

Time: 1Hour

NAME :

Marks :40

Four alternatives are given for each of the incomplete statement or questions. Choose the correct answer.

1) The lines representing $2x + 3y - 9 = 0$ & $4x + 9y - 10 = 0$ are

- A) Intersecting lines B) Perpendicular lines C) Parallel lines D) Coincident lines

2) In an A.P. 1,3, 5,..... 91, the 10th term from the last term is

- A) 19 B) 31 C) 73 D) 75

3) Discriminant of $ax^2 + bx + c = 0$ is

- A) $b^2 - 4ac$ B) $b^2 + 4ac$ C) $b^2 - 4c$ D) $b^2 - ac$

4) Value of $\sin 90^\circ + \tan 45^\circ$ is

- A) $\frac{1}{2}$ B) 0 C) 1 D) 2

5) Distance between the origin and a point (x,y) is

- A) $\sqrt{x^2 - y^2}$ B) $\sqrt{x^2 + y^2}$ C) $x^2 + y^2$ D) (0,0)

6) Angle between radius and tangent of a circle is

- A) 10° B) 50° C) 90° D) 180°

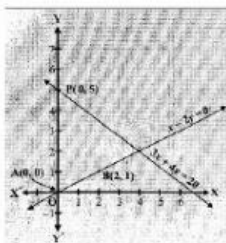
7) Total Surface Area of a sphere of radius 7cm is

- A) 216cm^2 B) 416cm^2 C) 516cm^2 D) 616cm^2

8) A toy is in the form of a cone mounted on a hemisphere of same radius. Total surface area of the toy is

- A) TSA of cone B) CSA of Cone + TSA of hemisphere
C) CSA of cone + CSA of hemisphere D) TSA of hemisphere + TSA of cone

9) Solutions of the equations $x - 2y = 0$ and $3x + 4y = 20$ are,



- A) $x = 2$ and $y = 4$ B) $x = 4$ and $y = 2$ C) $x = 3$ and $y = 2$ D) $x = 1$ and $y = 1$

10) Sum of the first 25 odd numbers is

- A) 25 B) 50 C) 125 D) 625

11) If $3x^2 - kx + 3 = 0$ has two equal roots, then the positive value of k is

- A) 6 B) 4 C) 2 D) 1

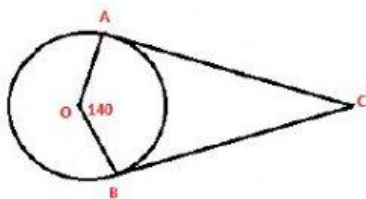
12) Value of $\sec^2\theta - \tan^2\theta$ is

- A) 0 B) 1 C) 2 D) 3

13) Distance between the points (x_1, y_1) and (x_2, y_2) is

- A) $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$ B) $d = \sqrt{(x_2 - x_1)^2 - (y_2 - y_1)^2}$
C) $d = \sqrt{(x_2 + x_1)^2 + (y_2 + y_1)^2}$ D) $d = \sqrt{x^2 + y^2}$

14) In the figure, AC and BC are the tangents. If $\angle AOB = 140^\circ$, then the value of $\angle ACB$ is



- A) 140° B) 100° C) 90° D) 40°

15) Curved surface area of a Cylinder is

- A) $2\pi rh$ B) $2\pi r(r+h)$ C) πrl D) $\pi r^2 l$

16) If Areas of two similar triangles are in the ratio 81 : 36, then the ratio of the corresponding sides is

- A) 81:36 B) 6 : 9 C) 9 : 6 D) 16 : 6

17) In the equations $x + y = 9$ and $x - y = 5$, values of x and y are

- A) $x=3$ and $y=2$ b) $x=4$ and $y=5$ C) $x=7$ and $y=2$ d) $x=2$ and $y=7$

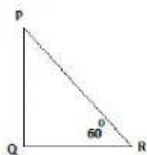
18) The roots of the quadratic equation $2x^2 - 8x + 3 = 0$ are

- A) Real and distinct B) Real and equal C) No real roots D) Imaginary roots

19) Value of $\cos 48^\circ - \sin 42^\circ$ is

- A) 48 B) 42 C) 1 D) 0

20) In $\triangle PQR$, $PQ \perp QR$, $\angle PRQ = 60^\circ$, $QR=5$, value of PR is



- A) 5 B) 10 C) 15 D) 20

21) Midpoint of the line joining the points $(-6, 2)$ and $(-8, 4)$ is

- A) $(5, 2)$ B) $(-7, 3)$ C) $(2, 5)$ D) $(3, -7)$

22) Relationship between Mean, Median and Mode is

A) Mode = 3Median - 2Mean

B) Mode = 2Median - 3Mean

C) Mean = Median + Mode

D) Median = 3Median + 2Mean

23) Which one of the following is a Pythagorean triplet?

