

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE ASKED TO DO SO

Test Booklet Series

A

TEST BOOKLET

T. B. Code : ASG - 2/18

RECRUITMENT OF A. S. O.

(A) TEST OF REASONING & MENTAL ABILITY

(B) MATHEMATICS

Sl. No. 258857

Time Allowed : 1½ Hours

Maximum Marks : 100

: INSTRUCTIONS TO CANDIDATES :

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET DOES NOT HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET OF THE SAME SERIES ISSUED TO YOU.
2. ENCODE CLEARLY THE TEST BOOKLET SERIES A, B, C OR D, AS THE CASE MAY BE, IN THE APPROPRIATE PLACE IN THE ANSWER SHEET USING BALL POINT PEN (BLUE OR BLACK).
3. You have to enter your Roll No. on the Test Booklet in the Box provided alongside. DO NOT write anything else on the Test Booklet.
4. YOU ARE REQUIRED TO FILL UP & DARKEN ROLL NO., TEST BOOKLET / QUESTION BOOKLET SERIES IN THE ANSWER SHEET AS WELL AS FILL UP TEST BOOKLET / QUESTION BOOKLET SERIES AND SERIAL NO. AND ANSWER SHEET SERIAL NO. IN THE ATTENDANCE SHEET CAREFULLY. WRONGLY FILLED UP ANSWER SHEETS ARE LIABLE FOR REJECTION AT THE RISK OF THE CANDIDATE.
5. This Test Booklet contains 100 items (questions) i.e. Sl. No. 1 to 50 items (questions) for Test of Reasoning & Mental Ability & Sl. No. 51 to 100 items (questions) for Mathematics. Each item (question) comprises four responses (answers). You have to select the correct response (answer) which you want to mark (darken) on the Answer Sheet. In case, you feel that there is more than one correct response (answer), you should mark (darken) the response (answer) which you consider the best. In any case, choose ONLY ONE response (answer) for each item (question).
6. You have to mark (darken) all your responses (answers) ONLY on the separate Answer Sheet provided by using BALL POINT PEN (BLUE OR BLACK). See instructions in the Answer Sheet.
7. (i) All items (questions) carry equal marks. All items (questions) are compulsory. Your total marks will depend only on the number of correct responses (answers) marked by you in the Answer Sheet.
(ii) There will be negative markings for wrong responses (answers). 25 (twenty five) percentage of marks allotted to a particular item (question) will be deducted as negative marking for every response (answer).
(iii) If candidates give more than one response (answer), it will be treated as a wrong response (answer) even if one of the given responses (answers) happens to be correct and there will be same penalty as above to that item (question).
8. Before you proceed to mark (darken) in the Answer Sheet the responses (answers) to various items (questions) in the Test Booklet, you have to fill in some particulars in the Answer Sheet as per the instructions sent to you with your Admission Certificate.
9. After you have completed filling in all your responses (answers) on the Answer Sheet and after conclusion of the examination, you should hand over to the invigilator the Answer Sheet issued to you. You are allowed to take with you the candidate's copy / second page of the Answer Sheet along with the Test Booklet, after completion of the examination, for your reference.
10. Sheets for rough work are appended in the Test Booklet at the end.

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE ASKED TO DO SO

SEAL

TEST OF REASONING & MENTAL ABILITY

1. Arrange the words given below in a meaningful sequence :
 - (i) Presentation
 - (ii) Recommendation
 - (iii) Arrival
 - (iv) Discussion
 - (v) Introduction
 - (A) (v), (iii), (iv), (i), (ii)
 - (B) (iii), (v), (iv), (ii), (i)
 - (C) (iii), (v), (i), (iv), (ii)
 - (D) (v), (iii), (i), (ii), (iv)
2. How many such pairs of digits are there in the number 421579368 each of which has as many digits between them in the number as when they are arranged in ascending order ?
 - (A) None
 - (B) One
 - (C) Two
 - (D) Three
3. How many 4's are there preceded by 7 but not followed by 3 ?

