

Class 11 Maths Chapter 11 Conic Sections MCQs For Practice

1. The equation of the circle passing through the point (2, 4) and having its centre at the intersection of the lines $x - y = 4$ and $2x + 3y + 7 = 0$ is

- (a) $(x - 1)^2 + (y - 3)^2 = 50$
- (b) $x^2 + y^2 - 2x + 6y - 40 = 0$
- (c) $(x - 1)^2 + (y - 3)^2 = (\sqrt{50})^2$
- (d) All of the above

2. The second degree equation $ax^2 + by^2 + 2hxy + 2gx + 2fy + c = 0$ will represent a circle if

- (a) $a = b$
- (b) no term with xy
- (c) $h = 0$
- (d) All of the above

3. The equation of the parabola with vertex at the origin, passing through the point P(3, -4) and symmetric about the y-axis

- (a) $x^2 = -4ay$
- (b) $x^2 = 4ay$
- (c) $4x^2 + 9y = 0$
- (d) $4x^2 - 9y = 0$

4. The equation of the directrix of the parabola whose vertex at (0, 0) and focus at (0, 2) is

- (a) $x = 2$
- (b) $y = 2$
- (c) $x = -2$
- (d) $y = -2$

5. The equation of the ellipse whose foci are (0, 6) and (0, -6) and the length of minor axis is 16 is

- (a) $x^2/64 + y^2/100 = 1$
- (b) $x^2/100 + y^2/64 = 1$
- (c) $x^2/144 + y^2/100 = 1$
- (d) $x^2/100 + y^2/144 = 1$

6. The length of the major and minor axes of an ellipse whose eccentricity is $\frac{4}{5}$ and vertices at (0, ± 10)

- (a) Major axis = 6 units and Minor axis = 5 units
- (b) Major axis = 12 units and Minor axis = 20 units
- (c) Major axis = 100 units and Minor axis = 36 units
- (d) Major axis = 20 units and Minor axis = 12 units

7. The eccentricity of the ellipse whose latus rectum is one half of its minor axis

- (a) $1/2$
- (b) $\sqrt{3}/2$
- (c) $2/3$
- (d) $3/2$

8. The equation of the hyperbola whose vertices are $(\pm 2, 0)$ and the foci are at $(\pm 3, 0)$ is

- (a) $x^2/4 - y^2/5 = 1$
- (b) $x^2/5 - y^2/4 = 1$
- (c) $x^2/16 - y^2/25 = 1$
- (d) $x^2/25 - y^2/16 = 1$

9. The equation of the hyperbola whose foci are $(\pm 5, 0)$ and the transverse axis is of length 8 is

- (a) $x^2/16 - y^2/4 = 1$
- (b) $x^2/25 - y^2/16 = 1$
- (c) $x^2/16 - y^2/9 = 1$
- (d) $x^2/8 - y^2/6 = 1$

10. A parabolic reflector is 9 cm deep and its diameter is 24 cm. At what distance from the vertex of the parabolic reflector the source of light should be kept so as to get maximum range of reflection?

- (a) 6 cm
- (b) 5.5 cm
- (c) 4.5 cm
- (d) 4 cm

***** ANSWER KEYS*****

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|-----------|-----------|-----------|-----------|------------|
| Q.1 - (b) | Q.2 - (d) | Q.3 - (c) | Q.4 - (d) | Q.5 - (a) |
| Q.6 - (d) | Q.7 - (b) | Q.8 - (a) | Q.9 - (c) | Q.10 - (d) |