

**Date: 27.12.2020**

**Max. Marks: 100**

## **SOLUTIONS**

**Time allowed: 120 minutes**

1. 5, 12, 26, 47, 75, \_\_\_?\_\_\_

(1) 99

(2) 110

(3) 105

(4) 93

**Ans. 2**

**Sol.**  $5 + 7 = 12$

$$12 + 14 = 26$$

$$26 + 21 = 47$$

$$47 + 28 = 75$$

$$75 + 35 = 110$$

2. 0, 2, 6, 12, 20, \_\_\_?\_\_\_

(1) 24

(2) 26

(3) 28

(4) 30

**Ans. 4**

**Sol.**  $1^2 - 1 = 0$

$$2^2 - 2 = 2$$

$$3^3 - 3 = 6$$

$$4^2 - 4 = 12$$

$$5^2 - 5 = 20$$

$$6^2 - 6 = 30$$

3. 5, 10, \_\_\_?\_\_\_, 50, 122, 170

(1) 26

(2) 37

(3) 49

(4) 27

**Ans. 1**

**Sol.**  $2^2 + 1 = 5$

$$3^2 + 1 = 10$$

$$5^2 + 1 = 26$$

$$7^2 + 1 = 50$$

$$11^2 + 1 = 122$$

$$13^2 + 1 = 170$$

4. 2, 2, 5, 4, 10, 8, 17, 14, \_\_?\_\_, 22

(1) 24

(2) 25

(3) 26

(4) 30

Ans. 3

Sol. I.  $\begin{array}{cccc} 2, & 5, & 10, & 17, & ? \\ \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \\ +2 & +5 & +7 & +9 & \end{array}$

$$\therefore 17 + 9 = 26$$

II.  $\begin{array}{cccc} 2, & 4, & 8, & 14, & 22 \\ \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \\ +2 & +4 & +6 & +8 & \end{array}$

5. 256, 10, 128, 40, \_\_?\_\_, 160, 32

(1) 65

(2) 50

(3) 58

(4) 54

Ans. 1

Sol. I. 256, 128, ?, 32

$$\frac{256}{2} = 128; \frac{128}{2} = 64$$

$$\frac{64}{2} = 32$$

II.  $\begin{array}{ccc} 10, & 40, & 60 \\ \underbrace{\quad} & \underbrace{\quad} & \\ \times 4 & \times 4 & \end{array}$

6. -5A, 0F, -3C, 20Z, \_\_\_\_\_, 19Y

(1) 2G

(2) 1G

(3) 2H

(4) 2I

Ans. 2 or 3

Sol. -5A, 0F, -3C, 20Z, ?, 19Y

$$-5 + 6 = A$$

$$0 + 6 = F$$

$$-3 + 6 = C$$

$$20 + 6 = Z$$

$$\therefore 1 + 6 = G$$

$$2 + 6 = H$$

Both option (2) and (3) are correct.

7. PRT, QTW, \_\_\_\_\_, SXC, TZF

(1) RWZ

(2) RVY

(3) RUY

(4) RVZ

Ans. 4

P, Q, R, S, T  
+1 +1 +1 +1

R, T, V, X, Z  
+2 +2 +2 +2

Sol.

T, W, Z, C, F  
+3 +3 +3 +3

**Direction : (Question Numbers 8 to 12)**

In each of the following series, one term is wrong. Identify the wrong term.

8. 0, 6, 24, 64, 120, 210

(1) 120

(2) 64

(3) 210

(4) 24

Ans. 2

Sol.  $1^3 - 1 = 0$

$$2^3 - 2 = 6$$

$$3^3 - 3 = 24$$

$$4^3 - 4 = 60$$

$$5^3 - 5 = 120$$

$$6^3 - 6 = 210$$

9. 73, 58, 94, 69, 116, 80, 126, 91, 157

(1) 58

(2) 69

(3) 116

(4) 80

Ans. 3

Sol. Two series given:

(I) 73, 94, 116, 136, 150  
+21 +21 +21 +21

$$94 + 21 = 115$$

(II) 58, 69, 80, 91  
+11 +11 +11

10. 1, 3, 5, 9, 18, 33, 65, 129

(1) 18

(2) 9

(3) 65

(4) 33

Ans. 1

Sol. 1, 3, 5, 9, 18, 33, 65, 129

The actual question

$$\begin{array}{ccccccc} 2, & 3, & 5, & 9, & 18, & 33, & 65, & 129 \\ \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} & \underbrace{\quad} \\ x2-1 & x2-1 & x2-1 & x2-1 & x2-1 & x2-1 & x2-1 & x2-1 \end{array}$$

$$\therefore 9 \times 2 - 1 = 17$$

$\Rightarrow$  18 is the wrong number.

11. AB, EG, IL, MP, QV, UA

(1) IL

(2) QV

(3) MP

(4) UA

Ans. 3

Sol.  $A + 4 = E$

$$E + 4 = I$$

$$I + 4 = M$$

$$M + 4 = Q$$

$$Q + 4 = U$$

$$B + 5 = G$$

$$G + 5 = L$$

$$L + 5 = Q$$

$$Q + 5 = V$$

$$V + 5 = A$$

12. Z, X, S, T, R, P, N, L

(1) R

(2) X

(3) T

(4) S

Ans. 4

Sol.  $Z - 2 = X$

$$X - 2 = V$$

$$V - 2 = T$$

$$T - 2 = R$$

$$R - 2 = P$$

$$P - 2 = N$$

$$N - 2 = L$$

**Direction : (Question Numbers 13 and 14)**

Read the questions and choose the proper answer

13. 'Angle' is related to 'Radian' in the same way as 'Force' is related to

- (1) Newton                      (2) Pascal                      (3) Joule                      (4) Watt

**Ans.** 1

**Sol.** S.I unit of 'angle' of 'radian'

similarly S.I unit of 'Force' is 'Newton'.

14. 'Book' is related to 'Page' then 'Flower' is related to:

- (1) Essence                      (2) Fragrance                      (3) Petal                      (4) Garland

**Ans.** 3

**Sol.** 'Book' is made of 'Pages'. Similarly 'Flower' is made of 'Petals'.

**Direction : (Question Numbers 15 and 16)**

First two terms are connected by some relationship. The same relationship is applicable for the next pair. Identify the suitable pair.

15. Paddy : Field :: \_\_\_?\_\_\_ : \_\_\_?\_\_\_

- (1) Steel, Mine                      (2) Steel, Ore                      (3) Steel, Factory                      (4) Steel, Iron

**Ans.** 3

**Sol.** 'Paddy' is grown in the field.

Similarly 'Steel' is produced in the 'Factory'.

16. 7 : 77 :: \_\_\_?\_\_\_ : \_\_\_?\_\_\_

- (1) 3, 12                      (2) 5, 30                      (3) 2, 5                      (4) 5, 35

**Ans.** 4

**Sol.**  $7 \times 11 = 77$  [Multiply with next prime number]

$5 \times 7 = 35$

**Direction : (Question Numbers 17 to 19)**

First pair is connected by some relationship. The same relationship is applicable for the next pair. Identify the missing term in the second pair.

