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

**Direct ions : (Question 1 to 5) :** In the Number series given below, one number is missing Each series is followed by five alternatives (1), (2), (3), (4) and (5). One of them ir the right answer. Identify and indicate it as per the "Instructions".

**1.**     13, 74, 290, 650, .......

(1) 1248          (2) 1470          (3) 1346          (4) 1452          (5) 1625

**Ans.**  **(Bonus)**

**Sol.**  13, 74, 290, 650, <u>1370</u>

$2^2 + 3^2, 5^2 + 7^2, 11^2 + 13^2, 17^2 + 19^2, 23^2 + 29^2$

**2.**     1, 11, 35, 79, .......

(1) 81          (2) 93          (3) 149          (4) 124          (5) 136

**Ans.**  **(3)**

**Sol.**  1, 11, 35, 79, 149
          +10  +24  +44  +70

**3.**     1, 5, 15, 34,.......

(1) 50          (2) 48          (3) 37          (4) 65          (5) 72

**Ans.**  **(4)**

**Sol.**  1, 5, 15, 34, 65
          +4  +10  +19  +31

**4.**     3, 13, 31, 57, .......

(1) 65          (2) 72          (3) 88          (4) 94          (5) 91

**Ans.**  **(5)**

**Sol.**  3, 13, 31, 57, <u>91</u>
          +10  +18  +26  +34

**5.**     2, 35, 104, 209, .......

(1) 350          (2) 248          (3) 256          (4) 311          (5) 413

**Ans.**  **(1)**

**Sol.**  2, 35, 104, 209, <u>350</u>
          +33  +69  +105  +141

**(Questios 6 to 10) :** In each of the following questions, a letter series is given, in which some letters are missing. The missing letters are given in the proper sequence as one of the alternative. Find the correct alternative.

**6.**     A....BBC...AAB...CCA...BBCC

(1) BACB          (2) ABBA          (3) CABA          (4) AABC          (5) ACBA

**Ans.**  **(5)**

**Sol.**  A <u>A</u> B B C <u>C</u>   A A B <u>B</u> C C   A <u>A</u> B B C C

**7.** BC...B....C.....B...CCB

(1) BBCB      (2) CBBC      (3) CBCB      (4) B....CCB      (5) CCBB

**Ans. (3)**

**Sol.** BC<u>C</u>B BC<u>C</u>B <u>B</u>CCB

**8.** C....BBB....ABBBB....ABBB.......

(1) BACBB      (2) AABCB      (3) ABACB      (4) ABCCB      (5) ABBCC

**Ans. (Bonus)**

**9.** C......BCCD......CCDB.........CDBCC......BC

(1) DBCD      (2) DBDD      (3) BDAA      (4) BDCD      (5) DCBD

**Ans. (1)**

**Sol.** CD<u>B</u>C/CD<u>B</u>C/CDB<u>C</u>/CDBC/CD<u>B</u>C

**10.** BA...B....AAB....A....B

(1) AABB      (2) BABB      (3) BAAB      (4) ABBA      (5) ABAA

**Ans. (4)**

**Sol.** <u>B</u> A <u>A</u> B <u>B</u> A A B <u>B</u> A <u>A</u> B

**Directions:**

**(Questions 11 to 15) :** Questions have become wrong due to wrong order of signs. Choose the correct order of signs from the five alternatives given under each question, so that the equations Iwicomes right Write it in your answer sheet against the corresponding question number.

