identities.

- (A) 89301 (B) 89402
(C) 88401 (D) 89401

35. Each of the digits in the number 34135278 is arranged in ascending order from left to right. The position of how many digits will remain unchanged as compared to that in the original number?

- (A) 2 (B) 3
(C) 1 (D) 4

36. A buys 150 gm gold for Rs.6,00,000 and gives 6% as making charges. What should be the selling price per 10 gm to have a profit of 6%?

- (A) Rs.49,444 (B) Rs.44,449
(C) Rs.44,494 (D) Rs.44,944

37. A, B, C, D, and E are sitting in a line. C is sitting at the west end and E is the neighbour of B and C. Between A and C there are two persons. Who is sitting at the east end?

- (A) B (B) D
(C) A (D) C

38. $\{(28 - 3^3) + 99\} + 136 \div 4 \times 5 - (44 - 2^2) = ?$

- (A) 250 (B) 200
(C) 230 (D) 270

39. 10 kg of superior quality of rice is mixed with 5 kg of inferior quality of rice. The prices of superior quality and inferior quality rice are ₹85 and ₹46, respectively. Find the average price per kg of the mixture.

- (A) ₹72 (B) ₹73
(C) ₹75 (D) ₹74

40. The given letters stand for various symbols as indicated.

Select the option which is correct according to the above letter symbols.

P	Q	R	S	T	U	V
+	-	×	÷	=	>	<

- (A) 4 R 12 S 3 T 2 R 8
(B) 4 R 12 S 3 T 2 S 8
(C) 4 R 12 S 3 U 2 R 8
(D) 4R 12 P 3 T 2 R 8

41. From a group of five boys, P, Q, R, S, T and three girls X, Y, Z, a team five have to be selected on the basis of the following criteria.

S and T cannot be together.
R and S have to be together.
S and Z cannot be together.
Q cannot be put with P.

If S is one of the members, which one of the following teams will be formed?

- (A) PSXQY
(B) SRYZQ
(C) TXRYS
(D) RQSYX

42. A number when divided by a divisor leaves a remainder of 24. When twice the original number is divided by the same divisor, the remainder is 13. What is the value of the divisor?

- (A) 35 (B) 37
(C) 25 (D) 30

43. Seven people A, B, C, D, E, F and G live in a seven-floor building. The lowermost floor is numbered as 1, the floor above it is numbered 2, and so on till the topmost floor is numbered 7. Only four people live below the floor on which D lives. Only two people live below C. B lives on the lowermost floor. E lives immediately above B. A lives on one of the floors above F but on one of the floors below G. Who lives on the floor numbered 4?
(A) C (B) D
(C) A (D) F
44. Find the numbers if the HCF of two numbers is 47 and their sum is 188.
(A) 141 and 138 (B) 47 and 141
(C) 215 and 211 (D) 47 and 51
45. Given below are three statements and three conclusions. Take the statements to be true even if they are at variance with commonly known facts, and decide whether the conclusion/s follow/s the given statements.
- Statements:**
I. All grasses are shrubs.
II. All roots are fruits.
III. All fruits are flowers.
- Conclusions:**
I. All grasses are flowers.
II. All roots are flowers.
III. Some flowers are fruits.
- (A) Only conclusion III follows
(B) Only conclusion I follows
(C) All the conclusions follow
(D) Conclusions II and III follow
46. 12% of the voters in an election did not cast their votes and 2% of the casted votes were declared invalid. In this election, there were only two candidates. The winner by obtaining 46% of the total registered voters defeated his opponent by 1,044 votes. What was the total number of voters registered in the election?
(A) 18125 (B) 10440
(C) 16750 (D) 14400
47. How is a quarter past 4 o'clock represented in 24-hour format?
(A) 14:45 (B) 16:45
(C) 16:15 (D) 14:15
48. A boat can travel 16.9 km downstream in 52 min. If the speed of the current is 3 km/h, then how much time (in hours) will the boat take to travel 84 km upstream?
(A) 6.22 (B) 6
(C) 13.5 (D) 7.5
49. A father is presently 3 times his daughter's age. After 10 years he will be twice as old as her. Find the daughter's present age.
(A) 15 years (B) 5 years
(C) 10 years (D) 20 years
50. The perimeter of a rectangle is 68 cm. If the area of the rectangle is 240 cm^2 , then what is the length of each of its diagonals?
(A) 25 cm (B) 27 cm
(C) 26 cm (D) 28 cm
51. A chord of a circle is equal to its radius of length 9 cm. Find the angle subtended by it in major segment.
(A) 90° (B) 60°
(C) 30° (D) 120°
52. After interchanging the given two numbers what will be the values of equation (I) and (II) respectively?
8 and 2
I. $3 + 6 - 8 \times 4 \div 2$
II. $4 \div 6 \times 9 + 2 - 8$
(A) 12 and 8 (B) 9 and 15
(C) 9 and 81 (D) 8 and 12
53. A 234 m long train passes a person running at 9 km/h in the opposite direction, in 6 seconds. In how much time (in seconds) will it pass another person who is moving at 23.4 km/h, in the same direction?
(A) 7.8 (B) 7.2
(C) 8 (D) 8.4

54. The table given below shows the sales of two companies in 5 years.

Years	Companies	
	P	Q
A	100	500
B	200	350
C	300	400
D	250	100
E	150	50

Which of the following statement is correct?

