Date: 05/11/2017

Max. Marks: 50   **SOLUTIONS**   **Time allowed: 45 mins**

Direction : In each of the questions **1** to **4** a letter series is given with one term missing shown by question mark (?). This term is one of four alternatives given under it. Find the right alternative.

1.   G, K, O, S, ?

(1) U   (2) W   (3) V   (4) X

Ans. (2)

Sol.   G, K, O, S, W
         +4 +4 +4 +4

2.   DX, HT, KQ, OM, ?

(1) SJ   (2) RK   (3) QJ   (4) RJ

Ans. (4)

Sol.   D, H, K, O, R   X, T, Q, M, J
         +4 +3 +4 +3   −4 −3 −4 −3

3.   H, D, A, Y, X, ?

(1) X   (2) W   (3) T   (4) V

Ans. (1)

Sol.   H, D, A, Y, X, X
         −4 −3 −2 −1 −0

4.   KLE, IND, GPC, ? , CTA.

(1) DRB   (2) BSE   (3) ERB   (4) ECR

Ans. (3)

Sol.   K, I, G, E, C   L, N, P, R, T   E, D, C, B, A
         −2 −2 −2 −2   +2 +2 +2 +2   −1 −1 −1 −1

Direction : In each or the questions **5** to **8** a number series in given with one terms missing shown by question mark (?). This term is one of the four alternatives given under it. Find the right alternative.

5.   4, 9, 25, ?, 121, 169

(1) 36   (2) 49   (3) 64   (4) 81

Ans. (2)

Sol. 2^2, 3^2, 5^2, 7^2, 11^2, 13^2

6. 1, 3, 7, 13, 21, ? 43, 57
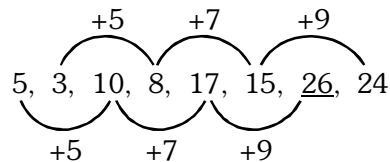
(1) 31   (2) 29   (3) 30   (4) 32

Ans. (1)

Sol. +2, +4, +6, +8, +10...........

7. 5, 3, 10, 8, 17, 15, ?, 24

(1) 25   (2) 23   (3) 26   (4) 27

Ans. (3)

Sol.

```
        +5      +7      +9
       ⌒       ⌒       ⌒
5,  3,  10,  8,  17,  15,  26,  24
  ⌣       ⌣       ⌣
   +5      +7      +9
```

8. 97, 77, 59, ?, 29, 17

(1) 34   (2) 39   (3) 37   (4) 43

Ans. (4)

Sol. −20, −18, −16, −14, −12

9. In the given question there are two statements and they have two conclusions I and II. You have to take the given statements to be true even if they seem to vary to commonly known facts. Read the conclusions and decide which of the given conclusions logically follows from the two given statements even disregarding commonly known facts.

Statements : (i) All women are intelligent.

(ii) Some women are educated.

Conclusions : (I) All educated women are intelligent.

(II) All intelligent are women

(1) Only conclusion I is true

(2) Only conclusion II is true

(3) Both conclusions I and II are true

(4) Neither conclusion conclusion I nor conclusion II is true

Ans. (1)

Sol.
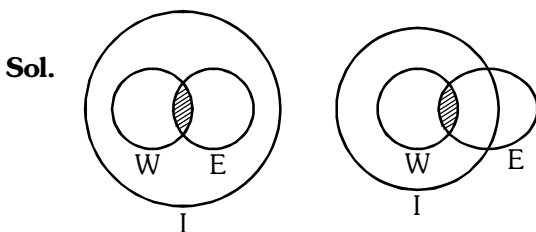
10. In the given question, a statement is followed by two arguments I and II. You have to decide which of the following arguments is 'strong' or 'weak'.

Statement : Continuous and comprehensive evaluation system should be implemented at school level.

Arguments : (I) yes, it helps in all-round development of the child.

(II) No, it puts more burden on teachers.

(1) Arguments I and II both are strong   (2) Arguments I and II both are weak

(3) Argument I is strong and II is weak   (4) Argument I is weak and II is strong.

Ans. (3)

Sol. Argument I is strong and II is weak

11. In the question given below, a statement is followed by a reason. Choose correct option for them.

Statement : Narmada river flows to west.