17. throw : collect :: push : \_\_\_?\_\_\_

- (1) pull                      (2) door                      (3) window                      (4) knock

**Ans.** 1

**Sol.** The words in each pair are antonyms.

18. apparel : shirt :: \_\_\_?\_\_\_ : necklace

- (1) gold                      (2) jewellery                      (3) silver                      (4) ring

**Ans.** 2

**Sol.** 'Shirt' belongs to 'apparel', 'necklace' belongs to 'jewellery'.

19. AB : ZY :: EF : \_\_?\_\_

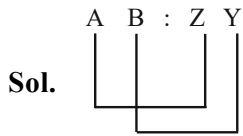
(1) UV

(2) VW

(3) WV

(4) VU

Ans. 4



opposite letters

$$\left. \begin{array}{l} \therefore E \leftrightarrow V \\ F \leftrightarrow U \end{array} \right\} \text{VU}$$

**Direction : (Question Number 20)**

Choose the set of numbers from the four alternatives which is similar to the given set.

20. (7, 14, 23)

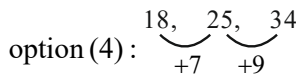
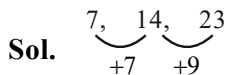
(1) (18, 25, 32)

(2) (27, 36, 45)

(3) (5, 11, 19)

(4) (18, 25, 34)

Ans. 4



**Direction : (Question Numbers 21 to 27)**

Read the information given in the questions and answer the following.

21. In the following letter series, some of the letters are missing which are given in the alternatives in order. Choose the correct alternative.

abb\_\_baa\_\_a\_\_bab\_\_ab

(1) cccc

(2) baab

(3) abab

(4) abba

Ans. 4

Sol. abba|baab|abba|baab

∴ abba

22. Choose the group of letters which is different from others.

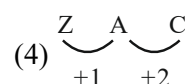
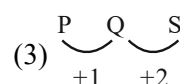
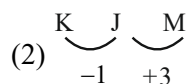
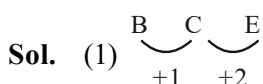
(1) BCE

(2) KJM

(3) PQS

(4) ZAC

Ans. 2



23. If, in a certain code language 'FRUIT' is coded as 'ZLOCN' then 'FLOWER' is coded as :
- (1) ZFIQYM                      (2) AFIQYM                      (3) ZFIQYL                      (4) AFIQYL

**Ans.** 3

**Sol.** F R U I T  
 -6 -6 -6 -6 -6  
 Z L O C N  
 F L O W E R  
 -6 -6 -6 -6 -6 -6  
 Z F I Q Y L

24. If C = 6, BE = 14, L = 24 and BAG = 20 then 'LUGGAGE' is :
- (1) 120                              (2) 60                              (3) 240                              (4) 44

**Ans.** 1

**Sol.** C = 3 × 2 = 6  
 BE = (2 + 5) × 2 = 14  
 2 5  
 L = 12 × 2 = 24  
 BAG = (2 + 1 + 7) × 2  
 2 1 7                      20  
 L U G G A G E  
 12 21 7 7 1 7 5  
 = (12 + 21 + 7 + 7 + 1 + 7 + 5) × 2  
 = 60 × 2 = 120

25. In a code language :
- (i) 'im be pee' means 'petals are blue'  
 (ii) 'sik hee' means 'red flowers'  
 (iii) 'pee mit hee' means 'flowers are fragrant'.  
 Then, 'fragrant are red flowers' is:
- (1) pee im mit hee              (2) im be sik mit              (3) be sik pee mit              (4) sik hee pee mit

**Ans.** 4

**Sol.** (i) 'im be pee' - ptals are blue  
 (ii) 'sik hee' means 'red flowers'  
 (iii) 'pee mit hee' means 'flowers are fragrant'.  
 From (i) and (iii)  
 Pee - are  
 From (ii) and (iii)

hee - flower

sik - red

and mit - fragrant

Then, 'fragrant are red flowers'

$\Rightarrow$  mit Pee Sik hee

**26.** If  $a + b = 51$ ;  $x + y = 5$ , then  $p - q$  is :

(1) 1

(2) -1

(3) 3

(4) 20

**Ans.** 1

$$a + b = 51$$

$\downarrow \downarrow$

**Sol.**

$$26 + 25 = 51$$

(Alphabets from Right to left)

$$x + y = 5$$

$\downarrow \downarrow$

$$3 + 2 = 5$$

$$\therefore p - q = 1$$

$$11 - 10 = 1$$

**27.** A mountain has always \_\_\_\_\_.

(1) animals

(2) trees

(3) height

(4) birds

**Ans.** 3

**Sol.** A mountain always has 'height'.



**Direction : (Question Number 28)**

Arrange the given words in a meaningful sequence and choose the most appropriate sequence.

- 28.** (a) cow (b) curd  
(c) milk (d) butter  
(1) (a), (d), (c), (b) (2) (c), (d), (b), (a) (3) (a), (b), (c), (d) (4) (a), (c), (b), (d)

**Ans.** 4

**Sol.** The meaningful sequence is

Cow  
↓  
Milk  
↓  
Curd  
↓  
Butter

**Direction : (Question Number 29)**

Choose the best reaction from the alternatives for the given situation.

- 29.** You are cycling on the narrow crowded street and suddenly you see a one rupee coin on the pavement. What action will you take?  
(1) Take the coin and give it to a beggar.  
(2) Take the coin and pocket it yourself.  
(3) Leave it where it is.  
(4) Take the coin and deposit in the nearest police station.

**Ans.** 4

**Sol.** As per the law and moral values, you have to deposit in the nearest police station whether it small or big amount.

**Direction : (Question Number 30)**

Arrange the given words in dictionary alphabetical order and choose the word which comes in the middle.

30. (a) credential (b) creed  
(c) colour (d) credible  
(e) create  
(1) (a) (2) (e) (3) (b) (4) (d)

**Ans.** 1

- Sol.** c) Colour  
e) Create  
a) Credential  
d) Credible  
b) Creed

**Direction : (Question Numbers 31 to 40)**

Read the instructions and informations given in the questions, and choose the best alternative.

31. Choose the word which can't be made from the letters of the word CHOREOGRAPHY.  
(1) GRAPH (2) GEOGRAPHY (3) CORE (4) ROGUE

**Ans.** 4

- Sol.** The alphabet 'U' is not there in the word '(CHOREOGRAPHY)'  
∴ R O G U E

32. Select the combination of numbers so that the letters arranged accordingly will form a meaningful word.  
I P E C L O  
1 2 3 4 5 6  
(1) 265143 (2) 651432 (3) 265134 (4) 261543

**Ans.** 1

- Sol.** P O L I C E  
2 6 5 1 4 3

33. A meaningful word starting with 'A' and the other four letters are from the first, second, fourth and fifth letters of the word 'CONTRACT'. The last letter of the meaningful word is:  
(1) O (2) T (3) R (4) A

**Ans.** 3

- Sol.** C O N T R A C T  
↓ ↓ ↓ ↓  
1 2 4 5

∴ A,C,O,T,R  
Meaningful word  
"ACTOR"

34. The number of P's in the following series which are immediately followed by B as well as immediately preceded by Z is :

PMBZPNPPBZPBZBPPZPBZPB

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

Ans. 4

Sol. "Z P B"

PMBZPNPPBZPBZBPPZPBZPB

35. If the alphabet series is written in the reverse order, which letter will be sixth to the left of eighteenth letter from the right?