- I. The ratio of combined sales of P in years A and B to that of combined sales of Q in years D and E is 1 : 2.
 II. The sales of P in year C is 300% of the sales of Q in year D.

- (A) Only I (B) Both I and II
 (C) Only II (D) Neither I nor II

55. The tank is filled by three pipes with different uniform flow rates. While the first two pipes are operating simultaneously, they fill the tank in the same duration that the third pipe takes to fill it alone. The second pipe can fill the tank 5 hours quicker than the first pipe, yet 4 hours slower than the third pipe. What is the time (in hours) needed for the first pipe to fill the tank?

- (A) 18 (B) 12
 (C) 9 (D) 15

56. Based on the data given in the following table, find the arithmetic mean of the number of major meals that included a potato-based dish, which the 39 students surveyed, had eaten in a week.

Number of Major Meals (with a potato-based dish) in a Week	Frequency
1	3
2	2
3	2
4	5
5	5
6	4
7	6

8	3
9	5
10	3
11	1
Total Frequency	39

- (A) 7 (B) 5
 (C) 6 (D) 8

57. Select the letter-cluster from among the given options that can replace the question mark (?) in the following series. CML, XJK, SGJ, NDI, ?

- (A) IBG (B) IAH
 (C) HAI (D) IBH

58. A milk merchant buys 30 litres of milk at the rate of Rs. 50 per litre and mixes 20 litres of water in it (water is free of cost). If he sells this mixture at the rate of Rs. 48 per litre, then what is the profit percentage?

- (A) 50 % (B) 60 %
 (C) 40 % (D) 66.66 %

59. Select the number from among the given options that can replace the question mark (?) in the following series. 13, ?, 25, 37, 53, 73

- (A) 19 (B) 15
 (C) 17 (D) 21

60. 'A – B' means 'A is B's wife'.
 'A + B' means 'A is B's brother'.
 'A × B' means 'A is B's father'.
 'A ÷ B' means 'A is B's sister'.

Using the same meaning of the mathematical operators as given above, in 'T × X ÷ Y + Z' what is T of Z's?

- (A) father (B) Brother
 (C) Mother (D) Son

61. A shopkeeper marks his goods at 20% above the cost price, but to trick his customers, he offers a 10% discount on the marked price and also uses a faulty weight that weighs 800 g for 1 kg. Find his overall profit percentage.

- (A) 37.5% (B) 32%
 (C) 27.5% (D) 35%

62. A bought an article for Rs. 5,400 and sold it at a loss of 30%. With this amount, he bought another article and sold it at a gain of 60%. What was his overall percentage gain or percentage loss?
 (A) Gain, 12% (B) Gain, 1.2%
 (C) Loss, 1.2% (D) Loss, 12%
63. Among the four letter-clusters listed, three are alike in some manner and one is different. Select the odd one.
 (A) NARD (B) CPGL
 (C) AUEQ (D) PWTS
64. A bus travels for three hours at 60 km/h, four hours at 50 km/h and the next five hours at 50 km/h. Find its average speed.
 (A) 52.5 km/h (B) 52 km/h
 (C) 46 km/h (D) 50 km/h
65. A toy is in the form of a cone mounted on a hemisphere. The radius of the hemisphere and that of the cone is 7 cm and height of the cone is 5 cm. The total surface area of the toy (take $\pi = \frac{22}{7}$) is (rounded off to two places of decimal):
 (A) 2648.81 cm² (B) 2666.85 cm²
 (C) 497.25 cm² (D) 486.65 cm²
66. 30 women working 5 hours a day can complete a work in 18 days. In how many days will 21 women working 8 hours a day complete the same work?
 (A) $18\frac{7}{13}$ days (B) $17\frac{11}{13}$ days
 (C) $16\frac{1}{14}$ days (D) $13\frac{3}{14}$ days
67. Which of the following letters is 8th to the right of the 12th letter in the English alphabets?
 (A) S (B) T
 (C) D (D) u
68. Shanmukh starts from a bank and walks 90 m towards south. Then she turns right, and walks 110 m. Then she turns right, and walks 90 m. Finally, she turns right again, and walks 220 m. In which direction is she now relative to the bank? (All the turns are 90 degree turns only)
 (A) North (B) South
 (C) East (D) West