Reason : Narmada river falls in the Bay of Bengal. ,

(1) Statement and reason both are true

(2) Statement is true but reason is false

(3) Statement is false but reason is true
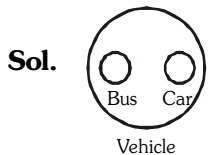
(4) Statement and reason both are false

Ans. (2)

Sol. Statement is true but reason is false

12. Which of the following Venn diagrams correctly represents Bus, Car and Vehicle ?

(1) (2) (3) (4)

Ans. (3)

Sol.
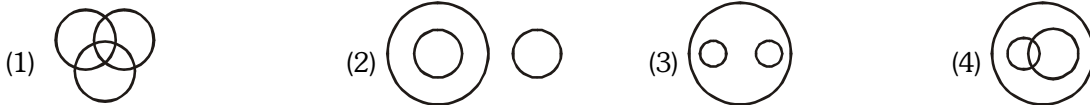
13. Which of the following Venn diagrams correctly represents white colour, clothes and natural flowers ?

(1) (2) (3) (4)

Ans. (1)

Sol.
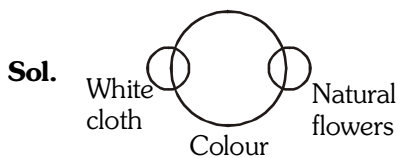
Questions (Q.14 & Q.15) : Out of 500 students, the following Venn diagram represents the number of students who got Distinction in Physics, Chemistry and Maths subjects. Answer Q.14 and Q.15 based on Venn diagram.
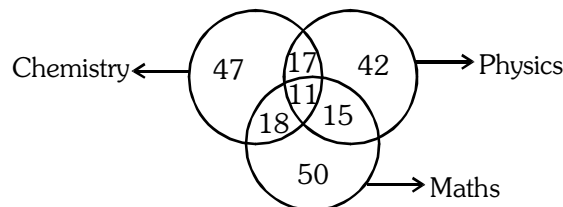
14. How many students got Distinction in both Physics and Maths subjects, when the students who got Distinction in Chemistry subject is not included ?

(1) 26 (2) 15 (3) 28 (4) 24

Ans. (2)

Sol. From Venn diagram = 15

15. What is the percentage of students who got Distinction in all the three subjects ?

    (1) 28%   (2) 35%   (3) 38%   (4) 40%

Ans. (4)

Sol. $\dfrac{200}{500} \times 100 = 40\%$

Questions (Q.16 & Q.17)

Direction : In questions 16 and 17 three alternatives are alike in a certain way but the rest one is different. Find out the odd one and write correct answer.

16. (1) Afghanistan   (2) Kabul   (3) Spain   (4) Iraq

Ans. (2)

Sol. All are countries except Kabul

17. (1) 1   (2) 729   (3) 144   (4) 64

Ans. (3)

Sol. All are cubes, except 144

18. 'A + B' means A is the son of B. 'A – B means A is the wife of B. Then what does P+R–Q mean?

    (1) Q is the father of P   (2) Q is the son of P   (3) P is the father of Q   (4) R is the son of Q

Ans. (1)

Sol. Q is the father of P
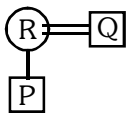
19. P, Q, R, S and T are sitting around a circular table facing centre to the table. R is just the right to P and is second to the left of S. T is not between P and S. Who is second to the left of R ?

    (1) Q   (2) S   (3) T   (4) P

Ans. (1)

Sol.
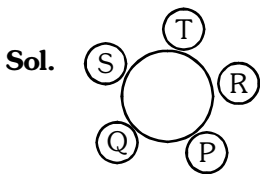
20. If '<' means '–', '>' means '+', '=' means '×' and '$' means '÷', then what will be the value of 27 > 81 $ 9 < 6 ?

    (1) 6   (2) 36   (3) 30   (4) 54

Ans. (3)

Sol. 27 + 81 ÷ 9 – 6 = 30

21. The four different positions of the dice are given below. Which number is on the face opposite to 6 ?

(1)   (2)   (3)   (4)

(1) 1   (2) 2   (3) 3   (4) 4

Ans. (1)

Sol.