5 9 3 2 1 7 4 2 6 9 7 4 6 1 3 2 8 7 4 1

3 8 3 2 5 6 7 4 3 9 5 8 2 0 1 8 7 4 6 3

 - (A) Four
 - (B) Three
 - (C) Six
 - (D) Five
4. If South-East becomes North, North-East becomes West and so on, what will West become ?
 - (A) North-East
 - (B) North-West
 - (C) South-East
 - (D) South-West
5. Seismography : Earthquake :: Tachometer : ?
 - (A) Landslides
 - (B) Strains
 - (C) Resistances
 - (D) Volcanoes

6. ABCDEFGHIJKLMNOPQR
STUVWXYZ

Which letter in this alphabet is the eighth letter to the right of the letter and which is tenth letter to the left of the last but one letter of the alphabet ?

- (A) X
- (B) W
- (C) I
- (D) H

7. If you write down all the numbers from 1 to 100, then how many times do you write 3 ?

- (A) 11
- (B) 18
- (C) 20
- (D) 21

8. P is the brother of Q and R. S is R's mother. T is P's father. Which of the following statements cannot be definitely true ?

- (A) T is Q's father
- (B) S is P's mother
- (C) P is S's son
- (D) Q is T's son

9. Pointing to a lady, a man said, "The son of her only brother is the brother of my wife." How is the lady related to the man ?

- (A) Mother's sister
- (B) Grandmother
- (C) Mother-in-law
- (D) Sister of father-in-law

10. There are six persons A, B, C, D, E and F. C is the sister of F. B is the brother of E's husband. D is the father of A and grandfather of F. There are two fathers, three brothers and a mother in the group. Who is the mother ?

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

11. A is B's sister. C is B's mother. D is C's father. E is D's mother. Then, how is A related to D ?

- (A) Grandfather
- (B) Grandmother
- (C) Daughter
- (D) Granddaughter

12. A woman introduces a man as the son of the brother of her mother. How is the man, related to the woman ?

- (A) Nephew
- (B) Son
- (C) Cousin
- (D) Uncle to Grandson

Direction (Q. Nos. 13-15) : Find the missing number in the following series of questions :

13. 4, 18, ?, 100, 180, 294, 448

- (A) 48
- (B) 50
- (C) 58
- (D) 60

14. 3, 5, 5, 19, 7, 41, 9, ?

- (A) 71
- (B) 61
- (C) 79
- (D) 69

15. 1, 2, 3, 10, ?, 9802

- (A) 99
- (B) 199

(C) 299

(D) 999

16. Two bus tickets from city A to B and three tickets from city A to C cost

Rs. 77 but three tickets from city A to

B and two tickets from city A to C

cost Rs. 73. What are the fares for

cities B and C from A ?

(A) Rs. 4, Rs. 23

(B) Rs. 13, Rs. 17

(C) Rs. 15, Rs. 14

(D) Rs. 17, Rs. 13

17. In a certain code language, '134'

means 'good and tasty' ; '478' means

'see good pictures' and '729' means

'picture and faint'.

Which of the following digits stands

for 'see' ?

(A) 9

(B) 2

(C) 1

(D) 8

18. 583 is related to 293, in the same way
as 488 is related to _____
- (A) 291
(B) 378
(C) 487
(D) 581
19. Sam ranked 9th from the top and 38th from the bottom in a class. How many students are there in the class ?
- (A) 45
(B) 47
(C) 46
(D) 48
20. If FRIEND is coded as HUMJTK, how is CANDLE written in that code ?
- (A) EDRIRL
(B) DCQHQB
(C) ESJFME
(D) DEQJQM
21. In a certain code language COMPUTER is written as RFUVQNPC. How will MEDICINE be written in that code language ?
- (A) MFEDJJOE
(B) EOJDEJFM
(C) MFEJDJOE
(D) EOJDJEFM
22. If ROSE is coded as 6821, CHAIR is coded as 73456 and PREACH is coded as 961473, what will be the code for SEARCH ?
- (A) 246173
(B) 214673
(C) 214763
(D) 216473
23. One morning after sunrise, Suresh was standing facing a pole. The shadow of the pole fell exactly to his right. To which direction was he facing ?
- (A) East
(B) West
(C) South
(D) Data is inadequate