69. Study the given figure carefully and select the number that can replace the 'X'.

5	9	13	15
14	19	24	32
9	10	11	17
32	19	X	33
23	9	6	16

- (A) 28 (B) 49
 (C) 17 (D) 22
70. $2x + 3y - 7z = 8$; $3x + 2y - 8z = 7$; $x + y - z = 13$. What is the value of $x^2 + y^2 + z^2$?
 (A) 185 (B) 205
 (C) 175 (D) 195
71. All 35 students of a class are standing in a straight-line facing north. Ram is standing at 17th position from the right end while Rakesh is standing at 17th position from the left end. Sonu is standing exactly in the middle of Ram and Rakesh. At what position is Sonu standing from the left end?
 (A) 20th (B) 12th
 (C) 18th (D) 3rd
72. Five boxes G, T, Y, R and U are placed one over the other but not necessarily in the same order. Exactly two boxes are placed between T and Y, but T is neither at the bottom nor at the top and not at any position above Y. What is the position of T from the bottom?
 (A) Fourth (B) Third
 (C) Second (D) First
73. Six people A, B, C, D, E and F are sitting around a circular table facing the centre. C sits second to the left of B. E is an immediate neighbour of B. F sits third to the left of E. D sits second to the left of A. Who sits to the immediate right of A?
 (A) E (B) B
 (C) C (D) F
74. Which of the following fraction is the largest?
 (A) $\frac{7}{8}$ (B) $\frac{13}{16}$
 (C) $\frac{63}{80}$ (D) $\frac{31}{40}$

75. After interchanging the given two numbers, what will be the value of the given equation? $2 \text{ and } 3; 5 - 3 \div 1 \times 2 + 7$
 (A) 8 (B) 6
 (C) 9 (D) 11
76. Select the option that represents the correct order of the given words as they would appear in an English dictionary.
 1. Earn 2. Efficient
 3. Educator 4. Effort
 5. Elite 6. Eloquence
 (A) 1, 3, 4, 2, 5, 6 (B) 1, 3, 2, 4, 6, 5
 (C) 1, 3, 2, 4, 5, 6 (D) 1, 3, 4, 5, 6, 2
77. Find the LCM of the fractions $\frac{2}{5}$, $\frac{3}{7}$ and $\frac{4}{9}$.
 (A) $\frac{2}{315}$ (B) $\frac{1}{315}$
 (C) 24 (D) 12
78. Read the question below followed by two statements. Study them and decide which statement(s) is/are sufficient to answer the question.
Question: What was the revenue of the zoo on a certain day?
Statements:
 I) 120 persons visited the zoo on that certain day.
 II) A discount of 25% on ticket price was offered on that certain day.
 (A) Neither statement I nor II is sufficient
 (B) Statement I alone is sufficient while II alone is not sufficient
 (C) Statement II alone is sufficient while I alone is not sufficient
 (D) Either statement I or II is sufficient
79. "If some artists are celebrities" and "all celebrities are millionaires", then which of the given conclusions follow?
 (A) No millionaires are celebrities.
 (B) All artists are millionaires.
 (C) No celebrities are millionaires.
 (D) Some artists are millionaires.
80. A random sample of 2 items is picked out from a population of 15 items. The number of all such samples is _____.
 (A) 105 (B) 60
 (C) 210 (D) 90
81. 25 articles were bought for Rs.8,625 and sold for Rs.12,675. Find the approximate profit percentage per article.
 (A) 32% (B) 47%
 (C) 39% (D) 45%
82. $\overline{CT}$ is a tangent to a circle at the point T on the circle. Chord $\overline{AB}$ of the circle is extended to meet the tangent $\overline{CT}$ at the point C. If $m(\overline{AB}) = 3 \text{ cm}$ and $m(\overline{BC}) = 2.4 \text{ cm}$, find the length (in cm) of the tangent $\overline{CT}$.
 (A) 4.2 (B) 3.6
 (C) 3.2 (D) 4.0
83. A number is square of 167. When digits of the number are rearranged in descending order, then the new number which is formed will be divisible by:
 (A) 11 (B) 13
 (C) 5 (D) 17
84. Select the option that represents the letters that, when placed from left to right in the blanks below, will complete the letter series.
 A C _ G I _ C _ G I A _ E G I A C E _ I _ C E _ I
 (A) E E A E A A G (B) A E C E G G A
 (C) E A E C G A G (D) A A E G G E A
85. A bag contains an equal number of 50 paise, 25-paise, 20-paise and 5 -paise coins. If the total monetary value of all these coins taken together is ₹55, then how many coins of each type are there?
 (A) 27 (B) 55
 (C) 52 (D) 50
86. 'Story' is related to 'Reader' in the same way as '_____' is related to 'Listener'.
 (A) Singer (B) Song
 (C) Lyrics (D) dance