- (1) C                                      (2) X                                      (3) B                                      (4) Y

Ans. 2

Sol. Z Y X W V U T S R Q P O N M L K J I H G F E D C B A

∴ sixth to the left of eighteenth letter from right end = 24<sup>th</sup> from right end (or) 3<sup>rd</sup> from left end = X

36. Three of the following four are alike in a certain way. Which one of them does not belong to that category?

Carrot, Sweet potato, Beetroot, Potato

- (1) Potato                                      (2) Beetroot                                      (3) Carrot                                      (4) Sweet potato

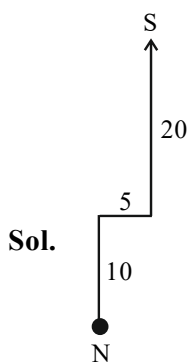
Ans. 1

Sol. Potato is stem, others are and roots.

37. After walking 10 kms, a person turned right and covered a distance of 5 kms. Then, turned left and covered a distance of 20 kms. In the end, the person was moving towards south. In which direction did the person start his journey?

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

Ans. 4



38. A group of 150000 persons consists of captains and soldiers. There is one captain for every 15 soldiers. The number of captains in the group is :

- (1) 10000                                      (2) 9375                                      (3) 9275                                      (4) 9475

Ans. 2

**Sol.**  $\frac{150000}{16} = 9375$

**39.** In an examination, a student scores 3 marks for every correct answer and loses one mark for every wrong answer. If she attempts all the 120 questions and secures 80 marks, the number of questions she attempted wrongly, is :

- (1) 70                                      (2) 50                                      (3) 60                                      (4) 80

**Ans.** 1

**Sol.** Let the number of questions marked Correctly = X, then

$$3x - (120 - x) = 80$$

$$3x + x = 80 + 120$$

$$4x = 200$$

$$\boxed{x = 50}$$

$$\therefore \text{Marked wrongly} = 120 - 50 = 70$$

**40.** Two statements **(I)** and **(II)** are followed by conclusions **(1)** and **(2)**, Read the statements and conclusions and give the correct answer.

**Statements :**

**(I)** Some fans are sweets.

**(II)** All sweets are tube lights.

**Conclusions :**

**(1)** Some fans are tube lights.

**(2)** Some tube lights are fans.

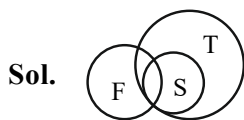
(1) Either conclusions follow

(2) Only conclusion **(1)** follows

(3) Only conclusion **(2)** follows

(4) Neither conclusion **(1)** nor **(2)** follows

**Ans.** 1



**Direction : (Question Numbers 41 to 46)**

The given operators convey new meanings. Read the meanings/instructions and find the answer.

**41.** If ' $\times$ ' means '+', ' $\div$ ' means '-', '-' means ' $\times$ ' and '+' means ' $\div$ ' then :

$$8 \times 7 - 8 + 40 \div 2 =$$

(1) 48

(2) 68

(3)  $7\frac{2}{5}$

(4) 7

**Ans.** 3

**Sol.**  $8 \times 7 - 8 + 40 \div 2 =$

$$8 + 7 \times 8 \div 40 - 2$$

$$8 + 7 \times \frac{1}{5} - 2$$

$$8 + \frac{7}{5} - 2 = \frac{47}{5} - 2 = \frac{37}{5} = 7\frac{2}{5}$$

$$7\frac{2}{5}$$

**42.** If '-' means ' $\div$ ', '+' means ' $\times$ ', ' $\div$ ' means '-' and ' $\times$ ' means '+' then which of the following is correct?

(1)  $52 \div 4 + 5 \times 8 - 2 = 36$

(2)  $43 \times 7 \div 5 + 4 - 8 = 25$

(3)  $36 \times 4 - 12 + 5 \div 3 = 420$

(4)  $36 - 12 \times 6 \div 3 + 4 = 60$

**Ans.** 1

**Sol.**  $52 - 4 \times 5 + 8 \div 2 = 36$

$$\left. \begin{array}{l} - \Rightarrow \div \\ + \Rightarrow \times \\ \div \Rightarrow - \\ \times \Rightarrow + \end{array} \right\}$$

$$52 - 20 + 4 = 36$$

$$56 - 20 = 36$$

$$52 - \frac{4 \times 5}{52 - 20} + \frac{8 \div 2}{2} = 36$$

43. The following relation became incorrect due to the interchange of two signs. Which of the two signs when interchanged makes the relation correct?

$$7 \div 8 \times 2 - 16 + 2 = 15$$

(1) + and -

(2) + and  $\div$

(3) + and  $\times$

(4)  $\div$  and  $\times$

Ans. 2

Sol.  $7 \div 8 \times 2 - 16 + 2 = 15$

$$7 + 8 \times 2 - \frac{16}{8} = 15$$

$$7 + 8 \times 2 - 8 = 15$$

$$7 + 16 - 8 = 15$$

$$23 - 8 = 15$$

44. If the interchanges are made in signs and numbers, which of the following would be correct?

Interchanges in signs : + and  $\times$

Interchanges in numbers : 4 and 5

(1)  $5 \times 4 + 20 = 40$

(2)  $4 \times 5 + 20 - 10 = 95$

(3)  $5 \times 4 + 20 = 104$

(4)  $5 \times 4 + 20 = 75$

Ans. 3

Sol. (1)  $5 \times 4 + 20 = 40$

$$4 + 5 \times 20$$

(2)  $4 \times 5 + 20 - 10 = 45$

$$5 + 4 \times 20 - 10$$

$$5 + 80 - 10$$

(3)  $5 \times 4 + 20 = 104$

$$4 + 5 \times 20$$

$$4 + 100 = 104$$

(4)  $5 \times 4 + 20 = 75$

$$4 + 5 \times 20$$

45. If  $5 * 7 = 74$  and  $2 * 8 = 68$ , then  $7 * 8$  is :

(1) 56

(2) 113

(3) 103

(4) 123

Ans. 2

Sol.  $5^2 + 7^2 = 74$

$$2^2 + 8^2 = 68$$

$$7^2 + 8^2 = 49 + 64 = 113$$

46. If  $17 + 22 = 12$  and  $26 + 19 = 18$ , then  $(10 + 20) + (12 + 2)$  is :  
 (1) 44                                      (2) 16                                      (3) 24                                      (4) 8

**Ans.** 4

**Sol.**  $17 + 22 \Rightarrow 1 + 7 + 2 + 2 = 12$

$26 + 19 \Rightarrow 2 + 6 + 1 + 9 = 18$

$(10 + 20) + (12 + 2)$

$(1 + 0 + 2 + 0) + (1 + 2 + 2) = 3 + 5 = 8$

**Direction : (Question Numbers 47 to 54)**

Read the questions and choose the appropriate answer.

47. A mirror is placed in front of a clock. The clock shows the time 5 hours 50 minutes. The reflection in the mirror is :

- (1) 6 hours 10 min.                      (2) 5 hours 10 min.                      (3) 6 hours 50 min.                      (4) 5 hours 50 min.

**Ans.** 1

**Sol.** Mirror image of clock =  $\frac{11:60}{6:10}$

48. The angle between the hour hand and minute hand when the time is 6 hours 45 minutes, is :

- (1)  $60^\circ$                                       (2)  $62.5^\circ$                                       (3)  $65^\circ$                                       (4)  $67.5^\circ$

**Ans.** 4

**Sol.**  $\theta = \left| 30 \times 6 - \frac{11}{2} \times 45 \right|$

$\theta = |180 - 247.5|$

$\theta = |67.5|^\circ$

49. Raj introduced a girl as the daughter of the daughter of his Aunt's mother. The girl is Raj's :

- (1) daughter                                      (2) sister                                      (3) grand daughter                      (4) mother

**Ans.** 2

Raj's Aunt's Mother

↓

Raj's Aunt

↓

Raj → Girl

**Sol.**

∴ Sister.

