

**Answer Ex-I****SINGLE CORRECT (OBJECTIVE QUESTIONS)**

1. C	2. B	3. B	4. A	5. C	6. D	7. A
8. D	9. A	10. A	11. B	12. C	13. D	14. C
15. A	16. B	17. A	18. B	19. C	20. C	21. C
22. C	23. B	24. A	25. D	26. C	27. A	28. D
29. C	30. A	31. A	32. B	33. B	34. A	35. C
36. A	37. B	38. C	39. B	40. C	41. B	42. A
43. C	44. D	45. C	46. A	47. D	48. D	49. C
50. A	51. B	52. B	53. A			

**Answer Ex-II****MULTIPLE CORRECT (OBJECTIVE QUESTIONS)**

1. A,C,D    2. B,C,D    3. A,C    4. A,B,C    5. B,C    6. C,D    7. B,C  
 8. A, B, C,D

**Answer Ex-III****SUBJECTIVE QUESTIONS**

1. square of side, 2 ;  $x^2 + y^2 = 1$ ;  $x^2 + y^2 = 2$     2. zero, zero    4. 32 sq. unit  
 5.  $2(x^2 + y^2) + 6x - 17y - 6 = 0$     6.  $x - y = 0$ ;  $x + 7y = 0$     7. (5, 1) & (-1, 5)  
 8.  $4x - 3y - 25 = 0$     OR     $3x + 4y - 25 = 0$     9. (i) (11, 16) (ii) (11, 8), (iii) (11, 12)  
 10.  $x^2 + y^2 - 2x - 2y + 1 = 0$     OR     $x^2 + y^2 - 42x + 38y - 39 = 0$   
 11. (i)  $3x - 4y = 21$ ;  $4x + 3y = 3$ ; (ii) A(0, 1) and B (-1, -6); (iii)  $90^\circ$ ,  $5(\sqrt{2} \pm 1)$  units  
       (iv) 25 sq. units, 12.5 sq. units ; (v)  $x^2 + y^2 + x + 5y - 6$ , x intercept 5; y intercept 7  
 12.  $x^2 + y^2 - 2x - 2y = 0$     13.  $2x - 2y - 3 = 0$     14.  $a^2(x^2 + y^2) = 4x^2y^2$   
 15.  $x^2 + y^2 = a^2 + b^2$ ;  $r = \sqrt{a^2 + b^2}$     16. (-4, 2),  $x^2 + y^2 - 2x - 6y - 15 = 0$   
 17. 63

18.  $x - 7y = 2$ ,  $7x + y = 14$ ;  $(x - 1)^2 + (y - 7)^2 = 3^2$ ;  $(x - 3)^2 + (y + 7)^2 = 3^2$ ;

$(x - 9)^2 + (y - 1)^2 = 3^2$ ;  $(x + 5)^2 + (y + 1)^2 = 3^2$

19.  $x^2 + y^2 - 6x + 4y = 0$  OR  $x^2 + y^2 + 2x - 8y + 4 = 0$

20.  $x^2 + y^2 + x - 6y + 3 = 0$

21. 64

24.  $x^2 + y^2 + 16x + 14y - 12 = 0$

25.  $(-4, 4)$ ;  $(-1/2, 1/2)$

26. (a)  $x^2 + y^2 + 4x - 6y = 0$ ;  $k = 1$ ; (b)  $x^2 + y^2 = 64$

27.  $5x^2 + 5y^2 - 8x - 14y - 32 = 0$

28.  $9x - 10y + 7 = 0$ ; radical axis

## Answer Ex-IV

## ADVANCED SUBJECTIVE QUESTIONS

1.  $x^2 + y^2 + 7x - 11y + 38 = 0$

4.  $x^2 + y^2 + 6x - 3y = 0$

5.  $\left(2, \frac{23}{3}\right)$

6.  $x^2 + y^2 - 3x - 3y + 4 = 0$  7.  $x + y = 2$  8.  $(1, 0)$  &  $(1/2, 1/2)$ ;  $r = \frac{1}{2\sqrt{2}}$

9.  $4x^2 + 4y^2 + 6x + 10y - 1 = 0$

10. 40

11. 10

12.  $r = 15$

13. 19

15. 75 sq. unit

16.  $x^2 + y^2 - 12x - 12y + 64 = 0$

17.  $x^2 + y^2 \pm a\sqrt{2}x = 0$

18. 19

## Answer Ex-V

## JEE PROBLEMS

1. (a) C (b) A

2. (a)  $6x - 8y + 25 = 0$  &  $6x - 8y - 25 = 0$ ; (b)  $(-9/2, 2)$

(c)  $x^2 + y^2 + 4x - 12 = 0$ ,  $T_1: \sqrt{3}x - y + 2\sqrt{3} + 4 = 0$ ,  $T_2: \sqrt{3}x - y + 2\sqrt{3} - 4 = 0$  (D.C.T.)

$T_3: x + \sqrt{3}y - 2 = 0$ ,  $T_4: x + \sqrt{3}y + 6 = 0$  (T.C.T)

3. (a) A; (b)  $OA = 3(3 + \sqrt{10})$

4. (a)  $x^2 + y^2 + 14x - 6y + 6 = 0$ ;

(b)  $2px + 2qy = r$

5. (a) C; (b) A

6. C

7.  $2x^2 + 2y^2 - 10x - 5y + 1 = 0$

8. D

9. (a) B; (b) A

10. (a) B; (b) C; (c) (i) D, (ii) A, (iii) D

11. (a) B; (b) 8

12. 3 13. D

14. 0002

15. A

16. A

17. D