

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

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|-------|-------|-------|-------|-------|-------|-------|-------|
| 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)**

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| 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 |
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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° , $5(\sqrt{2} \pm 1)$ 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. $(1, 0) \text{ \& } (1/2, 1/2) ; r = \frac{1}{2\sqrt{2}}$
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