

# PARABOLA

16

1m	2m	3m	5m
1(U)	1(U)	1(S)	–

## 1 MARK QUESTIONS

(Understanding)

1. If the length of the latus rectum of parabola  $y^2 = kx$  is 4, find  $k$ .
2. If the length of the latus rectum of parabola  $x^2 = 4ky$  is 8, find  $k$ .
3. Find the focus of the parabola  $x^2 = 8y$ .
4. Find the length of the latus rectum of the parabola  $y^2 + 4x = 0$ .
5. Find the equation of axis for the parabola  $3x^2 = 4y$ .
6. Find the equation of the directrix of the parabola  $x^2 = 12y$ .
7. Find the length of the latus rectum of the parabola  $x^2 = -36y$ .
8. Find the focus of the parabola  $y^2 = 4x$ .
9. Find the equation of the directrix of the parabola  $y^2 = -6x$ .
10. Find the equation of the directrix of the parabola  $y^2 = 18x$ .
11. Find the equation of the directrix of the parabola  $x^2 = -24y$ .
12. Find the equation of the axis for the parabola  $x^2 = 15y$ .
13. Find the length of the latus rectum of the parabola  $x^2 + 8y = 0$ .
14. Find the focus of the parabola  $x^2 = -16y$ .
15. Find the value of  $k$  if the length of the latus rectum of the parabola  $x^2 = -2ky$  is 8.

## 2 MARK QUESTIONS

(Understanding)

1. Find the equation of the parabola given that its vertex is  $(0,0)$  and focus is  $(4,0)$ .
2. Find the equation of the parabola given that its vertex is  $(0,0)$  and directrix is  $y = -3$ .
3. Find the equation of the parabola given that its focus is  $(0,1)$  and the directrix is  $y = -1$ .
4. Find the equation of the parabola whose focus is  $(0, -3)$  and the directrix is  $y = 3$ .

**QUESTION BANK****II PUC**

5. Find the equation of the parabola whose focus is (0,6) and vertex is (0,0).
6. Find the equation of the parabola given that its vertex is (0, 0) and focus is  $(-3, 0)$
7. Find the equation of the parabola given that its vertex is (0, 0) and focus  $\left(0, -\frac{5}{2}\right)$
8. Find the equation of the parabola given that focus is  $\left(\frac{5}{3}, 0\right)$  and vertex is (0, 0).
9. Find the equation of the parabola given that focus is  $\left(0, -\frac{3}{5}\right)$  and directrix is  $5y = 3$ .

**3 MARK QUESTIONS****(Skill)**

1. Find the equation of the parabola whose focus is (2, 0) and equation of the directrix is  $x = -2$ .
2. Find the equation of the parabola whose focus is  $(-2, -4)$  and directrix is  $y = 1$ .
3. Find the equation of the parabola whose vertex is (0,0) and axis is the y-axis and passes through  $\left(\frac{1}{2}, 2\right)$ .
4. Find the equation of the parabola whose vertex is (0,0) and axis is the y-axis and passes through  $(-1, -3)$ .
5. Find the equation of the parabola whose vertex is (0,0) and axis along the x-axis and passing through the point P(2,3).
6. Find the equation of the parabola whose vertex is (0, 0) and axis is the y axis and passing through  $(-2, -5)$ .
7. Find the equation of the parabola whose vertex is (0, 0) and axis is the x axis and passing through  $(-2, 3)$ .
8. Find the equation of the parabola whose vertex is (0, 0) and axis is the y axis and passing through  $(4, -3)$ .

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