	5	
6	4	1
	2	
	3	
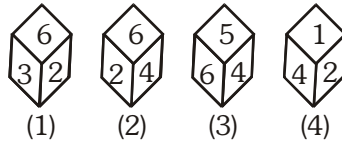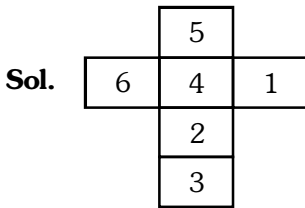
22. All faces of a solid cube of edge 8 cm are coloured. It is divided equally in the cubes of edge 2 cm. How many cubes will have all faces coloured ?

(1) 1   (2) 0   (3) 8   (4) 4

Ans. (2)

Sol. No. of cubes will have all face colored = 0

23. In a coded language the word 'SOLID' is written as 'HLORW', then in the same code language 'GAS' will be written as

(1) THZ   (2) TYI   (3) TZH   (4) ZHT

Ans. (3)

Sol.

```
  S   O   L   I   D          G   A   S
 19  15  12   9   4          7   1  19
  H   L   O   R   W          T   Z   H
+ 8  12  15  18  23       + 20  26   8
───────────────────       ──────────────
 27  27  27  27  27         27  27  27
```

24. If in a certain code I = 9 and GIRL = 46, then BOY = ?

(1) 37   (2) 39   (3) 24   (4) 42

Ans. (4)

Sol. Sum of position values.

25. If Ranjana is the sister of the son of Sohan's son, how is Ranjana related Sohan ?

(1) Daughter   (2) Sister   (3) Granddaughter   (4) Uncle

Ans. (3)

Sol.
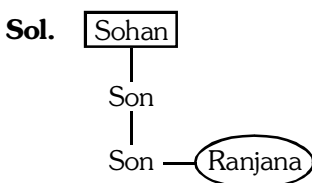
26. If North direction is called East and South direction is called West, then what will be called North-East direction?

(1) North-East   (2) East-South   (3) West-South   (4) North-West

Ans. (2)

Sol.

```
        E   S/E
        |  /
        | /
  N-----+-----S
        |
        |
        W
```
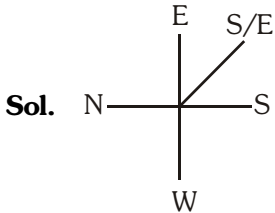
27. How many pairs of successive numbers have a difference of 2 in the following sequence ?

6, 4, 1, 2, 2, 8, 7, 4, 2, 7, 5, 3, 8, 6, 2, 1, 7, 0, 4, 1, 3, 2, 8, 6

(1) 4   (2) 5   (3) 6   (4) 7

Ans. (4)

Sol. 6, 4 , 1, 2, 2, 8, 7, 4, 2 , 7, 5, 3 , 8, 6 , 2, 1, 7, 0, 4, 1, 3 , 2, 8, 6

28. Arrange the following in a meaningful sequence :

A- Medicine   B- Diagnosis   C - Doctor   D- Fever   E - Recovery

(1) D C A B E   (2) D E C A B   (3) D C B A E   (4) C D B A E

Ans. (3)

Sol. Fever, Doctor, Diagnosis, Medicine, Recovery

29. Find the missing number (?) from the given alternatives, when same rule is applied in all three situations.

	5				21				51	
16	109	2		22	53	19		17	?	48
	6				15				13	
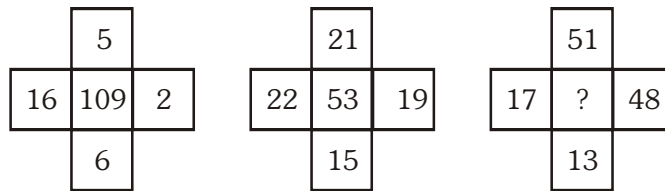
(1) 7   (2) 25   (3) 49   (4) 129

Ans. (2)

Sol. $(17 - 13)^2 + (51 - 48)^2 \Rightarrow 4^2 + 3^2 \Rightarrow 16 + 9 \Rightarrow 25$

30. As 'part' is related to 'whole', in the same way an 'Arc' is related to which of the following?

(1) Rectangle   (2) Circle   (3) Triangle   (4) Square

Ans. (2)

Sol. Part related to whole

∴ By Arc → circle

Direction : In question 31 to 34 there are two sets of figures. One set contains problem-figures while the other has answer-figures. There is a sequence according to which the problem-figures are arranged. You have to select an answer-figure which can be added in sequence with the problem-figures. Choose the correct figure.