**11.** 6 + 3 = 4 × 22

(1) × + =      (2) + − ×      (3) = × −      (4) + − =      (5) + ×−

**Ans. (1)**

**Sol.** 6 × 3 + 4 = 22

**12.** 12 − 3 = 4 × 11

(1) + + =      (2) × + =      (3) + − =      (4) × = −      (5) + = ×

**Ans. (3)**

**Sol.** 12 + 3 − 4 = 11

**13.** 16 × 4 ÷ 3 = 7

(1) + × =      (2) − + =      (3) + = −      (4) + − =      (5) ÷ + =

**Ans. (5)**

**Sol.** 16 ÷ 4 + 3 = 7

**14.** 7 ÷ 3 = 8 − 13

(1) ÷ + =      (2) × − =      (3) ÷ = +      (4) − + =      (5) − × =

**Ans. (2)**

**Sol.** 7 × 3 − 8 = 13

**15.** $15 - 3 \times 4 = 9$

    (1) $\div \times =$        (2) $\times - =$        (3) $\div - =$        (4) $\div + =$        (5) $+ \div =$
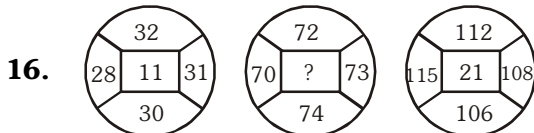
**Ans.** **(4)**

**Sol.** $15 \div 3 + 4 = 9$

**Directions :**

**(Questions 16 to 20) :** In these questions, numbers are placed in the figures on the bases of some rules. One place is vacant which is indicate as '?'. Find out the correct alternatives to replace the question mark '?'
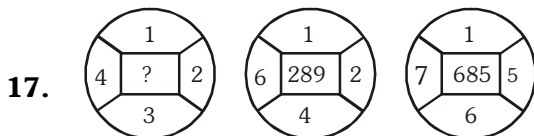
**16.**



    (1) 14         (2) 15         (3) 16         (4) 17         (5) 18

**Ans.** **(4)**

**Sol.** $\sqrt{28 + 32 + 31 + 30} = 11$

    $\sqrt{115 + 12 + 108 + 106} = 21$

    $\therefore \ \sqrt{70 + 72 + 73 + 74} = 17$

**17.**



    (1) 14         (2) 15         (3) 16         (4) 17         (5) 18

**Ans.** **(Bonus)**

**Sol.** $7^3 + 1^3 + 5^3 + 6^3 = 685$

    $6^3 + 1^3 + 2^3 + 4^3 = 289$

    $\therefore 4^3 + 1^3 + 2^3 + 3^3 = 100$

**18.**
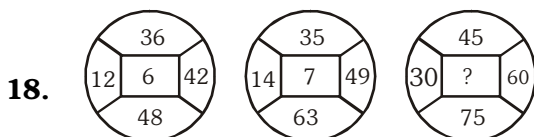


    (1) 12         (2) 15         (3) 18         (4) 21         (5) 24

**Ans.** **(2)**

**Sol.** HCF of ( 12, 36, 42, 48 ) = 6

    HCF of ( 14, 35, 44, 63 ) = 7

    $\therefore$ HCF of ( 30, 45, 60, 75 ) = 15

**19.**
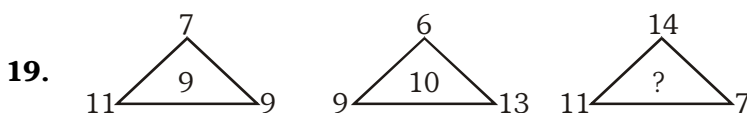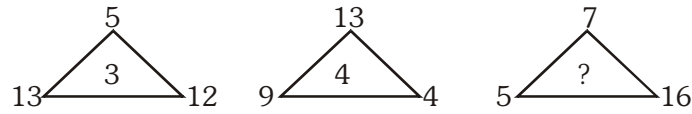


    (1) 7          (2) 9          (3) 4          (4) 5          (5) 10

**Ans.** **(4)**

**Sol.** Sum of digits of (Sum of outer number).

**20.**



(1) 5      (2) 4      (3) 10      (4) 8      (5) 6

**Ans. (5)**

**Sol.** $13 + 12 + 5 = 30 \Rightarrow 3 - 0 = 3$

$9 + 4 + 13 = 26 \Rightarrow 6 - 2 = 4$

$\therefore 5 + 7 + 16 = 28 \Rightarrow 8 - 2 = 6$

**Directions :**

**(Question 21 to 25) :** some letter are given in column I and some digits are in column II Each digit of column II respresents any letter of column I Study the columns and write the alternative letter after choosing the correct alternative against the corresponding question.