24. Find the odd one out :

- (A) Crusade
- (B) Campaign
- (C) Expedition
- (D) Cruise

25. If in the word 'DISTURBANCE', the first letter is interchanged with the last letter, the second letter is interchanged with the tenth letter and so on, which letter would come after the letter T in the newly formed word ?

- (A) S
- (B) I
- (C) T
- (D) N

26. A tailor had a number of shirt pieces to cut from a roll of fabric. He cut each roll of equal length into 10 pieces. He cut at the rate of 45 cuts a minute. How many rolls would be cut in 24 minutes ?

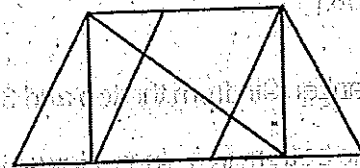
- (A) 32 rolls

- (B) 54 rolls

- (C) 108 rolls

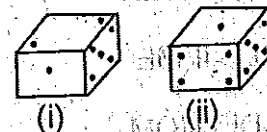
- (D) 120 rolls

27. Find the number of triangles in the given figure :



- (A) 8
- (B) 10
- (C) 12
- (D) 14

28. Observe the dots on a dice (one to six dots) in the following figures. How many dots are contained on the face opposite to that containing four dots ?



- (A) 2
- (B) 3
- (C) 6
- (D) Cannot be determined

29. A picture is copied onto a sheet of paper 8.5 inches by 10 inches. A 1.5 inch margin is left all around. What area in square inches does the picture cover?

(A) 76

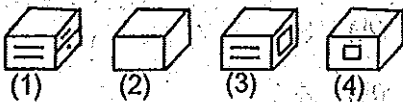
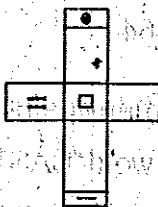
(B) 35

(C) 49

(D) 38.5

30. Choose the box that is similar to the box formed from the given sheet of

paper (X):



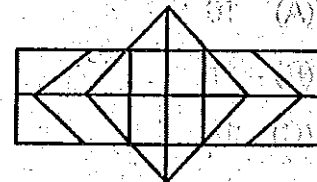
(A) 1, 2 & 3

(B) 1, 3 & 4

(C) 2 & 3

(D) 2, 3 & 4

31. Determine the number of rectangles and hexagons in the following figure :



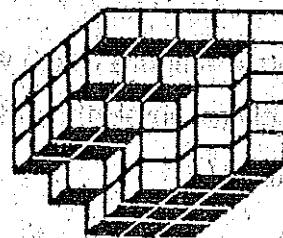
(A) 30, 5

(B) 32, 3

(C) 28, 5

(D) 30, 3

32. Count the number of cubes in the given figure :



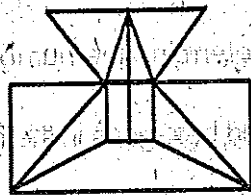
(A) 80

(B) 87

(C) 89

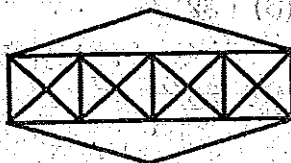
(D) 90

33. Find the minimum number of straight lines required to make the given figure :



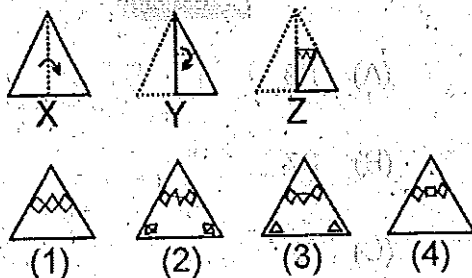
- (A) 16
(B) 17
(C) 18
(D) 19

34. Count the number of triangles and squares in the given figure :



- (A) 36 Triangles, 7 Squares
(B) 38 Triangles, 9 Squares
(C) 40 Triangles, 7 Squares
(D) 42 Triangles, 9 Squares