50. The number of combinations of two digit numbers having 4, can be made from the numbers 1, 2, 3, 4, 5, 6, 7, 8 and 9 is :

- (1) 16                                      (2) 11                                      (3) 17                                      (4) 18

Ans. 3



9 Combinations



9 Combinations

Sol.

But 44 will be common ∴ Required answer = 18 - 1 = 17

51. The number of numbers from 1 to 200 which are divisible by 10 but not divisible by 30, is :

- (1) 13                                      (2) 15                                      (3) 14                                      (4) 20

Ans. 3

10, 20, ~~30~~ 40 50 ~~60~~ 70 80 ~~90~~ 100

Sol.

110, ~~120~~, 130, 140, ~~150~~, 160, 170, ~~180~~, 190, 200

14-----3

52. A class of students strength 44 took an ability test. Five of them are not qualified the test. Out of the remaining qualified students Sam ranked 18<sup>th</sup> from the last. His rank from the top is :

- (1) 22                                      (2) 23                                      (3) 24                                      (4) 21

Ans. 1

Sol.  $44 - 5 = 39 \rightarrow$  Qualified

Sam's rank 18th from top  $39 - 18 + 1 = 22$

53. Which of the following statements are true?

- (a) Zero is neither positive nor negative
- (b) 1 is neither prime nor composite
- (c) The set of non-negative numbers is different from set of positive numbers
- (d) 2 is a prime but not composite

- (1) (a) and (b) only                      (2) (a), (b) and (c) only                      (3) (a), (c) and (d) only                      (4) All of the above

Ans. 4

Sol. All are correct



54. Which of the following are not true ?

- (a) All the integers are rational numbers
- (b)  $\pi$  is an irrational number
- (c) A rational number need not be a proper fraction
- (d) 0 is a rational number

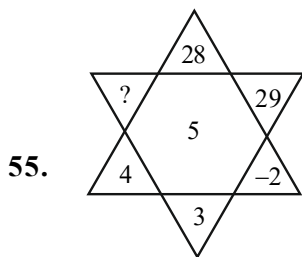
- (1) None of the above      (2) (a) and (d) only      (3) (a) and (b) only      (4) All the above

Ans. 1

Sol. None of the Above

**Direction : (Question Numbers 55 to 58)**

Find the missing character.



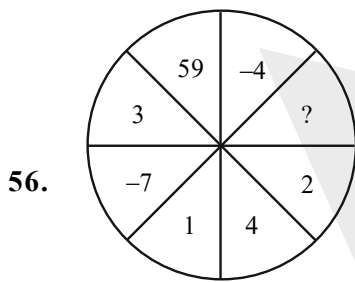
- (1) 23      (2) 22      (3) 27      (4) 3

Ans. 1

Sol.  $5^2 + 3 = 28,$

$$3^2 + 4 = 29$$

$$5^2 - 2 = 23$$



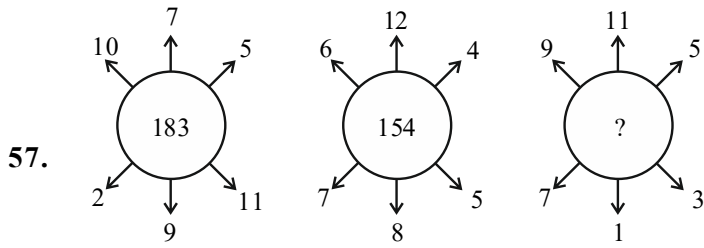
- (1) 348      (2) -348      (3) -8      (4) 7

Ans. 2

Sol.  $1^3 - 5 = -4,$

$$2^3 - 5 = 3,$$

$$(-7)^3 - 5 = -348$$



- (1) 86                                      (2) 73                                      (3) 33                                      (4) 104

Ans. 2

Sol.  $10 \times 11 + 7 \times 9 + 5 \times 2 = 183$

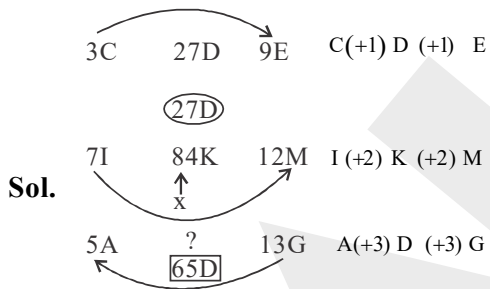
$9 \times 3 + 7 \times 5 + 11 \times 1 = 27 + 35 + 11 = 73$

58. 

3C	27D	9E
7I	84K	12M
5A	?	13G

- (1) 65D                                      (2) 65G                                      (3) 35H                                      (4) 65B

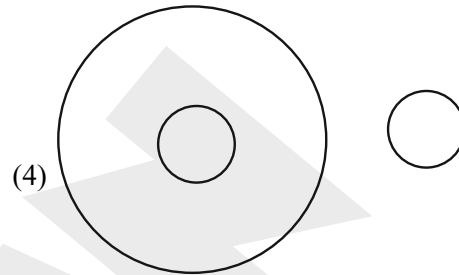
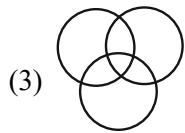
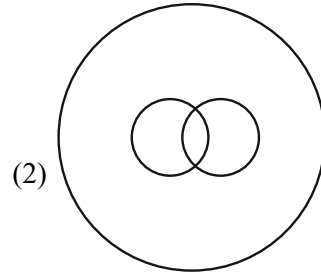
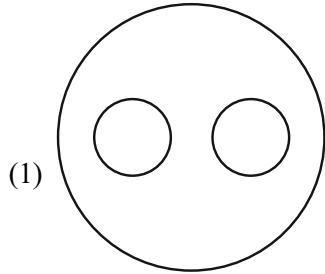
Ans. 1



**Direction : (Question Numbers 59 to 61)**

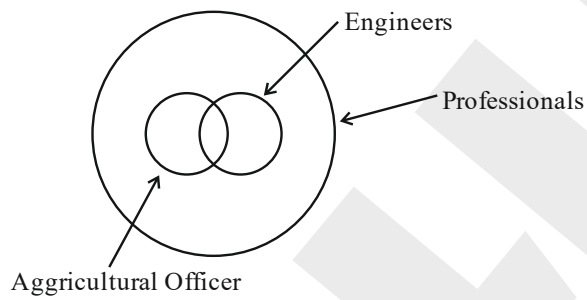
Select from the given diagrams (1), (2), (3) or (4), the one that illustrates the relationship among the three classes.