87. After 4 years, Ramesh's age will be 50% more than what his age was 16 years ago. What is his present age?
 (A) 56 years (B) 52 years
 (C) 54 years (D) 46 years
88. Six houses, K, L, M, N, O and P, are located in the same colony. P is 400 m to the west of K. M is 200 m to the east of L. O is 300 m to the north of K. N is 150 m to the south of L. L is 250 m to the south of K. What is the straight distance between O and N?
 (A) 400 m (B) 600 m
 (C) 700 m (D) 350 m
89. $\triangle ABC \sim \triangle EDF$ and area ($\triangle ABC$) : area ($\triangle EDF$) = 9 : 4. If AB = 5 cm, BC = 8 cm and CA = 10 cm, then DF is equal to:
 (A) $5\frac{1}{3}$ cm (B) $3\frac{1}{4}$ cm
 (C) $4\frac{2}{3}$ cm (D) $3\frac{2}{3}$ cm
90. A field is in the shape of a rectangle of length 90 m and breadth 75 m. In one corner of the field, a pit, which is 18 m long 15 m broad and 6 m deep, has been dug out. The earth taken out of it is evenly spread over the remaining part of the field. Find the rise in the level of the field?
 (A) 27 cm (B) 25 cm
 (C) 28 cm (D) 24 cm

Read the passage carefully and choose the best answer to each question out of the four alternatives (91-95)

In today's world, environmental conservation has become increasingly crucial. With the rapid depletion of natural resources and the devastating impact of human activities on the planet, it is essential that we prioritize sustainable practices to protect our environment for future generations. Environmental conservation encompasses a wide range of efforts, including biodiversity preservation, waste reduction, renewable energy adoption, and responsible land and water management.

91. What is the tone of the passage?
 (A) Critical and sceptical
 (B) Informative and neutral
 (C) Optimistic and urgent
 (D) Pessimistic and fatalistic.
92. Which title best represents the passage?
 (A) Human Impact on the Environment
 (B) The Importance of Environmental Conservation
 (C) The Significance of Renewable Energy
 (D) The Effects of Climate Change
93. Which inference can be drawn from the passage?
 (A) Environmental conservation only focuses on waste reduction.
 (B) Human activities have no impact on the planet's ecosystems.
 (C) Sustainable practices are necessary to protect the environment.
 (D) The depletion of natural resources is irreversible.
94. How does the passage connect to the world?
 (A) By discussing the impact of environmental conservation on wildlife
 (B) By examining the consequences of pollution on human health
 (C) By analysing the global efforts to combat climate change
 (D) By highlighting the depletion of natural resources worldwide
95. According to the passage, why has environmental conservation become increasingly crucial today?
 (A) Because it helps increase industrial production.
 (B) Because natural resources are rapidly depleting and human activities are harming the planet.
 (C) Because it promotes the use of more fossil fuels.
 (D) Because it reduces the need for technological development.

Read the given passage and answer the questions that follow. (96-100)

The playground is as essential as the class room. The student learns his lesson of the mind in the class room and adds to his store of knowledge. But the playground trains his powers of mind and body both. Here he learns physical skills and endurance. He further learns how to remain alert and watchful; how to get an advantage over his opponent. Thus, the student gets physical and mental training on the playground together. But the greatest good derived by him is that he learns the team spirit. He is governed by no selfish or individual motives. This team spirit helps him to fight for nobler causes in later life.

96. Choose the correct antonym for the word:

Endurance

- (A) Apathy (B) Grit
(C) Fortitude (D) Mettle

97. Identify the tone of the passage.

- (A) Biased (B) Informative
(C) Apologetic (D) Humorous

98. Identify the central theme of the passage.

- (A) Importance of playground and its benefits for students.
(B) Physical and mental training
(C) School and playground.
(D) Team spirit

99. Identify the structure of the passage.

- (A) Cause / effect
(B) Descriptive
(C) Chronology/time order
(D) Sequence/process

100. Select the appropriate title for the passage.

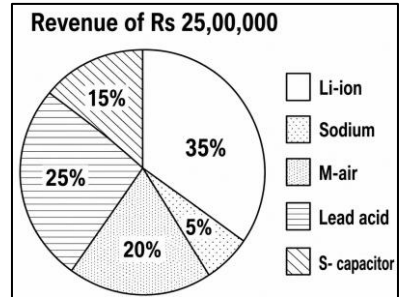
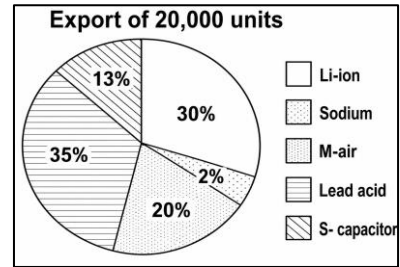
- (A) School and its activities.
(B) Playground and its benefit for students.
(C) School and playground.
(D) Importance of playground in a school

ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10
Ans.	B	A	D	A	B	D	A	B	B	A
Ques.	11	12	13	14	15	16	17	18	19	20
Ans.	B	B	C	C	A	A	B	C	B	D
Ques.	21	22	23	24	25	26	27	28	29	30
Ans.	A	A	C	C	D	B	A	D	B	A
Ques.	31	32	33	34	35	36	37	38	39	40
Ans.	C	B	B	D	B	D	B	C	A	A
Ques.	41	42	43	44	45	46	47	48	49	50
Ans.	D	A	D	B	D	A	C	A	C	C
Ques.	51	52	53	54	55	56	57	58	59	60
Ans.	C	D	A	C	D	C	B	B	C	A
Ques.	61	62	63	64	65	66	67	68	69	70
Ans.	D	A	A	A	C	C	B	C	C	D
Ques.	71	72	73	74	75	76	77	78	79	80
Ans.	C	C	C	A	B	C	D	A	D	A
Ques.	81	82	83	84	85	86	87	88	89	90
Ans.	B	B	D	C	B	B	A	C	A	B
Ques.	91	92	93	94	95	96	97	98	99	100
Ans.	C	B	C	D	B	A	B	A	A	D

Mock Test - 2

1. 20 percent of A's income is equal to 10 percent of B's income. If A's income is Rs. 2550, then what is B's income?
 (A) Rs. 5000 (B) Rs. 7650
 (C) Rs. 5100 (D) Rs. 4900
2. $6^{25} + 6^{26} + 6^{27} + 6^{28}$ is divisible by:
 (A) 254 (B) 259
 (C) 258 (D) 255
3. A baby stroller is sold for Rs. 12,320 by allowing a discount of 30% on its marked price. Find the marked price of a baby stroller.
 (A) Rs. 17,320 (B) Rs. 17,600
 (C) Rs. 12,700 (D) Rs. 18,500
4. How many terms of the series -9, -6, -3, must be taken so that the sum of all the terms is 45?
 (A) 9 (B) 11
 (C) 10 (D) 8
5. A person has some coins of Rs. 10, Rs. 5, and Rs. 2 denominations. The ratio of the products of the numbers of Rs. 10 and Rs. 5 coins, the numbers of Rs. 5 and Rs. 2 coins, and the numbers of Rs. 2 and Rs. 10 coins is 3 : 4 : 2 respectively. What could be the minimum amount of money this person has?
 (A) Rs. 52 (B) Rs. 88
 (C) Rs. 68 (D) Rs. 74
6. 8 cm and 5 cm are the radii of two circles. If the distance between the centres of the two circles is 11 cm, then the length (in cm) of the common tangent of two circles is:
 (A) $2\sqrt{7}$ (B) $3\sqrt{7}$
 (C) $\sqrt{7}$ (D) $4\sqrt{7}$
7. A battery manufacturer manufactures five different types of batteries. The total revenue for the year 2020 is Rs. 25,00,000 and 20,000 units were exported in 2020. The distribution of revenue and units for the five different types of batteries is shown in the charts.



Which type of the battery provides the highest revenue per unit of export?

- (A) Li-ion (B) Sodium
 (C) M-Air (D) Lead acid
8. 13, a, b, c are four distinct numbers and the HCF of each pair of numbers (13, a); (13, b); (13, c) is 13, where a, b, c are each less than 60 and $a < b < c$. What is the value of $\frac{a+c}{b}$?
 (A) 2 (B) 5 (C) 4.5 (D) 3.5
 9. Expand $x^2 + 2x + 3$ about $x = -2$.
 (A) $(x - 2)^2 - 2(x + 2) + 3$
 (B) $(x + 2)^2 - 2(x + 2) + 3$
 (C) $(x + 2)^2 + 2(x + 2) + 3$
 (D) $(x - 2)^2 - 2(x - 2) - 3$
 10. 15% of 20% of S = 126. What is the value of S?
 (A) 4200 (B) 4500
 (C) 4800 (D) 3900
 11. Ayush spends 25% of an amount of money on an insurance policy, 26% on food, 23% on children's education and 19% on recreation. He deposits the remaining amount of Rs. 26,600 in the bank. What is the total amount (in Rs.) that he spends on food and recreation together?
 (A) 1,95,000 (B) 1,71,000
 (C) 1,62,000 (D) 1,83,000

