Answers

1. (4)	**2.** (3)	**3.** (2)	**4.** (3)	**5.** (4)	**6.** (1)	**7.** (2)	**8.** (2)	**9.** (1)	**10.** (4)
11. (3)	**12.** (1)	**13.** (3)	**14.** (4)	**15.** (2)	**16.** (4)	**17.** (3)	**18.** (4)	**19.** (3)	**20.** (2)
21. (4)	**22.** (4)	**23.** (2)	**24.** (3)	**25.** (1)	**26.** (2)	**27.** (4)	**28.** (2)	**29.** (4)	**30.** (1)
31. (2)	**32.** (3)	**33.** (1)	**34.** (2)	**35.** (2)	**36.** (1)	**37.** (1)	**38.** (4)	**39.** (3)	**40.** (1)
41. (2)	**42.** (1)	**43.** (2)	**44.** (1)	**45.** (3)	**46.** (2)	**47.** (3)	**48.** (2)	**49.** (2)	**50.** (3)
51. (1)	**52.** (4)	**53.** (1)	**54.** (2)	**55.** (3)	**56.** (4)	**57.** (4)	**58.** (1)	**59.** (4)	**60.** (2)
61. (3)	**62.** (3)	**63.** (3)	**64.** (2)	**65.** (2)	**66.** (2)	**67.** (2)	**68.** (4)	**69.** (4)	**70.** (2)
71. (3)	**72.** (3)	**73.** (3)	**74.** (3)	**75.** (2)	**76.** (2)	**77.** (2)	**78.** (3)	**79.** (3)	**80.** (3)
81. (3)	**82.** (4)	**83.** (3)	**84.** (2)	**85.** (1)	**86.** (4)	**87.** (3)	**88.** (1)	**89.** (1)	**90.** (4)
91. (3)	**92.** (2)	**93.** (1)	**94.** (1)	**95.** (1)	**96.** (3)	**97.** (2)	**98.** (4)	**99.** (3)	**100.** (1)

Hints and Solutions

16. The design moves 180° or laterally and the horizontal line comes upwards.

17. The arc is increasing by half in upside and that forming circle. The inner arc is coming down slowly and the black dots goes upwards.

18. The inner black square is interchanging and the upper design interchanging their place.

19. The design is moving 90° in clockwise direction.

20. The first design takes place to the third design.

21. The inner black dot is moving 90° in clockwise direction and the outer arc is moving 90° in anti-clockwise direction and one line adds.

22. The problem figure 3 is same as problem figure 1. Thus, the answer figure will be same as problem figure 2.

23. The circle is moving half part in clockwise direction

24. The centre design is moving 90° in clockwise direction and the square moves 90° in anti-clockwise direction. In first two figures, the slant line is the North-East direction and the last two figure, it is in the North-West directions.

25. In the following figures the outer face is same as the mouth of the previous figure and the shape of eyes are same as the shape of face.

26. The black dot is moving next corner in clockwise direction and circle is moving one corner in clockwise direction.

27. In the following figure, one line is adding.

28. The slant lines '^' are adding subsequently.

29. The black circle moves 90° in clockwise direction and the sing '+' moves 135° in anti-clockwise direction.

30. The last sign is taking place of the first sign.

31. The problem figure is same as problem figure 2. Thus, the answer figure will be same as problem figure 3.

32. The design is moving 135° in anti-clockwise direction.

33. The design is made by joining both two parts of the design.

34. The problem figure 3 is same as problem figure 1. Thus, the answer figure will be the same as problem figure 2.

35. The second figure is the half design of the first figure.

36. The problem figure 3 is same as problem figure 1. Thus, the answer figure will be same as problem figure 2.

37. The inner design comes outside and the outer design revert.

38. The design is reverting and then moving 90° in clockwise direction.

39. The problem figure 3 is same as problem figure 1. Thus, the answer figure will be the same as problem figure 2.

40. The design is reverting and the white part change into shaded part.

41. In the shape, the eyes and nose are reversing.

42. The small arrows changes into big arrows and big arrow change into small one.

43. The outer design becomes short and joining.

44. One design is changing into two designs and joining.

45. The problem figure 3 is same as problem figure 1. Thus, the answer figure will be same as problem figure 2.

61. ∵ The place value of 4 in number 46890
$= 40000$
Face value of $4 = 4$
∴ Difference $= 40000 - 4 = 39996$