**59.** Engineers, Agricultural Officers, Professionals

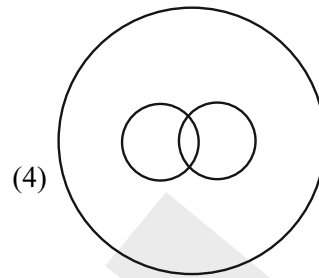
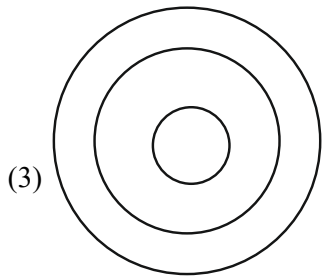
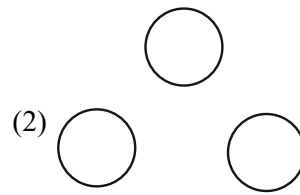
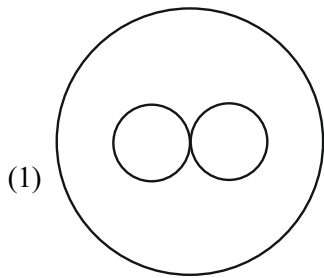


**Ans. 2**

**Sol.**

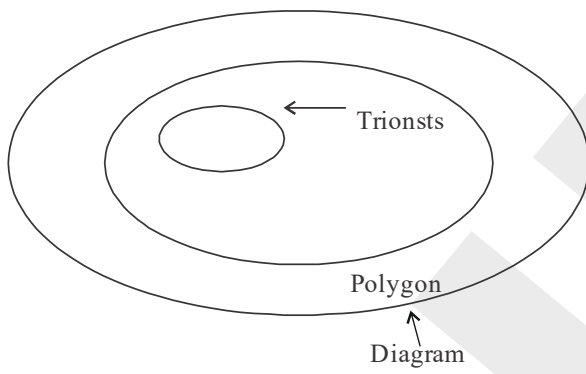


60. Diagrams, triangles, polygons

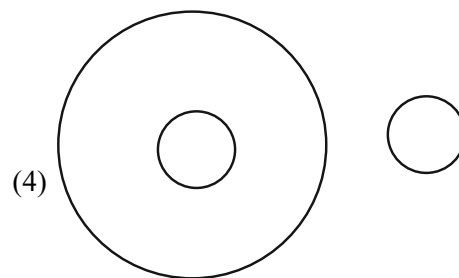
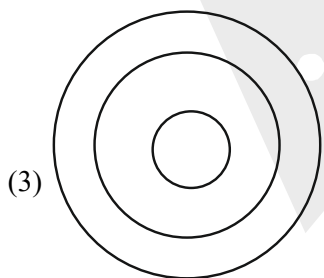
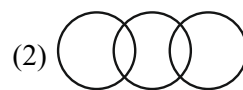


Ans. 3

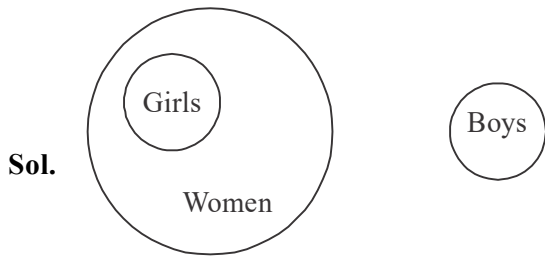
Sol.



61. Boys, girls, women

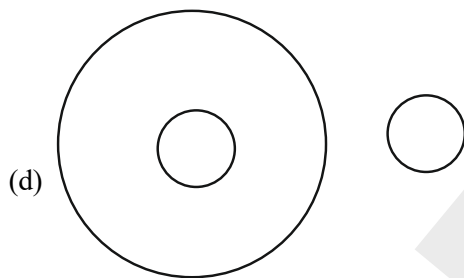
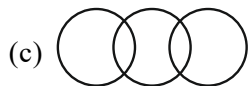
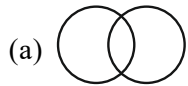


Ans. 2



**Direction : (Question Numbers 62 and 63)**

Select from the given diagrams (a), (b), (c) or (d) that one illustrates the relationship among given classes.



**62.** Haryana, Punjab, Chandigarh

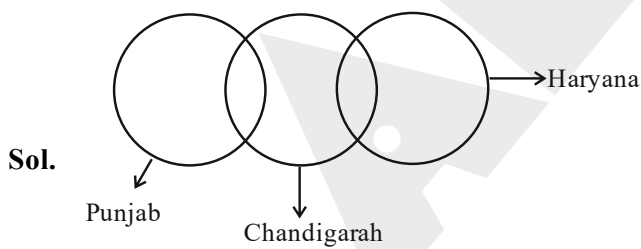
(1) (b)

(2) (c)

(3) (a)

(4) (d)

**Ans.** 2



**63.** Pets, Cats, Dogs

(1) (a)

(2) (b)

(3) (d)

(4) (c)

**Ans.** 4







**Direction : (Question Numbers 73 to 75)**

- (i) There are four persons P, Q, R, S
- (ii) They wear different colour caps - Red, Green, Blue and White.
- (iii) P is neither wearing White nor Green.
- (iv) Q is not wearing White.
- (v) S wears Red.

Based on the above information answer the questions.

**73.** R wears :

- (1) White cap                      (2) Green cap                      (3) Red cap                      (4) Blue cap

**Ans.** 1

**Sol.** → P is neither wearing white nor Green. Cap

i.e., P - ~~White~~, ~~Green~~ → (1)

→ Q is not wearing white cap

i.e., Q - ~~White~~ → (2)

→ S wears Red cap

i.e, S - Red → (3)

from (1) P is either Red or Blue

S is already Red so P is Blue

and Q is Green from (2)

So

P	Q	R	S	
Blue	Green	White	Red	(Caps)

R wears white cap

**74.** P wears :

- (1) White cap                      (2) Green cap                      (3) Red cap                      (4) Blue cap

**Ans.** 4

**Sol.** The final matching of caps is

P	Q	R	S
↓	↓	↓	↓
Blue	Green	White	Red

So P wears Blue



75. Q wears :

(1) White cap

(2) Green cap

(3) Red cap

(4) Blue cap

Ans. 2

Sol. The final matching is

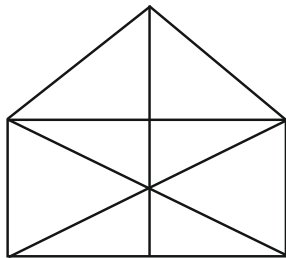
P	Q	R	S
↓	↓	↓	↓
Blue	Green	White	Red

So Q wears green

**Direction : (Question Numbers 76 to 79)**

Go through the diagrams in each of the question and choose the answer.

76. The number of triangles in the given diagram is :



(1) 17

(2) 11

(3) 8

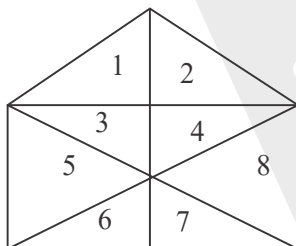
(4) 10

Ans. 1

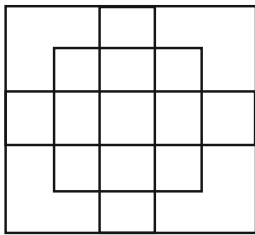
Sol. The triangles are

1,2,3,4,5,6,7,8,(1,2),(1,3),(2,4),(3,4),(6,7),(5,6,7),(3,4,8),(5,3,4),(6,7,8)

So total triangles are '17'.