35. Choose a figure which would most closely resemble the unfolded form of figure (Z) :



- (A) 1

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

36. A dice is numbered from 1 to 6 in different ways. If 1 is opposite to 5 and 2 is opposite to 3, then :

- (A) 4 is adjacent to 3 and 6
(B) 2 is adjacent to 4 and 6
(C) 4 is adjacent to 5 and 6
(D) 6 is adjacent to 3 and 4

37. A cube is painted blue on two adjacent surfaces and black on the surfaces opposite to blue surfaces and green on the remaining faces.

Now the cube is cut into 216 smaller cubes of equal size :

- (A) 56
(B) 48
(C) 32
(D) 64

38. How many pairs of letters are there in the word "CASTRAPHONE" which have as many letters between them in the word as in the alphabet ?

- (A) 3
(B) 4
(C) 5
(D) 6

39. How many meaningful English words can be formed with the letters ESRO using each letter only once in each word?

- (A) None
- (B) One
- (C) Two
- (D) Three

40. 34 is related to 12; in the same way as 59 is related to :

- (A) 45
- (B) 38
- (C) 26
- (D) 14

41. What is the number of triangles that can be formed whose vertices are the vertices of an octagon but have only one side common with that of octagon?

- (A) 64
- (B) 32
- (C) 24
- (D) 16

Direction (Q. Nos. 42-45): You are given a combination of alphabets and/or numbers followed by four alternatives (1), (2), (3) and (4). Choose the alternative which closely resembles the mirror image of the given combination.

42. TARAIN1014A

- (1) A1014IART

(2) A1014IART

(3) A1014IART

(4) A1014IART

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

43. 1965INDOPAK

(1) 1965INDOPAK

(2) 1965INDOPAK

(3) 1965INDOPAK

(4) 1965INDOPAK

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

44. MALAYALAM

(1) MALAYALAM

(2) MALAYALAM

(3) MALAYALAM

(4) MALAYALAM

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

45. SUPERVISOR

(1) SUPERVISOR

(2) SUPERVISOR

(3) SUPERVISOR

(4) SUPERVISOR

(A) 1

(B) 2

(C) 3

(D) 4

46. Find the mirror image when the exact time shown in a clock was 8 : 40 :

(A) 3 : 20

(B) 3 : 30

(C) 8 : 20

(D) 9 : 20

47. Find the mirror image when the exact time shown in a clock was 6 : 07 :

(A) 5 : 63

(B) 6 : 53

(C) 5 : 53

(D) 8 : 53

48. In a row of boys, if A who is 10th from the left and B who is 9th from the right interchanges their

positions, A becomes 15th from the left. How many boys are there in the row ?

(A) 23

(B) 31

(C) 27

(D) 28

49. If Z = 52 and ACT = 48, then BAT will be equal to :

(A) 39

(B) 41

(C) 44

(D) 46

50. If the first and second letters in the word DEPRESSION were interchanged, also the third and the fourth letters, the fifth and the sixth letters and so on, which of the following would be the seventh letter from the right ?

