CLASS-11
CHAPTER-10
CONIC SECTIONS

# EXERCISE - 10.3

In each of the exercises 1 to 9, find the coordinates of the foci, the vertices, the length of major axis, the minor axis, the eccentricity and the length of the latus rectum of the elipse

1. $\frac{x^2}{36} + \frac{y^2}{16}$=1
2. $\frac{x^4}{4} + \frac{y^2}{25}$=1
3. $\frac{x^2}{16} + \frac{y^2}{9}$=1
4. $\frac{x^2}{25} + \frac{y^2}{100}$=1
5. $\frac{x^2}{49} + \frac{y^2}{36}$=1
6. $\frac{x^2}{100} + \frac{y^2}{400}$=1
7. $36x^2 + 4y^2 = 144$
8. $16x^2 + y^2 = 16$
9. $4x^2 + 9y^2 = 36$

In each of the following Exercises 10 to 20, find the equatian for the ellipse that satisfies the given conditions:

10. vertices $(\pm 5, 0)$, foci$(\pm 4, 0)$
11. vertices$(\pm 13)$, foci$(\pm 5)$
12. vertices$(\pm 6, 0)$, foci$(\pm 4, 0)$
13. Ends of major axis $(\pm 3, 0)$, ends of minor axis $(0, \pm 2)$
14. Ends of major axis $(0, \pm\sqrt{5})$, ends of minor axis$(\pm 1, 0)$
15. Length of major axis 26, foci$(\pm 5, 0)$

16. Length of minor axis 16, foci $(0, \pm 6)$

17. Foci $(\pm 3, 0), a = 4$

18. $b = 3, c = 4$, centre at the origin; foci on the $x$-axis.

19. Centre at $(0, 0)$ major axis on the $y$-axis and passes through the points $(3, 2)$ and $(1, 6)$

20. Major axis on the $x$ -axis and passes through the points $(4, 3)$ and $(6, 2)$.