77. The number of squares in the given figure is :



- (1) 18                                      (2) 27                                      (3) 21                                      (4) 24

**Ans.** 2

**Sol.** Squares are 4,5,6,8,9,10,13,14,15,2,7,11,17

(1,4),(12,13),(15,16),(6,3),(4,5,8,9),(5,6,9,10),(8,9,13,14),

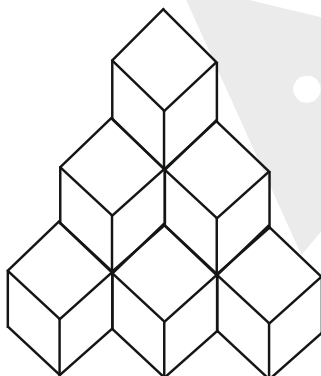
(9,10,14,15),(1,4,7,8,2,5,9)(2,5,9,6,10,3,11)

(7,8,9,13,14,12,17)(9,10,11,14,15,16,17)(4,5,6,8,9,10,13,14,15)

(1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17)

1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18

78. The number of cubes in the following figure is :

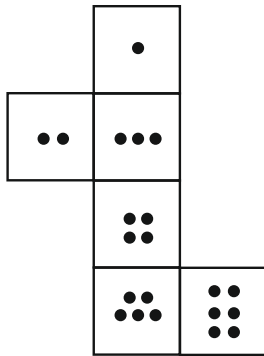


- (1) 6                                      (2) 8                                      (3) 10                                      (4) 9

**Ans.** 3

**Sol.** By Observation

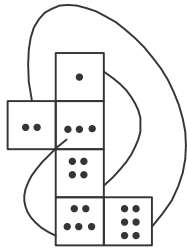
79. The number of dots lie opposite to the face having three dots, when the given figure is folded to form a cube, is :



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

**Ans.** 1

**Sol.** The face opposite to the face having '3' dots is '5' (The face having 5 dots) if you told to form a cube.



80. Father tells his son "I was your present age when you were born". If the father's age is 48 now, how old was the boy 6 years back ?

- (1) 16                                      (2) 17                                      (3) 18                                      (4) 19

**Ans.** 3

**Sol.** Now father's age is '48'.

$$\text{Son's age} = x$$

$$\text{Father's age} = 48$$

$$48 - x = x$$

$$48 = 2x$$

[As per the given data if father goes 'x' years back then he is at his son's age]

So age of boy 6 years ago is

$$x - 6$$

$$\Rightarrow 24 - 6 = 18 \text{ years}$$

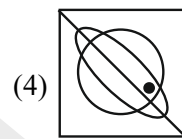
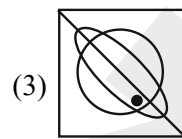
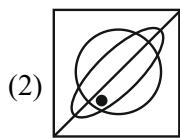
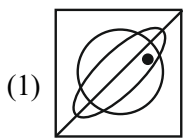
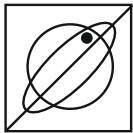
81. The water image of Q P N 5 7 6 4 is :

- (1) Q P N 2 L e t      (2) O B H 2 Δ e t      (3) Q P H 2 L e t      (4) O B N 2 Δ e t

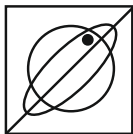
Ans. 2

Sol.  $\overline{\text{Q P N 5 7 6 4}}$  (Water image)  
 O B H 2 Δ e t

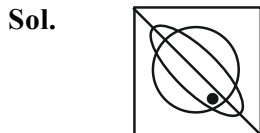
82. The water image of the given figure is :



Ans. 3



$\overline{\hspace{2cm}}$  (Water image)



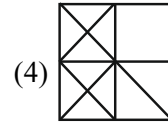
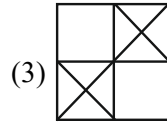
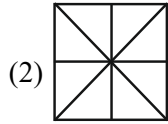
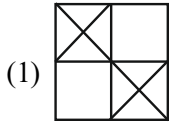
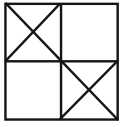
83. The mirror image of 2 5 9 R S W Z is :

- (1) Z W 2 Я e z z      (2) z z 2 Я S M Z      (3) z z 9 Я z M Z      (4) z s e Я z W Z

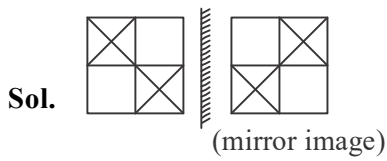
Ans. 1

Sol. By Observation

84. The mirror image of given figure is :



Ans. 3



85. A cube is coloured green on all six faces. The side of the cube is 3 cm. It is cut into smaller cubes of equal size of length 1 cm. The number of cubes without colour on any faces:

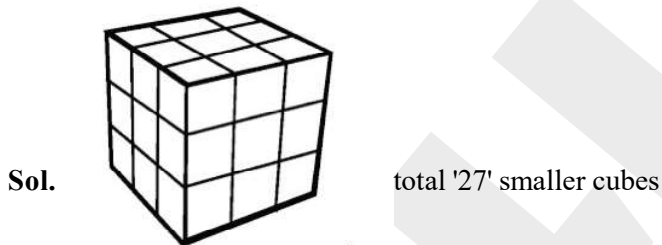
(1) 1

(2) 3

(3) 4

(4) 0

Ans. 1



the number cubes without colour on any faces is '1' (because all the outer layers are painted. i.e., 26 small cubes are painted so only one cube is inside which is not painted).

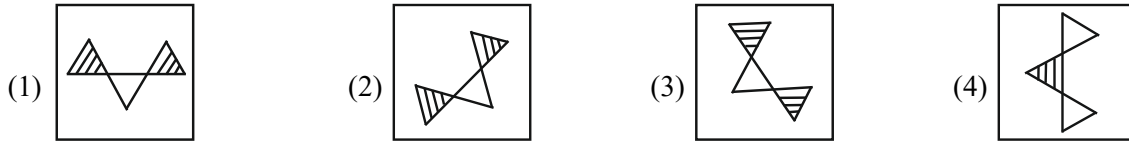
or

$$(n-2)^3 = (3-2)^3 = 1 \text{ (Here } n = 3\text{)}$$

**Direction : (Question Numbers 86 to 88)**

Out of the four figures (1), (2), (3) and (4) three are similar in some way. One figure is not like other three. Select the unlike figure.

86.



**Ans. 4**

**Sol.** Except 4th option remaining all are having two shaded parts

87.



**Ans. 4**

**Sol.** Except 4th options, in the remaining all options the two flags are in opposite direction.

88.



**Ans. 2**

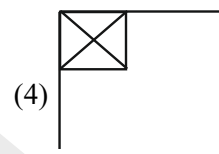
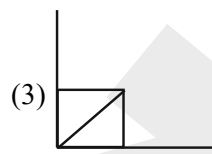
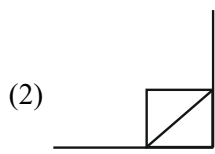
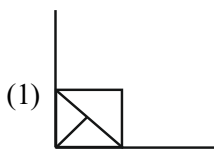
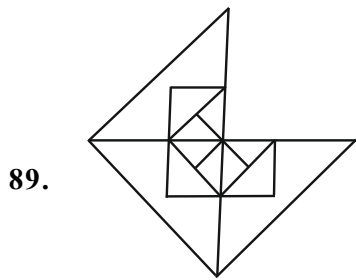
**Sol.** In 2nd diagram,



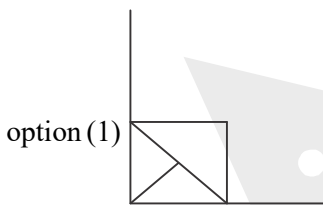
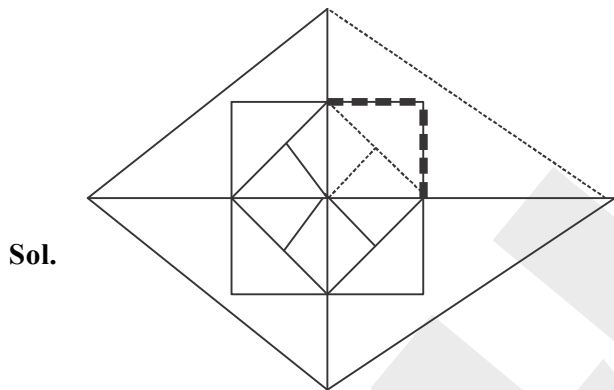
one opposite to each other

**Direction : (Question Number 89)**

Select the portion of the picture from the four alternatives (1), (2), (3), (4) to complete the following figure.

