**Circle**

**MCQ Single Correct**

1. The radius of a circle, having minimum area, which touches the curve  and the lines  is :

(1)  (2) 

(3)  (4)  **[2017]**

2. If one of the diameters of the circle , given by the equation , , is a chord of the circle S , whose centre is at (-3,2), then the radius of S is :

(1)  (2) 5

(3) 10 (4)  **[2016]**

3. The number of common tangents to the circles  and , is :

(1) 2 (2) 3

(3) 4 (4) 1 **[2015]**

4. Let C be the circle with centre at (1,1) and radius =1. If T is the circle centred at (0,y) , passing through origin and touching the circle C externally, then the radius of T is equal to

(1)  (2) 

(3)  (4)  **[2014]**

5. The circle passing through (1,-2) and touching the axis of x at also passes through the point

(1)  (2) 

(3)  (4)  **[2013]**

6. The length of the diameter of the circle which touches the x-axis at the point (1,0) and passes through the point (2,3)

(1) 6/5 (2) 5/3

(3) 10/3 (4) 3/5 **[2012]**

7. The equation of the circle passing through the points (1,0) and (0,1) and having the smallest radius is

(1)  (2) 

(3)  (4)  **[2011]**

8. The circle intersects the line at two distinct points if

(1)  (2) 

(3)  (4)  **[2010]**

9. If P and Q are the points of intersection of the circles and , then there is a circle passing through P, Q and (1,1) for

(1) all values of p (2) all except one value of p

(3) all except two values of p (4) exactly one value of p **[2009]**

10. The point diametrically opposite to the point P (1,0) on the circle is

(1) (3,-4) (2) (-3,4)

(3) (-3,-4) (4) (3,4) **[2008]**

11. Consider a family of circles which are passing through the point (-1,1) and are tangent to x-axis. If (h,k) are the co-ordinates of the centre of the circles, then the set of values of k is given by the interval

(1)  (2) 

(3)  (4)  **[2007]**

12. If the lines  and are two diameters of a circle of area  square units, the equation of the circle is

(1)  (2) 

(3)  (4)  **[2006]**

13. Let C be the circle with centre (0,0) and radius 3 units. The equation of the locus of the mid points of the chords of the circle C that subtend an angle of at its centre is

(1)  (2) 

(3)  (4)  **[2006]**

14. If the circles and  intersect in two distinct points P and Q then the line passes through P and Q for

(1) exactly one value of a (2) no value of a

(3) infinitely many values of a (4) exactly two values of a **[2005]**

15. A circle touches the x-axis and also touches the circle with centre at (0,3) and radius 2. The locus of the centre of the circle is

(1) an ellipse (2) a circle

(3) a hyperbola (4) a parabola **[2005]**

16. If a circle passes through the point (a,b) and cuts the circle  orthogonally, then the equation of the locus of its centre is **[2005]**

(1)  (2) 

(3)  (4) 

17. If a circle passes through the point (a,b) and cuts the circle  orthogonally, then the locus of its centre is **[2004]**

(1)  (2) 

(3)  (4) 

18. A variable circle passes through the fixed point A (p,q) and touches x-axis. The locus of the other end of the diameter through A is

(1)  (2) 

(3)  (4)  **[2004]**

19. If the lines  and lie along diameters of a circle of circumference , then the equation of the circle is

(1)  (2) 

(3)  (4)  **[2004]**

20. The intercept on the line y = x by the circle is AB. Equation of the circle on AB as a diameter is

(1)  (2) 

(3)  (4)  **[2004]**

21. If the two circles and intersect in two distinct points, then

(1)  (2) 

(3) r = 2 (4)  **[2003]**

22. The lines  and are diameters of a circle having area as 154 sq units. Then the equation of the circle is

(1)  (2) 

(3)  (4)  **[2003]**

23. If the chord  of the circle  subtends an angle of measure  at the major segment of the circle then the value of m is

(1)  (2) 

(3)  (4) none of these **[2002]**

24. The centres of a set of circles, each of radius 3, lie on the circle . The locus of any point in the set is

(1)  (2) 

(3)  (4)  **[2002]**

25. The centre of the circle passing through (0,0) and (1,0) and touching the circle  is

(1)  (2) 

(3)  (4)  **[2002]**

26. The equation of a circle with origin as a centre and passing through equilateral triangle whose median is of length 3a is

(1)  (2) 

(3)  (4)  **[2002]**