DPP – 3 (Basic Math)

Q 1.   Distance between foci of ellipse $\frac{x^2}{25} + \frac{y^2}{9} = 1$ is
(a) 9   (b) 7   (c) 6   (d) 8
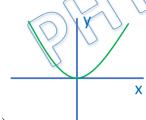
Q 2.   Equation of parabola opening up passing through (3,4) and having vertex at origin is
(a) $x = \frac{4}{9} y^2$ (b) $y = \frac{2}{9} x^2$ (c) $y = \frac{4}{3} x^2$ (d) $y = \frac{4}{9} x^2$

Q 3.   Which of the following is an equation of circle:
(a) $x^2 + y^2 = 2^2$ (b) $x^2 y + y^2 = 2^2$ (c) $xyz + y^2 = 2^2$ (d) None of these

Q 4.   Which of the following is an equation of parabola:
(a) $x^2 = 4ay$ (b) $y^2 = 2^2 bx$ (c) $x^2 = cy$ (d) All of these

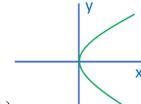Q 5.   Which of the following is an equation of ellipse:
(a) $\frac{x^2}{a} + \frac{y^2}{b} = 1$ (b) $\frac{y^2}{a^2} + \frac{x^2}{b^2} = 1$ (c) $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ (d) All of these

Q 6.   Which of the following is not an equation of circle:
(a) $(x - 2)^2 + (y - 1)^2 = 2^2$ (b) $(x + 2)^2 + (y - 4)^2 = 4$
(c) $(x - 2)^2 + y^2 = 2^2$ (d) None of these

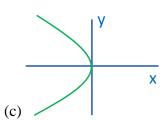Q 7.   Curve of $Y = 3x^2$ can be:

(a)   (b)

(c)   (d)
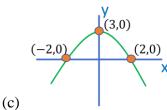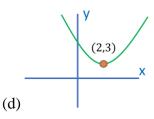
Q 8.   Curve of $\frac{x^2}{4} + \frac{y^2}{9} = 1$ is:

(a) — ellipse with points (2,0), (-3,0), (3,0), (-2,0)

(b) — ellipse with points (3,0), (-2,0), (2,0), (-3,0)

(c) — downward parabola with points (3,0), (-2,0), (2,0)

(d) — upward parabola with point (2,3)

Q 9. Find radius r and coordinate of centre C of the circle $(x - 3)^2 + y^2 = 4$:
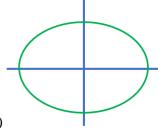
(a) $r = 2 \ unit, \ C(0,3)$

(b) $r = 4 \ unit, \ C(3,0)$

(c) $r = 2 \ unit, \ C(3,0)$

(d) $r = 2 \ unit, \ C(-3,0)$

Q 10. Which of the following is an equation of hyperbola:

(a) $xy = 1$

(b) $\dfrac{x^2}{a} - \dfrac{y^2}{b} = 1$

(c) $\dfrac{y^2}{a} - \dfrac{x^2}{b} = 1$

(d) All of these

Q 11. Equation of circle which has radius 4 unit and centre is C(-1,3):

(a) $(x - 1)^2 + (y - 3)^2 = 4^2$

(b) $(x + 1)^2 + (y - 3)^2 = 16$

(c) $(x + 1)^2 + (y + 3)^2 = 4^2$

(d) None of these

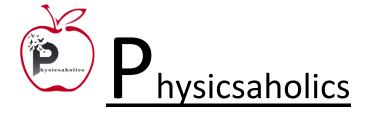Q 12. Curve of hyperbola is:

(a)

(b)

(c)

(d) None of these

Q 13. A particle is moving in such a way that sum of its distances from two fixed points always remains constant . Path of particle is

(a) circle

(b) parabola

(c) ellipse

(d) hyperbola

Answer Key

Q.1 d	Q.2 d	Q.3 a	Q.4 d	Q.5 d
Q.6 d	Q.7 a	Q.8 b	Q.9 c	Q.10 d
Q.11 b	Q.12 a	Q.13 c		