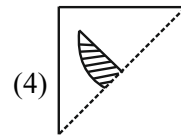
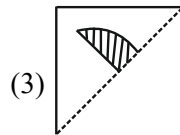
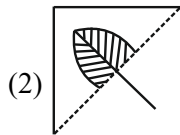
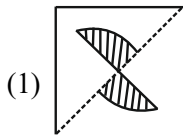
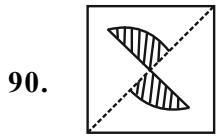


**Ans. 1**

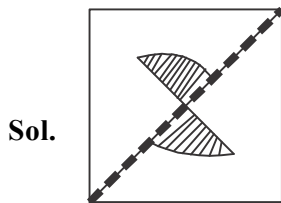


**Direction : (Question Number 90)**

A square transparent paper with a pattern is given. Choose amongst the four solution figures which would look like the one when the paper is folded at the dotted line.



**Ans. 2**

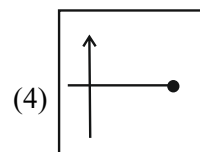
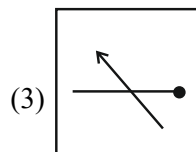
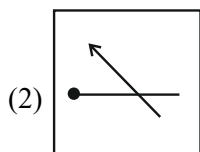
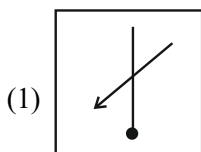
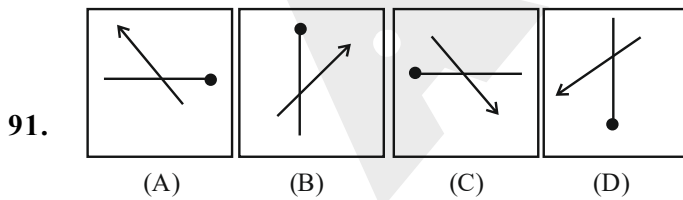


after folding at the dotted line the transparent view is




**Direction : (Question Numbers 91 to 95)**


In each of the following questions, find the answer figure (1), (2), (3) or (4) which would continue the given series of four figures (A), (B), (C) and (D).

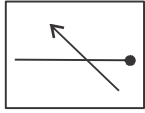


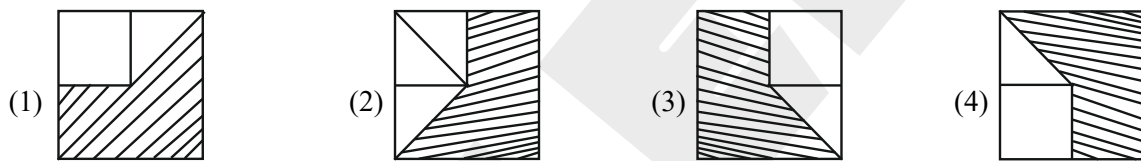
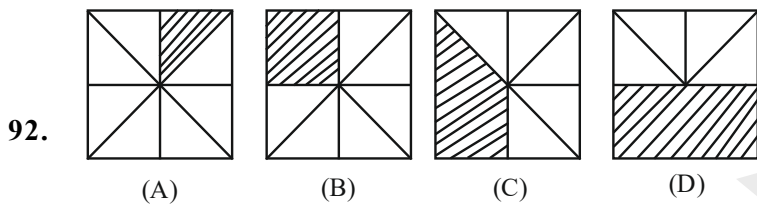
**Ans. 3**




**Sol.**  symbol is rotating 90° clockwise every time

 symbol is rotating 90° anticlockwise every time


so answer figure is 

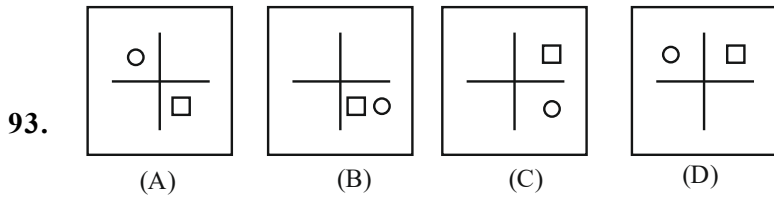


**Ans.** 2

**Sol.**  → If count it as 'one' shaded part, then everytime one shaded part is increasing anticlockwise by

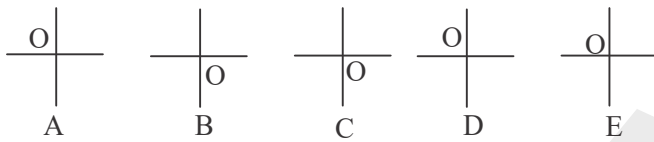
leaving one shaded part, which is starting part in anticlockwise

so answer figure is '3' shaped parts. 

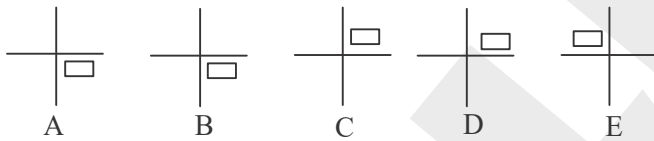


**Ans. 1**

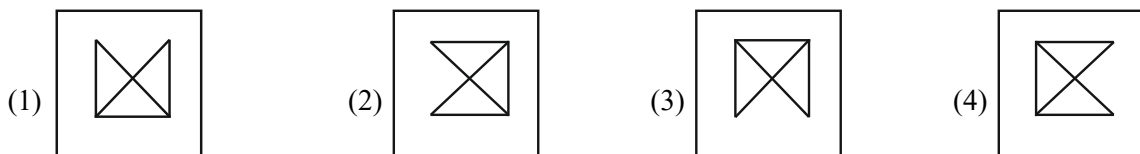
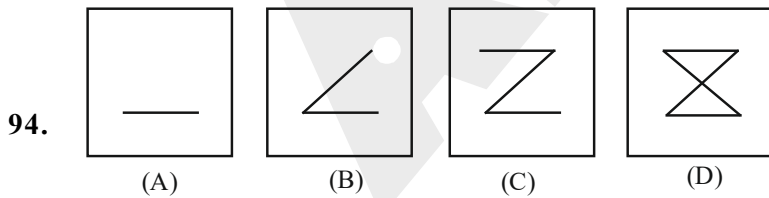
**Sol.** 'O' symbol is moving opposite diagonally and constant alternatively



'□' symbol constant and moving one step anticlockwise alternatively

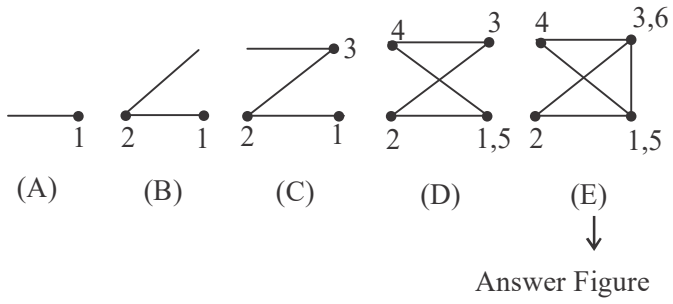


So answer figure is

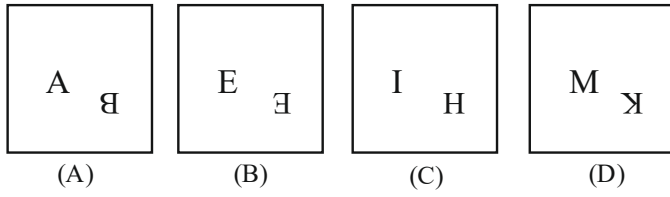


**Ans. 2**

**Sol.** Every time one line is adding, and there is continuity in the drawing



95.