31. Problem-figures

(A)   (B)   (C)   (D)

Answer-figures

(1)   (2)   (3)   (4)
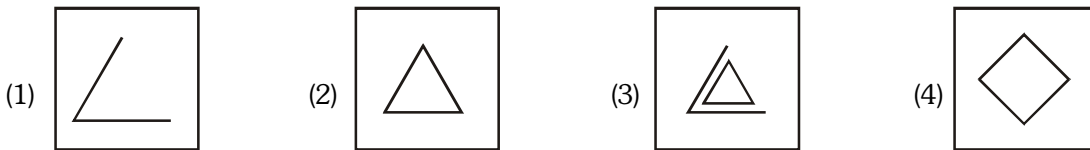
Ans. (4)

Sol. By observation

32. Problem-figures

(A)   (B)   (C)   (D)

Answer-figures

(1)   (2)   (3)   (4)
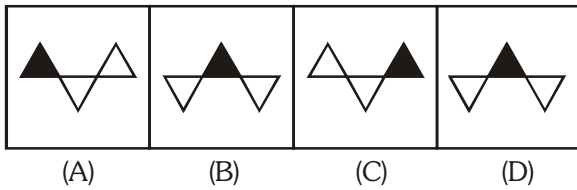
Ans. (3)

Sol. By observation

33. Problem-figures

(A)   (B)   (C)   (D)

Answer-figures

(1)   (2)   (3)   (4)
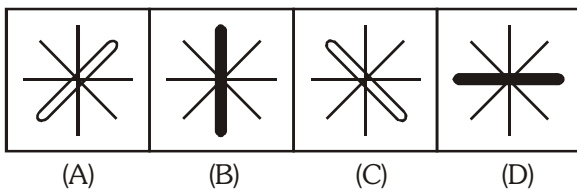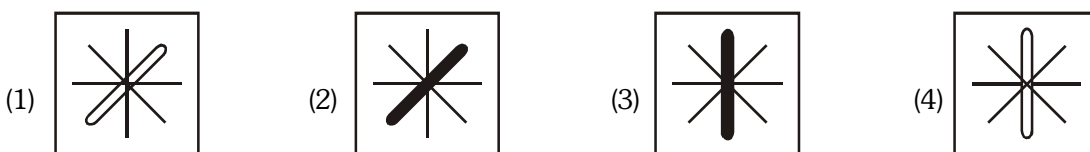
Ans. (1)

Sol. By observation

34. **Problem-figures**

(A)   (B)   (C)   (D)
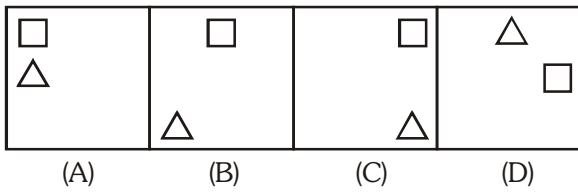
Answer-figures
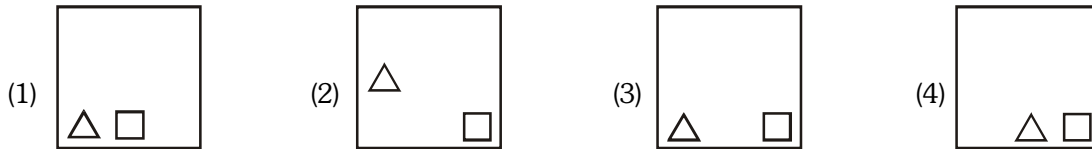
Ans. (4)

Sol. By observation

Direction : In questions 35 to 38 there are four figures given in each. one of these does not correlate with the rest of the figures. Select that odd figure.

35. (1) C   (2) J   (3) S   (4) U

Ans. (2)

Sol. By observation

36. (1)   (2)   (3)   (4)
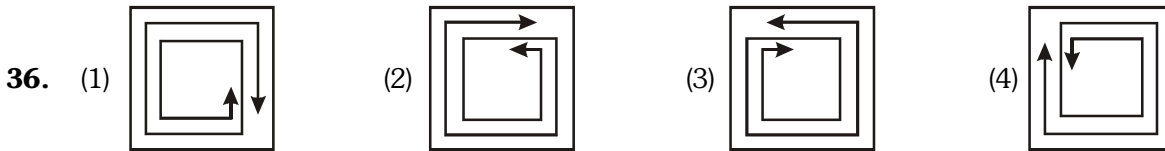
Ans. (3)

Sol. Except option (3), all figure are clockwise.