12. 4 years ago, the age of Garvit was three times that of Yuvansh, but one year ago the age of Garvit was two times that of Yuvansh. What is the difference between the ages of Garvit and Yuvansh?
(A) 13 years (B) 11 years
(C) 7 years (D) 6 years
13. A boat can row 36 km upstream in 9 hours and the same distance downstream in 3 hours. What is the speed of the boat in still water?
(A) 8 km/hr (B) 14 km/hr
(C) 10 km/hr (D) 6 km/hr
14. The length of each side of a regular hexagon is 10 cm. What is the area of the hexagon?
(A) $156\sqrt{3}$ cm² (B) $144\sqrt{3}$ cm²
(C) $148\sqrt{3}$ cm² (D) $150\sqrt{3}$ cm²
15. Select the option that will fill in the blank and complete the given series.
11, 14, 19, 26, _____, 46
(A) 30 (B) 37
(C) 35 (D) 34
16. A 1800 metres long train crosses a man walking in opposite direction in 10 seconds. If the speed of train is 8 times to the speed of man, then what is the speed of train?
(A) 576 km/hr (B) 640 km/hr
(C) 596 km/hr (D) 570 km/hr
17. Select the option that will fill in the blank and complete the given series.
A9B, B125C, C49D, D729E, _____
(A) G221H (B) F122G
(C) E36F (D) E121F
18. 10th class of 40 students took a Maths test. 25 students had an average score of 60. The other students had an average score of 80. What is the average score of the whole class?
(A) 66.5 (B) 65.5
(C) 67.5 (D) 68.5
19. John bought a puppy on Friday, 21 January 2022. The puppy becomes an adult dog on the 380th day since John bought him. On which day did the puppy become an adult?
(A) Saturday (B) Wednesday
(C) Monday (D) Sunday
20. A and B had a joint business in which A invested Rs. 60,000 in the business for one year. After 3 months B invested Rs. 80,000. At the beginning of the second year, A invested Rs. 30,000 more and B withdrew Rs. 5,000. At the end of two years, profit earned by A is Rs. 35,880. What is the profit (in Rs.) earned by B, if they distributed half of the total profit equally and rest in the capital ratio?
(A) 69,920 (B) 38,060
(C) 34,040 (D) 58,940
21. Select the option which is different from the rest.
(A) 729 (B) 343
(C) 256 (D) 512
22. A copper wire is bent in the form of a square and it encloses an area of 30.25 cm². If the same wire is bent to form a circle, then find the area of the circle. [Use $\pi = \frac{22}{7}$]
(A) 38.50 cm² (B) 42.25 cm²
(C) 35 cm² (D) 30.25 cm²
23. V is the mother of P. P is the brother of K. N, the brother of K, has only one child T. K is the only granddaughter of H. How is K related to T?
(A) Father's mother
(B) Mother
(C) Sister
(D) Father's sister
24. A and B can finish a work in 6 days and 4 days, respectively. A alone worked on it for 2 days. Thereafter, B joined him. How much total time was taken by them to finish the work?
(A) $3\frac{3}{5}$ days (B) $1\frac{3}{5}$ days
(C) $3\frac{1}{5}$ days (D) $4\frac{1}{5}$ days

25. In a certain code language, '22 55 77' is coded as 'rr pp tt' and '77 66 44' is coded as 'pp kk ll' and '66 11 22' is coded as 'kk tt zz'. How is '11' coded in the given language?

- (A) tt (B) zz
(C) kk (D) pp

26. A question and three statements labelled (I), (II) and (III) are given. You have to decide which statement(s) is/are sufficient to answer the question.

Question: Who is the tallest among A, B, C, D and E?

Statements:

- I. A is taller than E but shorter than D.
II. B is shorter than C but taller than E.
III. D is taller than C and A is taller than B.

- (A) Statements I and II together are sufficient.
(B) Statements I, II and III are insufficient.
(C) Statements I, II and III are sufficient.
(D) Statements I and III together are sufficient.

27. $\triangle ABC$ and $\triangle PQR$ are similar. The areas of these two triangles are 289 sq.cm and 576 sq.cm, respectively. If $PR = 12$ cm, then $AC = ?$

- (A) 8.5 cm (B) 12 cm
(C) 6 cm (D) 7.25 cm

28. Select the set in which the numbers are related in the same way as are the numbers of the following set. (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 /deleting /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)

- (9, 4, 85)
(6, 5, 41)
(A) (8, 2, 228) (B) (2, 15, 39)
(C) (3, 9, 19) (D) (1, 4, 5)

29. A pipe can fill a tank in 30 hours. Due to a leakage at the bottom, it is filled in 50 hours. How much time will the leakage take to empty the completely filled tank?

- (A) 60 hours (B) 85 hours
(C) 70 hours (D) 75 hours

30. TB 12 is related to QY 20 in a certain way. In the same way, ML 16 is related to JI 24. To which of the following is RD 20 related following the same logic?

- (A) BO 26 (B) OA 28
(C) OA 26 (D) AO 28

31. Find the mean from the following table (rounded off to two decimal places).

Score	Frequency
15	2
18	3
21	4
22	1
19	5
23	1
24	2

- (A) 17.56 (B) 20.82
(C) 18.44 (D) 19.78

32. 1 packet of biscuits costs Rs. 16, but a pack of 4 of the same packets of biscuits costs Rs. 56. What is the effective discount (in %) on the pack?

- (A) 8 (B) 10
(C) 7.5 (D) 12.5

33. Sohan is facing north-west. He turns 90° clockwise, then 360° anticlockwise and then 90° clockwise. In which direction is Sohan facing now?