Ans. 1

Sol.  $\overbrace{A, E, M, I, Q}$  (First letter)

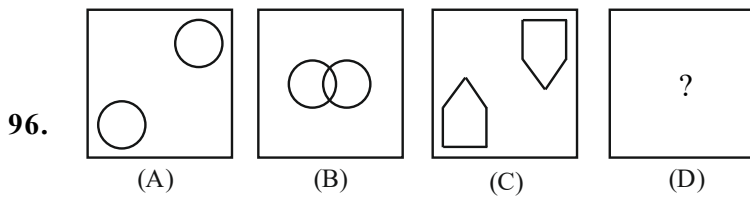
$\overbrace{B, E, H, K, N}$  (second letter)

$\overbrace{B, E, H, K, N}$   
 $+3 \quad +3 \quad +3+3 \quad +3$

so mirror image of N is "M" so answer is  $\overline{QH}$

**Direction : (Question Numbers 96 to 98)**

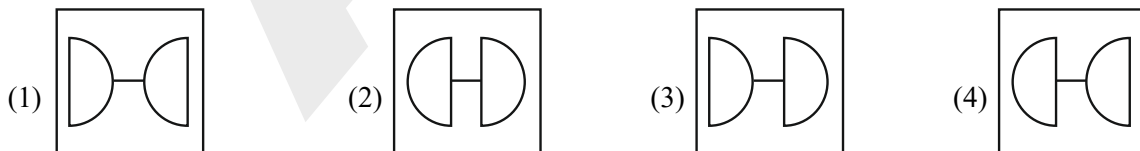
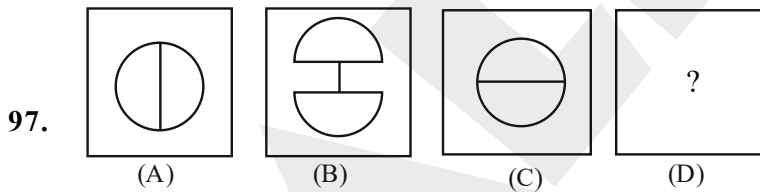
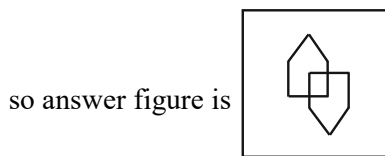
The pair of figures (A) and (B) are related in some manner. In the same manner the other pair of figures (C) and (D) are connected. Choose the figure which replaced (D).



**Ans. 4**

**Sol.** Two ('O') circle symbols are intersecting each other is B and diagonally opposite in 'A'.

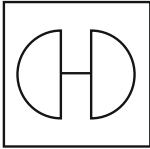
In the same way pentagons are diagonally opposite in 'C' negative so in the figure 'D' then must be intersect with each other.

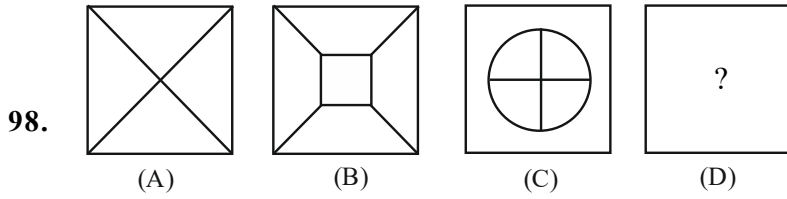


**Ans. 2**

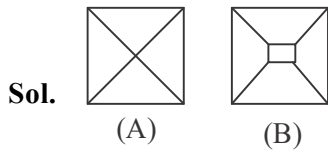
**Sol.** From figure A to figure 'B' semi circles are seperated by rotating 90°

In the same way from fig C to fig D. two semi circles must be seperated by totating 90°

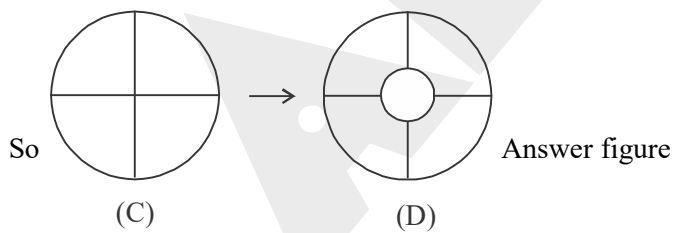
So answer figure is 



**Ans.** 1

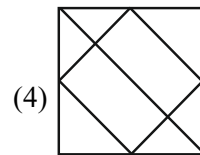
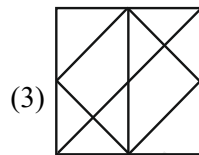
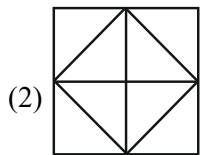
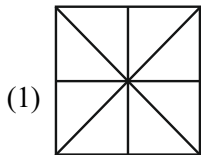
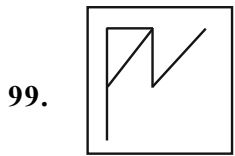


Remove lines in the centre and replacing with same outside figure.

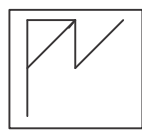
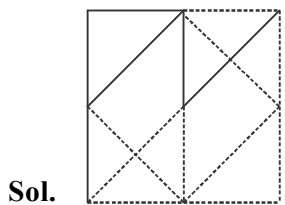


**Direction : (Question Numbers 99 and 100)**

Figure (X) is embedded in any one of the four alternatives (1), (2), (3) or (4). Choose the figure which contains the figure (X).



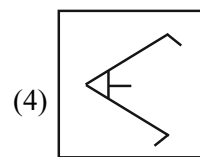
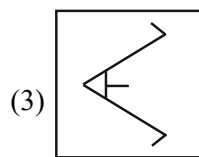
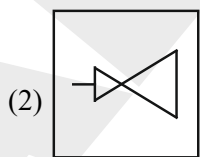
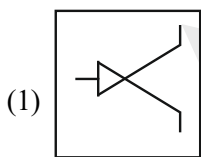
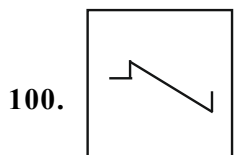
**Ans. 3**



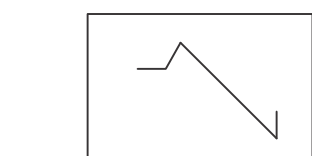
(X)

Question Figure

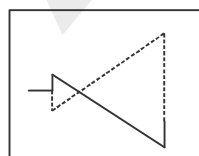
option (3)  
Answer Figure



**Ans. 2**



(X)  
Question Figure



Option (2)  
Answer Figure