37. (1)   (2)   (3)   (4)

Ans. (1)

Sol. By observation

38. (1)   (2)   (3)   (4)
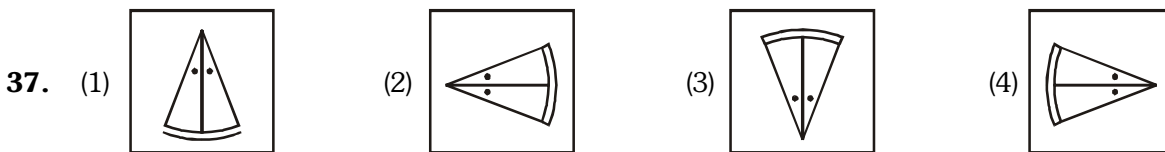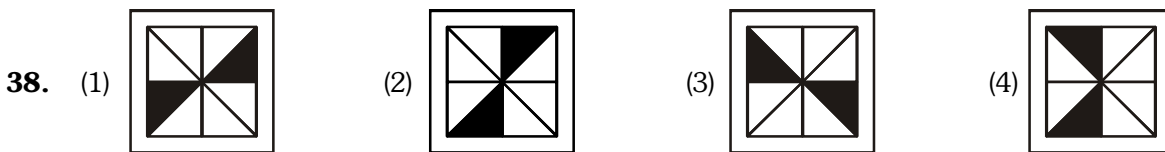
Ans. (4)

Sol. By observation

Direction : In questions 39 and 40, find the correct mirror image of the given figure, when mirror is placed on right side of the figure.

39. **S T O P**

(1) **ꟼ O T Ƨ** (2) **ꟼ O T Ƨ** (3) **ꟼ T O Ƨ** (4) **P O T Ƨ**

Ans. (2)

Sol. S T O P | ꟼ O T Ƨ

40. **Question-image**

Answer-image

(1)   (2)   (3)   (4)

Ans. (4)

Sol.
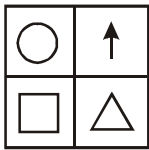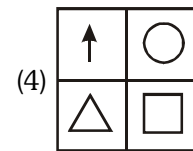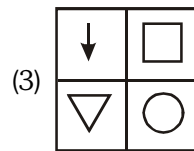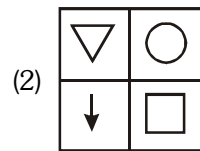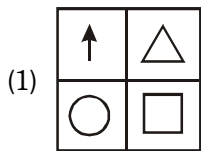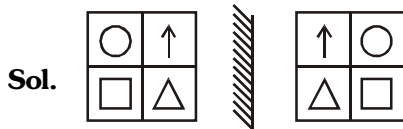
Direction : In questions 41 and 42 select the correct water image of the given figure.

41. **Question-image**

Answer-image

(1)   (2)   (3)   (4)

Ans. (2)

Sol.
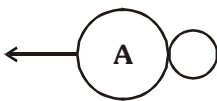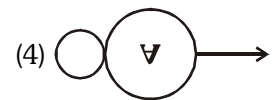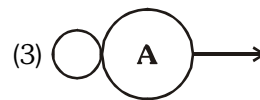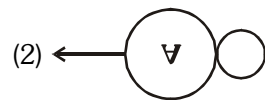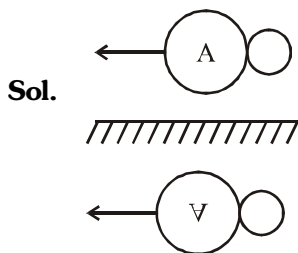
42. **Question-image**

X 7 W 4

Answer-image

(1) X ⅃ ⋈ ⴕ   (2) X 7 ⋈ 4   (3) X ⅃ W ⴕ   (4) X ∠ ⋈ ⴕ

Ans. **(1)**

Sol. X ∠ ⋈ ⴕ

Direction : A square transparent sheet with a pattern is folded along the dotted line. Which of the following answer figures is formed after folding the transparent sheet ?