- (A) South-West (B) North-west
(C) South-east (D) North-east

34. Find the value of $(a^3 + b^3 + c^3 - 3abc)$, where $a = 335$, $b = 215$ and $c = 180$.

- (A) 15452630 (B) 14502230
(C) 14472250 (D) 15421320

35. What is the sum of the digits placed at the even places when counted from left to right in the number 479812356?

- (A) 22 (B) 26
(C) 32 (D) 18

36. A bought a bag and a bottle for a total of Rs. 900. He sold the bottle at a profit of 12% and the bag at a profit of 20%. If he earned a total profit of Rs. 160.80, then calculate the cost price of the bottle.
(A) Rs. 320 (B) Rs. 300
(C) Rs. 200 (D) Rs. 240
37. Six people A, B, C, D, E and F are sitting around a circular table facing the centre. C sits second to the left of D. A is an immediate neighbour of D. F sits third to the left of A. B sits second to the left of E. Who sits to the immediate right of C?
(A) A (B) B
(C) E (D) F
38. $56\% \text{ of } 4800 - \{(9^3 \times 8) \div \sqrt{6561}\} - 48\% \text{ of } (81 \div 8) = ?$
(A) 2612.14 (B) 2611.86
(C) 2612.86 (D) 2611.14
39. A bag contains 50 kg of pulses. There are three pulses, A, B, and C, mixed in it in the ratio of 4: 3: 3. The prices of pulses A, B, and C are ₹80 per kg, ₹60 per kg and ₹80 per kg respectively. What will be the average cost of 1 kg mixture of
(A) ₹74 (B) ₹80
(C) ₹70 (D) ₹72
40. After interchanging the given two numbers, what will be the value of the given equation?
 $6 \text{ and } 2; 9 \div 2 \times 6 + 5 - 1$
(A) 13 (B) 7
(C) 5 (D) 9
41. Six bowlers B1, B2, B3, B4, B5 and B6 are compared on the basis of their bowling speed. Speed of B5 is more than B4 only. Speed of B1 is less than B2 and B3 more than B5 and B6. Which of the following can be the correct order of their speed?
(A) $B4 > B2 > B1 > B6 > B5 > B3$
(B) $B3 > B2 > B6 > B1 > B5 > B4$
(C) $B4 > B3 > B1 > B6 > B5 > B2$
(D) $B2 > B3 > B1 > B6 > B5 > B4$
42. A natural number n divides 732 and leaves 12 as a remainder. How many values of n are possible?
(A) 18 (B) 22
(C) 20 (D) 16
43. Five boxes A, B, C, D and E are kept one over the other but not necessarily in the same order. A is kept third from the bottom. Only one box is kept between A and B. There are only three boxes between D and B. C is placed immediately above B. How many boxes are placed between A and D?
(A) 3 (B) 0
(C) 2 (D) 1
44. Find the LCM of 20, 30, 45 and 65.
(A) 2000 (B) 2340
(C) 2240 (D) 180
45. Read the given statements and conclusions carefully and decide which of the conclusions logically follow(s) from the statements.
Statements:
1. All songs are old.
2. Some old are sweet.
Conclusions:
1. Some songs are sweet.
2. All songs are sweet.
3. Some sweets are old.
4. No old is a song.
(A) 2 (B) 3
(C) 1 (D) 4
46. 30% of the men are over the age of 25 years, and 80% are under or equal to 50 years of age. Football is played by 20% of all men. What percentage of football players are under or equal to 50 years of age, if 20% of men over the age of 50 years play football?
(A) 77% (B) 80%
(C) 71% (D) 82%
47. How many times are the hour and the minute hands of a clock at a right angle in a period of two days?
(A) 88 (B) 77
(C) 48 (D) 92

48. A boat can travel 21 km in 3 hours going upstream. It can travel 55 km in 5 hours going downstream. What is the speed of the stream?

- (A) 2.5 km/h
(B) 3.5 km/h
(C) 3 km/h
(D) 2 km/h

49. Eight years ago, the average age of A, B and C was 22 years. The average age of A and C after 2 years from now will be 32.5 years. What will be the age (in years) of B after 3 years from now?

- (A) 37 (B) 31
(C) 39 (D) 32

50. The length of the diagonals of a rhombus is 40 cm and 60 cm. What is the length of the side of the rhombus?

- (A) $50\sqrt{3}$ cm
(B) $20\sqrt{3}$ cm
(C) $10\sqrt{13}$ cm
(D) $40\sqrt{13}$ cm

51. A chord is drawn in a circle of radius 10 cm, if the distance of the chord from the centre is 6 cm, then the length of the chord (in cm) is:

