

Topics : Circle, Permutation & Combination

Type of Questions

M.M., Min.

Single choice Objective (no negative marking) Q.,1,2,3,4

(3 marks, 3 min.)

[12, 12]

Multiple choice objective (no negative marking) Q.5

(5 marks, 4 min.)

[5, 4]

Subjective Questions (no negative marking) Q. 6,7,8

(4 marks, 5 min.)

[12, 15]

- Equation of the chord of circle $x^2 + y^2 - 6x + 8y = 0$ with $(5, -3)$ as its middle point is
 (A) $2x + y - 7 = 0$ (B) $x - 2y - 11 = 0$ (C) $x + y - 2 = 0$ (D) $x - y - 8 = 0$
- If the radius of the circumcircle of the triangle TPQ, where PQ is chord of contact corresponding to point T with respect to circle $x^2 + y^2 - 2x + 4y - 11 = 0$, is 6 unit, then distance of T from the director circle of the given circle is :
 (A) 6 (B) 12 (C) $6\sqrt{2}$ (D) $12 - 4\sqrt{2}$
- The internal common tangents of the circles $x^2 + y^2 - 4x - 4y + 4 = 0$ and $x^2 + y^2 + 6x + 6y + 9 = 0$ are :
 (A) $x - y = 2$ & $x + 2y = 3$ (B) $2x - 3y = 4$ & $x + 5 = 5$
 (C) $x + 1 = 0$ & $y - 3 = 0$ (D) None of these
- The length of transverse common tangent of the circles $x^2 + y^2 = 1$ and $(x - h)^2 + y^2 = 1$ is $2\sqrt{3}$, then the value of 'h' is :
 (A) ± 2 (B) ± 4 (C) $\sqrt{3}$ (D) None of these
- Equation of a circle of radius 2 and touching the circles $x^2 + y^2 - 4|x| = 0$ is
 (A) $x^2 + y^2 + 2\sqrt{3}y + 2 = 0$ (B) $x^2 + y^2 + 4\sqrt{3}y + 8 = 0$
 (C) $x^2 + y^2 - 4\sqrt{3}y + 8 = 0$ (D) None of these
- If the letters of the word 'SHWETA' are written in all possible ways and then are arranged as in a dictionary, then the rank of the word 'SHWETA' is
- How many numbers divisible by 5 and lying between 4000 and 5000 can be formed from the digits 4, 5, 6, 7 and 8 (Repetition of digits is allowed).
- How many car number plates can be made if each plate contains 2 different letters of english alphabet, followed by 3 different digits.

Answers Key

1. (A) 2. (D) 3. (D) 4. (B)
5. (B, C) 6. 430 7. 25 8. 468000