43. **Transparent-sheet**

Answer-figure

(1)   (2)   (3)   (4)
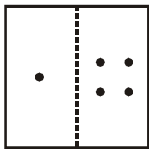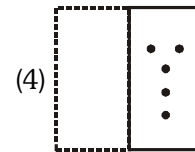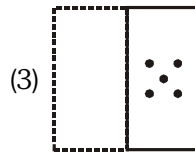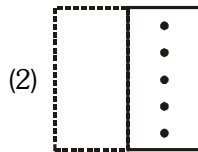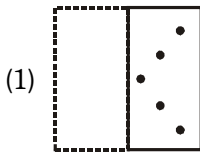
Ans. **(3)**

Sol. By observation

44. **Transparent-sheet**

Answer-figure

(1)   (2)   (3)   (4)
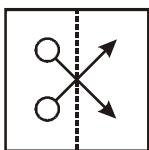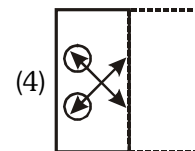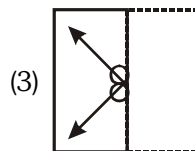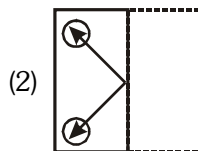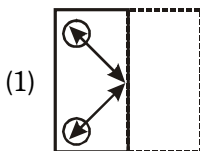
Ans. **(2)**

Sol. By observation

Question (45 - 46)

Direction : In the following figures there is a question figure, which is embedded in one of the answer-figures. Trace out the correct figure.
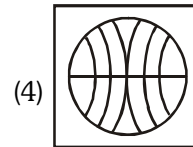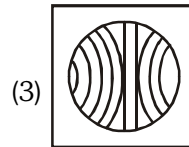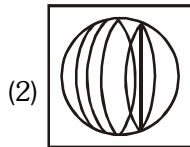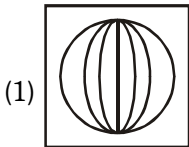
Question figure

45.

(1)   (2)   (3)   (4)
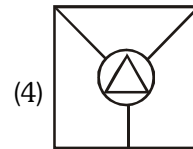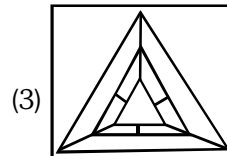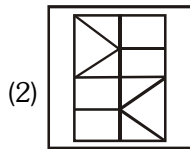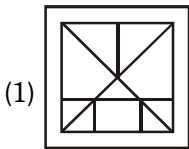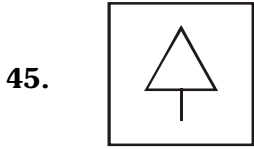
Ans. (3)

Sol. By observation

Question figure

46.

(1)   (2)   (3)   (4)
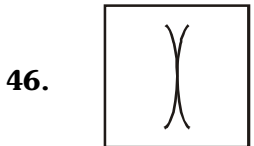
Ans. (4)

Sol. By observation

47. Which of the answer-figures completes the given matrix figure ?

(1)   (2)   (3)   (4)
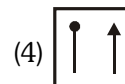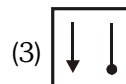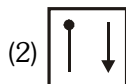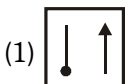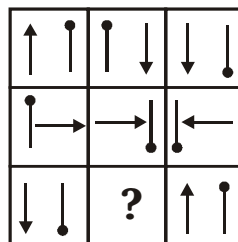
Ans. (1)

Sol. By observation

48. If 20 * 3 = 180 and 4 * 5 = 100, then what is the value of 7 * 7 ?

    (1) 21   (2) 49   (3) 343   (4) 7
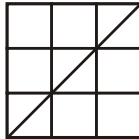
Ans. **(3)**

Sol. $(20 \times 3) \times 3 \Rightarrow 180$

    $(4 \times 5) \times 5 \Rightarrow 100$

    $(7 \times 7) \times 7 \Rightarrow 343$

49. Determine the number of squares in the following figure :
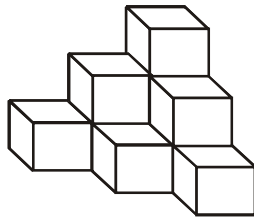
    (1) 14   (2) 9   (3) 10   (4) 16

Ans. **(1)**

Sol. No of square

    $9 + 4 + 1 \Rightarrow 14$

50. How many cubes are laid on a plane as shown in the following figure ?

    (1) 14   (2) 12   (3) 10   (4) 8

Ans. **(3)**

Sol. No of cubes

    $3 + 4 + 3 \Rightarrow 10$