

1. If the equation of parabola $y^2 - 8y - x + 19 = 0$ find
- (i) Vertex
 (A) (0, 0) (B) (3, 4)
 (C) (4, 4) (D) (4, 3)
- (ii) Focus
 (A) (1, 4) (B) $\left(\frac{3}{4}, 3\right)$
 (C) $\left(\frac{13}{4}, 4\right)$ (D) $\left(3, \frac{4}{3}\right)$
- (iii) Directrix
 (A) $x = \frac{11}{4}$ (B) $y = \frac{11}{4}$
 (C) $x = \frac{4}{11}$ (D) $y = \frac{4}{11}$
2. The portion of point (1, 4) with respect to the parabola $y^2 + 9 - 6y = 5x$, is
 (A) On curve / Parabola
 (B) Outside Parabola
 (C) Inside Parabola
 (D) None of these
3. The two ends of latusrectum of a parabola are the points (3, 6) and (-5, 6) then the pfocus is
 (A) (1, 6) (B) (-1, 6)
 (C) (1, -6) (D) (-1, -6)
4. The equation of $y^2 - 2x - 2y + 5 = 0$ represents
 (A) Circle centred at (1, 1)
 (B) Parabola with directrix at $x = \frac{3}{2}$
 (C) Parabola with focus at (1, 2)
 (D) Parabola with directrix at $x = -\frac{1}{2}$
5. If (0, 4) and (0, 2) are respectively, the vertex and focus of a parabola, then its equation is
 (A) $x^2 + 8y = 32$ (B) $y^2 + 8y = 32$
 (C) $x^2 - 8y = 32$ (D) $y^2 - 8y = 32$
6. The coordinates of a point on the parabola $y^2 = 8x$ whose focal distance is 4, is
 (A) 2, 4 (B) (4, 2)
 (C) (-2, -4) (D) (4, -2)
7. An equilateral triangle is inscribed in a parabola $y^2 = 4ax$ whose vertex is at the vertex of the parabola. The length of each side of the triangle is
 (A) $2a\sqrt{3}$ (B) $4a\sqrt{3}$
 (C) $6a\sqrt{3}$ (D) $8a\sqrt{3}$
8. In the parabola $y^2 = 4ax$, the length of chord passing through the vertex and inclined to the axis at an angle $\left(\frac{\pi}{4}\right)$ is
 (A) $2a\sqrt{2}$ (B) $\sqrt{2}a$
 (C) $2a$ (D) $4a\sqrt{2}$
- DIRECTION (9 - 11):** Consider the equation of parabola $25[(x - 2)^2 + (y - 4)^2] = (4x - 3y + 12)^2$
9. The coordinates of the focus are
 (A) (3, -2) (B) (2, 4)
 (C) (-1, 1) (D) None of these
10. Length of latusrectum is
 (A) $\frac{8}{5}$ (B) $\frac{4}{5}$
 (C) $\frac{16}{5}$ (D) None of these
11. The equation of the axis is
 (A) $4x + 3y + 15 = 0$ (B) $4x + 3y + 10 = 0$
 (C) $3x + 4y - 22 = 0$ (D) None of these

12. The equation of the latusrectum is
(A) $4x - 3y + 4 = 0$ (B) $4x - 3y + 8 = 0$
(C) $4x + 3y + 7 = 0$ (D) None of these
13. What is the equation of parabola whose vertex is at $(0, 0)$ and focus is at $(0, -2)$?
(A) $y^2 + 8x = 0$ (B) $y^2 - 8x = 0$
(C) $x^2 + 8y = 0$ (D) $x^2 - 8y = 0$
14. The focus of the parabola $y^2 - x - 2y + z = 0$ is
(A) $\frac{3}{4}$ (B) $\frac{5}{4}$
(C) $\frac{4}{5}$ (D) $\frac{1}{5}$
15. Find the coordinates of a point on the parabola $y^2 = 8x$ and whose focal distance is 4
(A) $(2, -4)$ (B) $(2, +4)$
(C) $(2, \pm 4)$ (D) $(-2, \pm 4)$