62. ∵ The cost of 1 table = ₹ 1050
∴ The cost of 2 tables $= 2 \times 1050 =$ ₹ 2100
∴ The cost of 7 chairs = ₹ 2100
[∵ Cost of 7 chairs = Cost of 2 tables]
∴ The cost of 1 chair $= 2100 \div 7 =$ ₹ 300

63. ∵ Total marks = 250
Student got = 30%
i.e., $250 \times \frac{30}{100} = 75$ marks
Failed by = 25 marks
∴ Pass marks $= 75 + 25 = 100$ marks

64. $\frac{17}{27}, \frac{17}{25}, \frac{17}{19}, \frac{17}{13}$ are in ascending order
(In like fractions with equal numerators, the fraction with greatest denominators is the smallest.)

65. $98 - [65 + \{32 - (12 + 5)\}]$
$= 98 - [65 + \{32 - 17\}]$
$= 98 - [65 + 15] = 98 - 80 = 18$

66. CP of 1 dozen oranges = ₹ 21
CP of 60 oranges of 5 dozen oranges
$= 21 \times 5$
$=$ ₹ 105 [∵ 1 dozen = 12]
SP of 1 dozen oranges = ₹ 24
SP of 5 dozen oranges $= 24 \times 5 =$ ₹ 120
∴ Profit = SP − CP = 120 − 105 = ₹ 15

67. Given, $P =$ ₹ 1500, $r = 11\%$, $t = 2$ yr
$$SI = \frac{P \times r \times t}{100}$$
$$= \frac{1500 \times 11 \times 2}{100} =$$ ₹ 330
Amount, $A = P + SI = 1500 + 330 =$ ₹ 1830

68. The number, correct to the nearest ten is 70.

69. The side of square $= \frac{\text{Perimeter}}{4}$
∴ The side of the given square $= \frac{200}{4} = 50$ m
∴ Area = Side × Side
$= 50 \times 50$
$= 2500$ sq m

70. $50 \times 5 \times 0.05 = 250 \times \frac{5}{100} = \frac{25}{2} = 12\frac{1}{2} = 12.50$

71. The student went to sleep at = 9 : 30 pm
The student got up at = 4 : 15 am
Time from 9 : 30 to 12 : 00 (midnight)
= 2 h 30 min
Time from 12 : 00 to 4 : 15 = 4 h 15 min
Total time = 6 h 45 min
∴ The student slept for = 6 h 45 min

72. ∵ Time $= \frac{\text{Distance}}{\text{Speed}}$
$= \frac{120}{80} = \frac{3}{2}$ h = 1 h 30 min
The train will cover the distance by
= 10 : 50 am + 1 h 30 min
= 12 : 20 pm

73. The mean proportion of the term 9 and 16 is
$= \sqrt{9 \times 16} = 3 \times 4 = 12$

74. ∵ First five even numbers are = 2, 4, 6, 8, 10
Their average $= \frac{2 + 4 + 6 + 8 + 10}{5} = \frac{30}{5} = 6$

75. ∵ Speed = 80 km/h
∴ Time = 4 h 6 min
$= 4 \text{ h } \frac{6}{60} \text{ h} = 4\frac{1}{10} \text{ h} = \frac{41}{10} \text{ h}$
∵ Distance = Speed × Time
∴ Distance $= 80 \times \frac{41}{10} = 328$ km

76. 5005050

77.

3	105
5	35
	7

Prime factors of 105 are 3, 5 and 7.
∴ Number of factors of 105 are = 3

78. $\frac{185 \times 25 \times 16}{37 \times 500} = 4.0$

79. Total CP of the table = 180 + 20 = ₹ 200
Profit = 20%
$$\text{SP of the table} = \frac{\text{CP} \times (100 + \text{Profit per cent})}{100}$$
$$= \frac{200 \times 120}{100} =$$ ₹ 240

80. Volume of cuboid $= l \times b \times h$
$= 18 \times 12 \times 8$ cu cm
Volume of cube = Volume of cuboid
$= 18 \times 12 \times 8$
∴ Edge of cube $= \sqrt[3]{18 \times 12 \times 8} = 12$ cm