CLASS - VIII

1) A library has an average of 510 visitors on Sunday and 240 on other days. The average number of visitors per day in a Month of 30 days bigining with Sunday is :

1) 250   2) 276   3) 280   4) 285

2) If $(a^m)^n = a^{m^n}$ then expressing 'm' interms of 'n', m =

1) $(n-1)^{\frac{1}{n}}$ 2) $(n)^{\frac{1}{n+1}}$ 3) $(n)^{\frac{1}{n-1}}$ 4) $(n-1)^n$

3) $x^{-1} = 4^{-1} + 5^{-1}$ then x =

1) $\frac{20}{9}$ 2) $\frac{1}{9}$ 3) $\frac{9}{20}$ 4) $\frac{11}{9}$

4) If the mean of x and $1/x$ is M and mean of y and $1/y$ is N then mean of x^2, y^2, $1/x^2$, $1/y^2$ is :

1) $M^2 + N^2 - 1$ 2) $M^2 - N^2 + 1$ 3) $M^2 - N^2 - 1$ 4) $M^2 - N + 3$

5) The figure that can be drawn when only two diagonals are given ......

1) Square   2) Rhombus   3) Rectangle   4) 1 and 2

6) If the mean of a, b, c is 'x' and $ab + bc + ca = 0$ then mean of a^2, b^2, c^2 is:

1) x^2 2) $3x^2$ 3) $6x^2$ 4) $9x^2$

7) What is the difference in the areas of a Square and a Rhombus, where as the diagonals of Rhombus are 8cm and 6cm; the Square has the same side as that of Rhombus

1) 4sq.cm   2) 3 sq.cm   3) 2 sq.cm   4) 1 sq.cm

8) Less than Ogive is a ...

1) Straight line   2) Falling curve   3) Raising curve   4) Polygon

9) $\sqrt{1 + \frac{55}{729}} = 1 + \frac{x}{27}$ then x = ...

1) 1   2) 3   3) 5   4) 7

10) If (a+b) : (b+c) : (c+a) = 6 : 7 : 8 and (a+b+c) = 14 then c = ...

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

2

11) If $2^x = 3^y = 6^{-z}$ then $\left(\frac{1}{x}+\frac{1}{y}+\frac{1}{z}\right) = $ ....

1) 1　　　　　2) 0　　　　　3) $-\frac{1}{2}$　　　　　4) $\frac{3}{2}$

12) Author of the famous book 'How to Solve It' is ....
   1) George Cantor　　　　　2) Rubrik
   3) George Polya　　　　　4) Kaprekar

13) $1+\frac{1}{2}+\frac{1}{4}+\frac{1}{8}+\frac{1}{16}+\frac{1}{32}+$ .... = ...

1) 4　　　　　2) 2　　　　　3) $>\frac{3}{2}$　　　4) Can not be determined

14) A. The sides 4cm, 4cm, and 9 cm form an isosceles triangle.
   B. The sides 4cm, 5cm and 3 cm form a right angle triangle.
   Then the truth statement :
   1) A only　　　　　2) B only　　　3) Both A and B　　　4)A and B are false

15) " Between two rational numbers, there will be infinite number of rational
   numbers"- This is called :
   1) Reflexive property　　　　　2) Symmetric
   3) Transitive　　　　　4) Density property

16) $0.\overline{2}+0.\overline{3}+0.\overline{4} = $ ......

1) $0.\overline{09}$　　　　2) 9/10　　　　3) 1　　　　4) $0.0\overline{9}$

17) If the mean of 'n' observations $x_1, x_2, x_3, ..., x_n$ is $\overline{x}$, then the mean of 'n'
   observations $2x_1+3, 2x_2+3, 2x_3+3, ... 2x_n+3$ is ....
   1) $2\overline{x}$　　　　2) $2\overline{x}+3$　　　3) $(2\overline{x}+n)/n$　　　4) $(2\overline{x}-n)/n$

18) A man driving a moped at 42 kmph reaches his destination 5 minutes late to an
   appointment. If he had driven at 60kmph he would have reached the place 4
   minutes before time. If he starts at 9 A.M. what is the correct time he has to
   reach the place?
   1) 9.30A.M.　　　　2) 9.25A.M.　　　　3) 9.21 A.M.　　　　4) 9.45 A.M.

