



















❖ **Q.No. 63 to Q.No.67 Integer type: The answer to each question is an integer ranging from 0 to 9 :**

**(Correct Answer : +4, Wrong Answer : 0)**

63. If  $x = \frac{1}{2 - \sqrt{3}}$ , then the value of  $x^3 - 2x^2 - 7x + 10$  is equal to
64. If  $A = \left\{ p \in N, p \text{ is a prime and } p = \frac{7n^2 + 3n + 3}{n} \text{ for some } n \in N \right\}$ , then the number of elements in the set A is
65. If  $\frac{3}{2}x + 2y = \frac{x}{4} - \frac{y}{2} = 1$ , then  $x - y =$
66. If  $x + \frac{1}{x} = 3$ , then  $x^2 + \frac{1}{x^2} =$
67. The ratio between the length and the perimeter of rectangular plot is 1 : 3 the relation between the length and breadth of the plot is  $K : 1$ . Find K.

## ANSWER KEY

### MENTAL ABILITY

- |         |         |         |         |         |
|---------|---------|---------|---------|---------|
| 1. (B)  | 2. (D)  | 3. (A)  | 4. (C)  | 5. (D)  |
| 6. (A)  | 7. (B)  | 8. (C)  | 9. (C)  | 10. (B) |
| 11. (D) | 12. (B) | 13. (B) | 14. (C) | 15. (B) |
| 16. (C) | 17. (D) | 18. (C) | 19. (A) | 20. (B) |
| 21. (A) | 22. (C) | 23. (A) | 24. (C) | 25. (B) |

### SCIENCE

- |  |          |           |          |          |
|--|----------|-----------|----------|----------|
| 26. (D)  | 27. (D)  | 28. (B)   | 29. (B)  | 30. (C)  |
| 31. (D)  | 32. (B)  | 33. (C)   | 34. (D)  | 35. (A)  |
| 36. (ABC)  | 37. (BC) | 38. (ABD) | 39. (AC) | 40. (BD) |
| 41. (A) $\rightarrow$ (s), (B) $\rightarrow$ (p), (C) $\rightarrow$ (r), (D) $\rightarrow$ (q) |          |           | 42. (7)  | 43. (1)  |
| 44. (4)  | 45. (2)  | 46. (5)   |          |          |

### MATHEMATICS

- |  |           |          |          |           |
|--|-----------|----------|----------|-----------|
| 47. (C)  | 48. (C)   | 49. (A)  | 50. (B)  | 51. (B)   |
| 52. (C)  | 53. (D)   | 54. (C)  | 55. (A)  | 56. (C)   |
| 57. (AC)   | 58. (ABC) | 59. (AB) | 60. (AB) | 61. (A,B) |
| 62. (A $\rightarrow$ r, B $\rightarrow$ s, C $\rightarrow$ p, D $\rightarrow$ q) | 63. (8)   | 64. (1)  | 65. (3)  |           |
| 66. (7)  | 67. (2)   |          |          |           |