- (A) 10 (B) 12
(C) 16 (D) 8

52. After interchanging the given two signs and two numbers, what will be the value of the given equation?

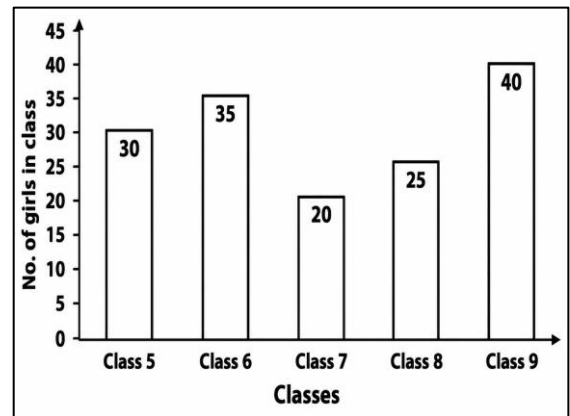
+ and -, 7 and 9; $8 \times 7 + 9 \div 1 - 5$

- (A) 70 (B) 60
(C) 40 (D) 10

53. A 280 m long train is running at a speed of 54 km/h. In how much time (in seconds) will it cross a man moving at 12 km/h in the same direction as that of the train?

- (A) 28 (B) 20
(C) 24 (D) 25

54. Study the given bar graph and calculate the average number of girls studying in the 5th, 6th and 8th grades.



- (A) 32.5 (B) 20.33
(C) 30 (D) 28.33

55. Two pipes A and B can fill a tank in 12 minutes and 24 minutes, respectively, while a third pipe C can empty the full tank in 32 minutes. All the three pipes are opened simultaneously. However, pipe C is closed 2 minutes before the tank is filled. In how much time (in minutes) will the tank be full?

- (A) 9 (B) 10
(C) 12 (D) 8

56. Calculate the mean from the following table.

Scores	Frequencies
0–10	2
10–20	4
20–30	12
30–40	21
40–50	6
50–60	3
60–70	2

- (A) 33.4 (B) 32.6
(C) 35.8 (D) 34.2

57. Select the option that will fill in the blank and complete the given series.

ABCD, _____, XYZA, XXXX, UVWX, UUUU

- (A) AAAA (B) DCBA
(C) DDDD (D) BCBA

58. A certain sum is divided between four people in the ratio 3 : 4 : 7 : 8, respectively. If the amount received by D is ₹408 more than the amount received by B, what is the total amount received by C and D?
 (A) ₹1,630 (B) ₹1,510
 (C) ₹1,610 (D) ₹1,530
59. Select the option that will fill in the blank and complete the given series. 3, 4, 0, 9, - 7, _____
 (A) - 32 (B) 18
 (C) 7 (D) 8
60. 'A @ B' means 'A is the father of B'.
 'A & B' means 'A is the mother of B'.
 'A # B' means 'A is the husband of B'.
 'A % B' means 'A is the sister of B'.
 If G % W # K & C @ M, then M is the grand Daughter of G's _____.
 (A) Sister (B) Mother
 (C) brother (D) Father
61. A shopkeeper mixed two varieties of rice of prices Rs. 36/kg and Rs. 24/kg in the ratio of 1 : 2, respectively. He sold the mixture for Rs. 2,100 to earn a profit of 25%. Find the quantity of rice of cost Rs. 24/kg used in the mixture.
 (A) 38 kg (B) 40 kg
 (C) 37.5 kg (D) 39 kg
62. A bronze article having a marked price of ₹1,000 is sold during a festive season sale after three successive discounts of 20% and 30% and 10%. What will be the amount (in ₹) to be paid by a customer if she buys the article during the festival season?
 (A) 508 (B) 564
 (C) 504 (D) 496
63. Among the four numbers given below, three are alike in some manner and one is different. Select the odd one.
 (A) 187 (B) 165
 (C) 143 (D) 159
64. A class of 25 students took an English test. 15 students had an average score of 80. The other students had an average score of 60. What is the average score of the whole class?
 (A) 72 (B) 74
 (C) 76 (D) 80
65. 15 identical solid spherical balls of radius 5 cm are melted to form a single sphere. In this process, 35% of the mass is wasted. What is the radius (in cm) of the single sphere that is now formed? [Use $\pi = 22/7$, and give your answer correct to two decimal places.]
 (A) 12.68 cm (B) 16.68 cm
 (C) 10.68 cm (D) 34.68 cm
66. A and B complete a work in 24 and 30 days, respectively, working 10 hours per day. The work is to be done in two shifts. The morning shift is for 6 hours and the evening shift is for 4 hours. On the first day, A works in the morning and B works in the evening, and they interchange their shifts every day. On which day did the work get completed?
 (A) 21st day (B) 24th day
 (C) 30th day (D) 27th day
67. Some numbers / markers in this question are coded using the letters according to the table below and the conditions given after it. Your answer is to satisfy those conditions.
- | Number / Sign | Code |
|---------------|------|
| @ | C |
| % | L |
| ! | N |
| 4 | D |
| 2 | M |
| 5 | B |
| # | R |
| ? | A |
| + | P |
| = | J |
| 3 | X |
| & | W |
| 7 | E |
| < | H |