19) The sum of 9 consecutive whole numbers is 99, then the largest number of these
   whole numbers is .....
   1) 15　　　　　2) 17　　　　　3) 19　　　　　4) 21

20) A person incurs 5% loss by selling a watch for Rs.1140. At what price should the watch be sold to earn 5% profit? (in Rs.)
   1) 1260   2) 1250   3)1320   4) 1280

21) Range of first 'n' even natural numbers is .....
   1) $2n + 2$ 2) $2n - 2$ 3) $n - 2$ 4) $n - 1$

22) The cube root of the reciprocal of 27^2 is .....
   1) $\frac{1}{6}$ 2) 6   3) $\frac{1}{9}$ 4) $\frac{1}{27}$

23) The square root of $41-\sqrt{21+\sqrt{19-\sqrt{9}}}$ is....
   1) 6   2) 9   3) 30   4) 36

24) The third proportion for $(a^2 - b^2)$ and $(a + b)$ is
   1) $a - b$ 2) $a + b$ 3) $a^2 + b^2$ 4) $\frac{a+b}{a-b}$

25) Number of diagonals in a n-sided polygon ....
   1) $\frac{n(n-1)}{2}$ 2) $\frac{n(n+1)}{2}$ 3) $\frac{n(n-3)}{2}$ 4) $\frac{n(n+3)}{2}$

26) The decimal representation of rational number is in the form of
   A. terminating decimal   B. non-terminating decimal
   C. Recurring decimal   then the truth statements are ....
   1) A or B   2) B or C   3) A or (B and C)   4) A and (B or C)

27) There are 60 multiple choice questions in this test. Two marks are awarded for each correct answer and one mark is deducted for every wrong answer. If a student got 45 marks after answering all the questions then the number of correct answers in the paper is ....
   1) 40   2) 45   3) 35   4) 30

28) If $a = \frac{1}{b}$, $b = \frac{1}{c}$ and $c = \frac{7}{5}$ then $(a \times b) \times c$ is ......
   1) $\frac{5}{7}$ 2) $\frac{7}{5}$ 3) $\frac{49}{25}$ 4) $\frac{25}{49}$

29) If S, A and D respectively represent 'one side', 'one angle' and 'one diagonal' of a Quadrilateral, then with the usual notation of symbols, construction of quadrilateral is not possible for ...

   1) S.S.S.S.A   2) S.S.S.S.D   3) S.A.S.D.A   4) S.A.S.A.S

30) A square field with side 30m is surrounded by a path of uniform width. The area of the path is 256 sq.m. then width of the path is

   1) 4m   2) 3m   3) 2m   4) 1m

31) Mode of 'n' natural numbers ......

   1) 0   2) (n/2)th term   3) (n+1)/2th term   4) Doesn't exist

32) If $\frac{p}{q} = \frac{r}{s} = \frac{t}{u} \neq$ ....

   1) $\sqrt[3]{\frac{prt}{qsu}}$ 2) $\frac{p+r+t}{q+s+u}$ 3) $\frac{3p-2r+t}{3q-2s+u}$ 4) $\frac{p^2+r^2+t^2}{q^2+s^2+u^2}$

33) The close approximation to the ratio 1.615 : 1 is known as ...

   1) Golden Ratio   2) Fibonacci ratio

   3) Kaprekar ratio   4) Ratio in proportion

34) If $a^m . a^n = a^{mn}$ then $m(n-2) + n(m-2) =$ ....

   1) 0   2) 1   3) -1   4) $\frac{1}{2}$

35) The wrong number in the series 2, 9, 28, 65, 126, 216, 344 is

   1) 2   2) 28   3) 126   4) 216

36) Which of the following is true?

   1) Cube of an even number is an odd number

   2) The cube of a two-digit number may be a three digit number

   3) Cube of a single digit number may be a single digit number

   4) There is no perfect cube which ends with 8

37) The possible number of bold type English Alphabets(Capital) which have point symmetry:

   1) 4   2) 5   3) 6   4) 2

38) If the perimeter of an isosceles right triangle is $(6 + 3\sqrt{2})$ m, then area of the triangle:

1) 4.5 sq.m   2) 5.4 sq.m   3) 9 sq.m   4) 5 sq.m

39) The ratio of the area of a square to that of the square drawn on its diagonal is

1) 3 : 4   2) 2 : 5   3) 1 : 2   4) 3 : 5

40) A student attempted to draw a quadrilateral PLAY given that PL=3cm, LA=4cm, AY=4.5cm, PY=2cm and LY =6cm. But he was not able to draw. The best reason

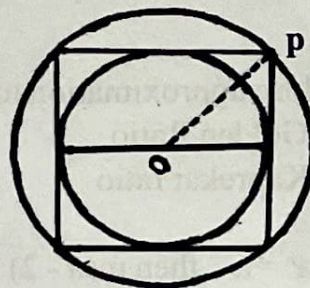1) AL+AY>LY   2) YL-YA<AY
3) PL+PY<YL   4) At least one angle has to be given

41) By selling an article at 2/5 of the marked price, there is a loss of 25%. The ratio of the the marked price and the cost price is ....