A) 3,4,6

B) 5,12,13

C) 12,14,16

D) 8, 15,16

24) The total surface area of a cone whose radius = 7cm and slant height = 13cm is

A) 286cm^2

B) 400cm^2

C) 420cm^2

D) 440cm^2

25) Product of two consecutive odd numbers is 63. Equation form of this is,

A) $x^2 + 2x + 63 = 0$

B) $x^2 - 2x - 63 = 0$

C) $x^2 + 2x - 63 = 0$

D) $x^2 - 63 = 0$

26) Roots of $x^2 - 4x = 0$ are

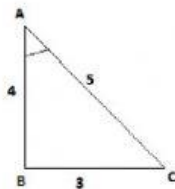
A) 4 and -4

B) 4 and 0

C) 2 and 0

D) 0 and -4

27) In the figure $\cos A$ is ,



A) $\frac{3}{4}$

B) $\frac{4}{5}$

C) $\frac{3}{5}$

D) $\frac{5}{4}$

28) If $\tan \theta = \frac{5}{12}$, then $\cot \theta$ is

A) $\frac{5}{12}$

B) $\frac{12}{5}$

C) $\frac{12}{13}$

D) 12

29) The distance of the co-ordinate P(5,7) from the y-axis is

A) 5

B) 7

C) 1

D) 12

30) If the total score of the students in a test is 350, Mean = 10, the number of students in that class is

A) 35

B) 3.5

C) 175

D) 700

31) Which one of the following is a quadratic equation?

A) $x^3 - 2x^2 + 3 = 0$

B) $x^2 - 2x + 5 = x^2$

C) $x(x+2) = 0$

D) $x + 2 = 0$

32) If the volume of a cone is 50cm^3 , then the volume of the cylinder of same base and height is

A) 300cm^3

B) 200cm^3

C) 150cm^3

D) 50cm^3

33) Which one of the following is an A.P.?

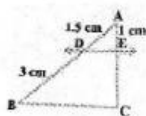
A) 3,5,8,11...

B) 4,7,10,13,...

C) 4,8,16,32,...

D) -8,-5,-3,-1,.....

34) In the given figure value of EC is,



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

35) The length of the tangents drawn from an external point to a circle is

- A) perpendicular B) parallel C) equal D) not equal

36) In a right triangle ABC, if $\angle B = 90^\circ$, $AB = 8\text{cm}$, $AC = 17\text{cm}$, then the length of BC is

- A) 8cm B) 15cm C) 17cm D) 25cm

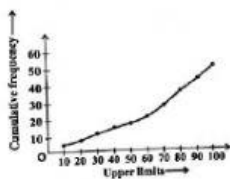
37) Angle formed by the line of sight with the horizontal when the point is below the horizontal level is

- A) angle of elevation B) angle of depression C) equal angle D) Right angle

38) Formula to find the Mode is

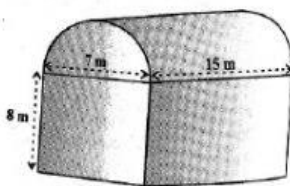
- A) $\frac{\sum f_i x_i}{\sum f_i}$ B) $l + \left(\frac{\frac{n}{2} - cf}{f} \right) \times h$ C) $l + \left(\frac{f_1 - f_0}{2f_1 - f_0 - f_2} \right) \times h$ D) None of these

39) The given graph represents



- A) Histogram B) Pie chart C) Less than Ogive D) More than Ogive

40) Volume of the solid given below is,



- A) volume of cube + volume of cylinder B) volume of cuboid + volume of cylinder
C) volume of cube + volume of hemisphere D) volume of cuboid + $\frac{1}{2}$ volume of cylinder

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OMR ANSWER SHEET



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QUESTION PAPER VERSION

☐ A
 ☐ B
 ☐ C
 ☐ D

ABSENT SHADE AB

☐

Qn.No	Answer			
1	A	B	C	D
2	A	B	C	D
3	A	B	C	D
4	A	B	C	D
5	A	B	C	D
6	A	B	C	D
7	A	B	C	D
8	A	B	C	D
9	A	B	C	D
10	A	B	C	D

Qn.No	Answer			
11	A	B	C	D
12	A	B	C	D
13	A	B	C	D
14	A	B	C	D
15	A	B	C	D
16	A	B	C	D
17	A	B	C	D
18	A	B	C	D
19	A	B	C	D
20	A	B	C	D

Qn.No	Answer			
21	A	B	C	D
22	A	B	C	D
23	A	B	C	D
24	A	B	C	D
25	A	B	C	D
26	A	B	C	D
27	A	B	C	D
28	A	B	C	D
29	A	B	C	D
30	A	B	C	D

Qn.No	Answer			
31	A	B	C	D
32	A	B	C	D
33	A	B	C	D
34	A	B	C	D
35	A	B	C	D
36	A	B	C	D
37	A	B	C	D
38	A	B	C	D
39	A	B	C	D
40	A	B	C	D

Student Signature

Room invigilator Signature