(A) R

(B) O

(C) S

(D) P

MATHEMATICS

51. $\frac{1}{1.4} + \frac{1}{4.7} + \frac{1}{7.10} + \frac{1}{10.13} + \frac{1}{13.16} = ?$

(A) $\frac{1}{3}$

(B) $\frac{5}{16}$

(C) $\frac{3}{8}$

(D) $\frac{41}{7280}$

52. What least number of five digits is exactly divisible by 41?

(A) 10045

(B) 10004

(C) 10041

(D) 10025

53. HCF of $\frac{9}{10}$, $\frac{12}{25}$, $\frac{18}{35}$ and $\frac{21}{30}$ is:

(A) $\frac{3}{5}$

(B) $\frac{252}{5}$

(C) $\frac{3}{1400}$

(D) $\frac{63}{700}$

54. 0.04×0.0162 is equal to:

(A) 6.48×10^{-3}

(B) 6.48×10^{-5}

(C) 6.48×10^{-4}

(D) 6.48×10^{-6}

55. $\frac{(489 + 375)^2 - (489 - 375)^2}{489 \times 375} = ?$

(A) 144

(B) 864

(C) 2

(D) 4

56. $0.\overline{63} + 0.\overline{37} + 0.\overline{80} = ?$

(A) $1.\overline{79}$

(B) 1.80

(C) $1.\overline{80}$

(D) $1.\overline{81}$

57. Two numbers are respectively 20% and 50% more than a third number.

These two numbers are in the ratio:

(A) 2 : 5

(B) 4 : 5

(C) 6 : 7

(D) 3 : 5

58. A fruit seller had some apples. He (B) Rs. 30

sells 40% and still has 420 apples. (C) Rs. 40

Originally he had : (D) Rs. 60

(A) 588 apples

(B) 600 apples

(C) 672 apples

(D) 700 apples

59. 100 oranges are bought at the rate of Rs. 350 and sold at the rate of Rs. 48 per dozen. The percentage of profit or loss is :

(A) $14\frac{2}{7}\%$ gain

(B) 15% gain

(C) $14\frac{2}{7}\%$ loss

(D) 15% loss

60. The difference between the simple and compound interest on Rs. 4,000 for 2 years at 10% per annum is :

(A) Rs. 20

61. A and B can do a work in 8 days, B and C can do the same work in 12 days, A, B and C together can finish the work in 6 days. So

A and C together will do it in :

(A) 8 days

(B) 4 days

(C) 6 days

(D) 12 days

62. A man crosses a 600 m long street in 5 min. His speed in km per hour

is :

(A) 3.6

(B) 7.2

(C) 8.4

(D) 10

63. $(64)^2 \div \sqrt[3]{32768} = ?$

(A) 128

(B) 132

(C) 142

(D) 104

64. If α, β are the roots of a quadratic

equation such that $\alpha + \beta = 24$ and

$\alpha - \beta = 8$, then the equation is :

(A) $x^2 - 24x + 128 = 0$

(B) $x^2 + 24x + 128 = 0$

(C) $x^2 + 24x - 128 = 0$

(D) None of these

65. If $\sqrt{3}x - 2 = 2\sqrt{3} + 4$ then the value

of x is :

(A) $2(1 - \sqrt{3})$

(B) $2(1 + \sqrt{3})$

(C) $1 + \sqrt{3}$

(D) $1 - \sqrt{3}$

66. When $x^3 + 3x^2 - kx + 4$ is divided by

$x - 2$, the remainder is k. The value

of k is :

(A) 2

(B) 4

(C) 8

(D) 6

67. If $(2x + 5y) : (5x - 7y) = 5 : 3$ then $x : y$

is :

(A) 50 : 19

(B) 56 : 63

(C) 48 : 56

(D) 16 : 25

68. The fourth proportional to 5, 4,

25 is :

(A) 5

(B) 10

(C) 15

(D) 20

69. If $\begin{vmatrix} x+3y & y \\ 7-x & 4 \end{vmatrix} = \begin{vmatrix} 4 & -1 \\ 0 & 4 \end{vmatrix}$ then the values of x and y are :

(A) $-7, -1$

(B) $7, -1$

(C) $-7, 1$

(D) $1, 7$

70. If $M = \begin{bmatrix} 2 & 0 \\ 1 & 2 \end{bmatrix}$ and $N = \begin{bmatrix} 2 & 0 \\ -1 & 2 \end{bmatrix}$ then

$M + 2N$ is :