1) 2 : 5   2) 5 : 2   3) 8 : 15   4) 15 : 8

42) From the adjecent figure the ratio of the areas of the inscribed circle to the circumscribed circle is

1) 1 : 2   2) 1 : 3
3) 2 : 3   4) 3 : 4

43) A rational number between -5 and +3 is

1) $\sqrt{4}$ 2) $\sqrt{12}$ 3) $\sqrt{13}$ 4) $\sqrt{14}$

44) The ratio of the length of parallel sides of a trapezium is 4:3 and the distance between them is 8 cm and the area is 42 sq.cm then the longer parallel side is (in cm.)

1) 4   2) 4.5   3) 7.5   4) 6

45) The mean of 'n' observations is $\overline{x}$. By an error one observation is registered as 'a' instead of 'b' then the correct mean is :

1) $(n\overline{x}+a-b)/n$ 2) $(n\overline{x}-a+b)/n-1$

3) $(n\overline{x}-a-b)/n-1$ 4) $[n\overline{x}-(a-b)]/n$

46) A quadrilateral of area 104cm² has one of its diagonal of length 16cm. and length of one of the perpendicular on it from vertex equal to 9cm. What is the length of the perpendicular from opposite vertex (in cm.)?

1) 6   2) 4   3) 8   4) 12

47) $1^3 + 2^3 + 3^3 + 4^3 + \ldots + 12^3 =$

     1) $(6 \times 13)^2$ 2) $(4 \times 12)^2$ 3) $(6 \times 12 \times 13)$ 4) $(12 \times 13)^2$

48) $a \neq b \neq c \neq d$ are four +ve integers such that $a^3 + b^3 = c^3 + d^3$, then each of the sum is equal to

     1) 6174   2) 1729   3) 1887   4) 1972

49) If 50% of (a - b) = 30 % of (a + b), then what % of 'a' is 'b'?

     1) 20%   2) 25%   3) 15%   4) 40%

50) If $2^a \times 3^b = 576$ then $\dfrac{a}{b}$ is ....

     1) 2   2) 3   3) $\frac{1}{2}$ 4) $\frac{1}{3}$

51) Howmany articles were sold?

     A) Total profit earned was Rs.1596
     B) Cost price per article was Rs 632
     C) Selling price per article was Rs. 765

To get the answer, the statements needed

     1) Any two of the three   2) A and B only
     3) B and C only   4) All A, B and C

52) ABCD is a square of side 14cm. P, Q, R, S are the mid points of AB, BC, CD, DA. APS, BPQ, CQR and DRS are sectors. Area of the shaded region is

     1) 196sq.cm   2) 154sq.cm
     3) 42sq.cm   4) 24sq.cm
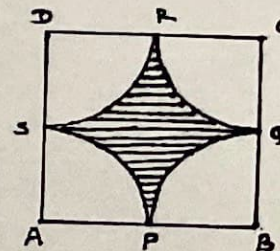
53) A sum of money amounts to Rs. 6690 after 3 years and to Rs. 10,035 after 6 years on Compound interest. Then the sum is (in Rs.)

     1) 4,500   2) 4,460   3) 6,400   4) 4,600

54) The method of drawing enlarged or reduced similar figures is called

     1) Tessellation   2) Symmetry   3) Dialation   4) Order of symmetry

55) If the perimeter of a rectangle and a square, each is equal to 80 cm and the difference of their areas is 100 sq.cm, then sides of the rectangle are ......

    1) 25cm, 15cm   2) 28cm, 12cm

    3) 30cm, 10cm   4)35cm, 15cm

56) Rs 1210 were divided among A,B,C so that A:B=5:4 and B:C=9:10, then C gets....

    1) Rs. 340   2) Rs.400   3) Rs.450   4) Rs.475

57) Find the number that differs with others   1, 5, 14, 30, 50, 55, 91.

    1) 5   2) 50   3) 55   4) 91

58) The sides of Eternal triangle are

    1)$m^2 - n^2$, $2mn$, $m^2 + n^2$ 2) $m - n$, $m^2 - n^2$, $m + n$

    3) $m + n$, $2\sqrt{mn}$, $m - n$ 4) $\dfrac{m}{n}$, mn, $m + n$

59) If $15.7\overline{32}$ is expressed in the form of p/q then p - q = ...

    1) 14855   2) 14785   3)14585   4) 13685

60) Solution for $\dfrac{5x+2}{2x+3} = \dfrac{12}{7}$ is ..

    1) 4   2) 2   3) 0   4) -1