

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

|       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|
| 1. D  | 2. A  | 3. C  | 4. A  | 5. D  | 6. C  | 7. C  |
| 8. D  | 9. B  | 10. A | 11. D | 12. D | 13. C | 14. C |
| 15. D | 16. B | 17. A | 18. D | 19. C | 20. A | 21. A |
| 22. A | 23. B | 24. C | 25. D | 26. B | 27. D | 28. C |
| 29. B | 30. D | 31. B | 32. B | 33. B | 34. D | 35. D |
| 36. A | 37. C | 38. C | 39. A | 40. D | 41. B | 42. B |
| 43. D | 44. B | 45. D | 46. C | 47. A | 48. D | 49. A |
| 50. D | 51. D | 52. C | 53. B | 54. A | 55. B | 56. D |
| 57. C | 58. C |       |       |       |       |       |

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

|            |        |        |        |        |        |
|------------|--------|--------|--------|--------|--------|
| 1. A,B,C,D | 2. A,C | 3. A,C | 4. A,B | 5. A,B | 6. A,C |
|------------|--------|--------|--------|--------|--------|

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

1. (a)  $\left(2, \frac{8}{3}\right)$ ; (b) 4      2. (33, 26)      3.  $K = 7$  or  $31/9$       4.  $1 : 2$ ;  $Q(-5, -3)$
5.  $83x - 35y + 92 = 0$       6.  $2x + y - 1 = 0$       7.  $\left(\frac{7}{2}, \frac{13}{2}\right)$  or  $\left(-\frac{3}{2}, \frac{3}{2}\right)$       9.  $y = x^2$  and  $y = 2 - x^2$
10.  $x - y = 0$       11. 91 sq. units      12. 6 units
13.  $\frac{3}{2}$  sq. units,  $\left(3, 3\frac{3}{4}\right)$ , isosceles      14. 3 units      15.  $c = -4$ ;  $B(2, 0)$ ;  $D(4, 4)$
16.  $x + 5y + 5\sqrt{2} = 0$  or  $x + 5y - 5\sqrt{2} = 0$       17. 400 sq. units
18.  $x - 3y - 31 = 0$  or  $3x + y + 7 = 0$       19.  $14x + 23y = 40$       20. 4
21.  $x - 5 = 0$       22. 47      23.  $0 < \theta < \frac{5\pi}{6} - \tan^{-1} 3$
24. 533      25.  $(A) \rightarrow R$ ;  $(B) \rightarrow S$ ;  $(C) \rightarrow Q$

**Answer Ex-IV****ADVANCED SUBJECTIVE QUESTIONS**

1. (a) 5 ; (b) 2 ; (c)  $\frac{3}{2}$       2.  $x + 4y = 4$ ;  $5x + 2y = 8$       3.  $a = 11$ ,  $c = 78$
4.  $7x + 24y + 182 = 0$  or  $x = -2$       5. (0, 0) or (0, 5/2)
6.  $3x + 6y - 16 = 0$ ;  $8x + 8y + 7 = 0$ ;  $12x + 6y - 11 = 0$       7.  $x^2 + 4y^2 + 4xy + 4x - 2y - 1 = 0$
8.  $2x - y + 3 = 0$ ,  $2x + y - 7 = 0$ ,  $x - 2y - 6 = 0$       10.  $B\left(-\frac{2t}{3}, -\frac{t}{6}\right)$ ,  $C\left(\frac{t}{2}, t\right)$
11.  $(y_1^2 - \delta^2)x^2 - 2x_1y_1xy + (x_1^2 - \delta^2)y^2 = 0$       12. (a) 74 ; (b) 50 ; (c) 47
13. (a)  $\frac{50}{7}$  ; (b)  $\frac{63}{10}$  ; (c)  $\frac{3}{10}(8\sqrt{5} - 5\sqrt{10})$       14. (1, -2), yes  $\left(\frac{1}{3}, -\frac{2}{3}\right)$
15.  $x + y = 1$ ;  $x + 9y = 1$
16. (i) area = 6sq. units, (ii) diagonals are  $\sqrt{5}$  &  $\sqrt{53}$       17.  $6x^2 - xy - y^2 - x - 12y - 35 = 0$

**Answer Ex-V****JEE PROBLEMS**

1. (a) D ; (b) D      2.  $(4, 1) \rightarrow (2, 3) \rightarrow (3, 3) \rightarrow (0, 3\sqrt{2})$       3. (a) D ; (b) A
4. (a) C; (b) B; (c) B; (d)  $x - 3y + 5 = 0$  ; (e) 18      5. A
6.  $y = 2x + 1$ ,  $y = -2x + 1$       7. (a) C ; (b) C
8. (A)  $\rightarrow$  S ; (B)  $\rightarrow$  P, Q ; (C)  $\rightarrow$  R ; (D)  $\rightarrow$  P, Q, S      9. D
10. B