(A) $\begin{bmatrix} 6 & 0 \\ 1 & 6 \end{bmatrix}$

(B) $\begin{bmatrix} 6 & 0 \\ -1 & 6 \end{bmatrix}$

(C) $\begin{bmatrix} 4 & 0 \\ -1 & 4 \end{bmatrix}$

(D) None of these

71. For which value of p , the pair of equations $4x + py + 8 = 0$, $x + y + 1 = 0$ has not unique solution :

(A) 4

(B) 2

(C) 1

(D) 3

72. The discriminant of the quadratic equation $2x^2 - 4x + 3 = 0$ is :

(A) -4

(B) 2

(C) 3

(D) -8

73. If a pair of linear equations is given by $a_1x + b_1y + c_1 = 0$ and $a_2x + b_2y + c_2 = 0$ where $a_1/a_2 \neq b_1/b_2$ then :

(A) The pair of linear equations is consistent

(B) The pair of linear equations is inconsistent

(C) The pair of linear equations is independent

(D) The pair of linear equations is dependent

74. In an A. P. the 5th and 8th terms are

11 and 17 respectively. The 15th term

is :

(A) 31

(B) 41

(C) 45

(D) 47

75. Which of the following are in

A. P. ?

(A) $\frac{1}{\sqrt{3}} + \sqrt{3} + \frac{5}{\sqrt{3}} + \dots$

(B) $\frac{1}{\sqrt{3}} - (\sqrt{3} + 1) + \frac{5}{\sqrt{3}} + \dots$

(C) $\frac{1}{\sqrt{2}} + \sqrt{5} + \frac{\sqrt{3}}{2} + \dots$

(D) $\frac{1}{\sqrt{3}+1} + \sqrt{3} + \frac{5}{\sqrt{3}+2} + \dots$

76. The sum of three numbers in A. P. is

36 and their product is 1140, then one

of the number is :

(A) 19

(B) 10

(C) 6

(D) 3

77. Find the sum of first 11 terms of an

A. P. of which the 6th term is 45 :

(A) 445

(B) 495

(C) 497

(D) 485

78. A computer company must have 20

programmers to handle system

programming jobs and 30

programmers for application

programming. Of those hired, 5 are

expected to perform jobs of both

types. How many programmers must

be hired ?

(A) 50

(B) 45

(C) 35

(D) 25

79. For an event if 'p' be the probability of the happening of the event and 'q' be the probability of not happening the event then which one of the following is true?

- (A) $p > q$
- (B) $p + q = 1$
- (C) $p < q$
- (D) $p + q = 0$

80. Two dice are thrown. Find the probability that getting a sum of 6:

- (A) $5/36$
- (B) $1/36$
- (C) $1/6$
- (D) $5/18$

81. Three coins are tossed. Find the probability of all heads:

- (A) $1/8$
- (B) $3/8$
- (C) $5/8$
- (D) $7/8$

82. The least number which should be added to 2497 so that the sum is exactly divisible by 5, 6, 4 and 3 is:

- (A) 3
- (B) 13
- (C) 23
- (D) 33

83. If a set has n elements then the power set of that set has _____ elements.

- (A) n^2
- (B) 2^n
- (C) $2n$
- (D) None of these

84. Find the chance of picking an even number from the series of natural numbers 1 to 100:

- (A) $\frac{1}{100}$
- (B) $\frac{1}{50}$
- (C) $\frac{1}{2}$
- (D) None of these

85. An urn contains a thoroughly mixed set of 10 white, 15 red and 25 black marbles. Determine the probability of drawing a white or a red marble :

(A) $1/5$

(B) $1/2$

(C) $3/10$

(D) None of the above

86. A solid metal cylinder of radius 14 cm and height 21 cm is melted down and recast into spheres of radius 3.5 cm.

So the number of spheres that can be made is :

(A) 48

(B) 54

(C) 63

(D) 72

87. How many times will the wheel of diameter 105 cm rotate in covering a distance of 330 m ?

(A) 100 revolutions

(B) 110 revolutions

(C) 90 revolutions

(D) 105 revolutions

88. The area of the segment of a circle, if the angle of the sector is 120° and the radius of the circle is 21 cm is given by :

(A) 190.953 sq. cm.

