Question Paper – 1

ONE MARK QUESTIONS

1. In an AP, if a_p and a_q are consecutive terms, then write the common difference.
2. Write the formula to find the volume of frustum of cone.
3. Write discriminant of the quadratic equation $px^2 + qx - r = 0$
4. State Pythagoras converse theorem.
5. If $a_1x+b_1y+c_1=0$ and $a_2x+b_2y+c_2=0$ are representing the parallel lines, then write the relationship between their corresponding coefficients.
6. In a circle if the angle between two radii is 120^0. Then find the angle of inclination between the pair of tangents drawn to circle.

TWO MARK QUESTIONS

7. Find the nth term of an AP 4, 2, 0, -2……
8. If $\sin\theta = \frac{3}{4}$, find $\cos\theta$ and $\tan\theta$
9. Solve: $2x + y - 6 = 0$ and $4x - 2y - 4 = 0$ by elimination method.
10. Solve: $x^2 - 12x + 27 = 0$ using formula
11. Draw a circle of radius 3.5 cm. from a point 5 cm away from the its center, construct a pair of tangents to the circle
12. Find the distance between the origin and the point (5,5)
13. Find the discriminant of the equation $2x^2 - 5x - 1 = 0$ and write the nature of the roots.

THREE MARK QUESTIONS

14. Prove that "Tangents drawn from an external point to the circle are equal".
15. Construct a triangle of sides 6cm, 7cm and 8 cm and then a triangle similar to it whose sides are $\frac{3}{5}$ of the corresponding sides of the first triangle.
16. The following table gives the production yield per hectare of wheat of 100 farms of a village. Change the distribution to **"more than type"** distribution, and draw its ogive.

production yield(in kg/ha)	50-55	55-60	60-65	65-70	70-75	75-80	120-140
Number of land	2	8	12	24	6	5	3

17. Find the mode of the following data.

C.I	0-5	5-10	10-15	15-20	20-25
Frequency	8	9	5	3	1

THREE MARK QUESTIONS

18. Solve: $2x - y = 2$ and $4x - y = 4$ graphically.
19. Prove that "the ratio of the areas of two similar triangles is equal to the square of the ratio of their corresponding sides".

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