(B) 180 sq. cm.

(C) 271.047 sq. cm.

(D) 117.041 sq. cm.

89. A single letter is selected at random from the word PROBABILITY. The probability that it is a vowel is :

(A) $\frac{3}{11}$

(B) $\frac{4}{11}$

(C) $\frac{2}{11}$

(D) 0

90. A and B are two events such that $P(A) = 0.3$ and $P(A \cup B) = 0.8$. If A and B are independent then P(B) is :

(A) $\frac{2}{3}$

(B) $\frac{3}{8}$

(C) $\frac{2}{7}$

(D) None of these

91. A bag contains 5 brown and 4 white socks. A man pulls out two socks. The probability that they are of the same colour is :

(A) $\frac{5}{108}$

(B) $\frac{1}{6}$

(C) $\frac{5}{18}$

(D) $\frac{4}{9}$

92. Two dice are thrown simultaneously. The probability of getting a total score 5 is :

(A) $\frac{1}{8}$

(B) $\frac{1}{12}$

(C) $\frac{1}{9}$

(D) None of these

93. A bag contains 8 red and 6 blue balls. If 5 balls are drawn at random, what is the probability that 3 are red and 2 are blue ?

(A) $\frac{60}{143}$

(B) $\frac{59}{141}$

(C) $\frac{60}{141}$

(D) $\frac{59}{143}$

94. The G. M. of the numbers $3, 3^2, 3^3, \dots, 3^n$ is :

(A) $3^{2/n}$

(B) $3^{\frac{n-1}{2}}$

(C) $3^{\frac{n}{2}}$

(D) $3^{\frac{n+1}{2}}$

95. In a class of 100 students there are 70 boys whose average marks in a single subject are 75. If the average mark of the complete class is 72, then the average mark of the girls is :

(A) 73
(B) 65
(C) 68
(D) 74

96. The sum of 7 variates is 12. If six of them are 5, 13, 9, 17, 14 and 10, the 7th variate is :

(A) 12
(B) 16
(C) 17
(D) 18

97. The median of the following distribution is :

Weight in nearest kg.	No. of students
46	7
48	5
50	8
52	12

Weight in nearest kg.	No. of students
53	10
54	2
55	1

(A) 50
(B) 53
(C) 52
(D) 54

98. The mode of the following frequency distribution is :

Marks obtained (out of 10)	No. of students
0	3
2	5
3	12
4	18
6	21
7	8
9	2
10	1

(A) 21
(B) 8
(C) 6
(D) None of these

99. The variance of the first n natural numbers is:

- (A) $\frac{n^2 - 1}{12}$
 (B) $\frac{n^2 - 1}{6}$
 (C) $\frac{n^2 + 1}{6}$
 (D) $\frac{n^2 + 1}{12}$

100. The lower quartile range for the data 9, 11, 15, 19, 17, 13, 7 is:

- (A) 7
 (B) 11
 (C) 9
 (D) 8

98. The mode of the following frequency distribution is

Weight (kg)	Number of students
7	1
8	2
9	4
10	8
11	10
12	5
13	2
14	1

- (A) 12
 (B) 8
 (C) 10
 (D) 11

97. The sum of x variates 12, 11, 6, 10, 13, 14 and 10 is

- (A) 12
 (B) 10
 (C) 11
 (D) 13

96. The median of the following

Weight (kg)	Number of students
7	1
8	2
9	4
10	8
11	10
12	5
13	2
14	1

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