| Column -I | Column-II |
|-----------|-----------|
| ABLMS | 24538 |
| QRLBA | 93526 |
| PTQAB | 52601 |
| LRNPQ | 93716 |
| ATRNP | 29071 |
| MSPTQ | 84106 |
| QPNAR | 16729 |
| RABLS | 29583 |
| TSLBA | 80325 |
| PLQST | 31860 |

Code of leters are

**Sol. (Q. 21 to 25) :**

| A | B | L | M | S | Q | R | P | T | N |
|---|---|---|---|---|---|---|---|---|---|
| 2 | 5 | 3 | 4 | 8 | 6 | 9 | 1 | 0 | 7 |

**21.** The code for M is ...........

(1) 0      (2) 8      (3) 1      (4) 6      (5) 4

**Ans. (5)**

**22.** The code for N is ........

(1) 9      (2) 6      (3) 1      (4) 7      (5) 2

**Ans. (4)**

**23.** The code for A is .....

(1) 9      (2) 5      (3) 2      (4) 8      (5) 3

**Ans. (3)**

**24.** The code for S is ......

(1) 3      (2) 2      (3) 5      (4) 0      (5) 8

**Ans. (5)**

**25.** The code for P is .......

(1) 3      (2) 8      (3) 0      (4) 1      (5) 6

**Ans. (4)**

**Direct tons:**

**[Questions 26 to 30) :** There are six persons in a family A, B, C, D, E and F.

(i)     C is the sister of E

(ii)    A is the brother of the husband of E.

(iii)   D is the father of A and D is the grand father of F

(iv)    There are two fathers, three brothers and a mother in the family.

On the basis of above details, choost the correct alternative.

**Sol.  (Q.26 to Q.30) :**
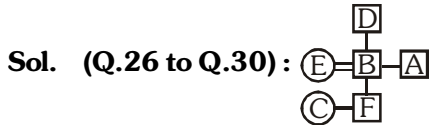


**26.**   What is the relationship between E and F ?

(1) Daughter          (2) Son          (3) Husband          (4) Grandson          (5)  Father-in-law

**Ans.  (2)**

**27.**   Who is the mother ?

(1) E          (2) D          (3) C          (4) B          (5) A

**Ans.  (1)**

**28.**   How many male members are there in this family ?

(1) One          (2) Two          (3) Three          (4) Four          (5) Five

**Ans.  (4)**

**29.**   Who is the husband of E ?

(1) F          (2) D          (3) B          (4) C          (5) A

**Ans.  (3)**

**30.**   How many persons are there in the category of brothers ?

(1) 1          (2) 2          (3) 4          (4) 2          (5) 3

**Ans.  (5)**

**Directions :**

**(Questions 31 to 35) :** There are four terms in each question. The term right to symbol : : have some relationship as the term of the left to symbol : : and out of the four one term is missing, which is among one of the given five alternatives. Find the correct alternatives.

**31.**   KMF : LLH : : RMS ....?..

(1) TVT          (2) SUS          (3) SLR          (4) SSU          (5) SLU

**Ans.  (5)**

**Sol.**
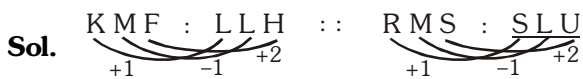


**32.**   GFH :  EGG : : ...?....: FSS

(1) GHF          (2) HRT          (3) HGF          (4) HFG          (5) GEF

**Ans.  (2)**

**Sol.**

**33.** UVST : WTUR : : ? ......: RILO

(1) PKJO     (2) TSUV     (3) UVTS     (4) TSVU     (5) SRUT

**Ans.** **(1)**

**Sol.**

$$\underset{+2}{\overset{+2}{U\,V\,S\,T}} : \underset{-2}{\overset{}{W\,T\,U\,R}} \;::\; \underset{-2}{\overset{}{P\,K\,J\,Q}} : \underset{+2}{\overset{-2}{R\,I\,L\,O}}$$

**34.** Newspaper : Editor : : Film : ....?.....

(1) Actor     (2) Producer     (3) Director     (4) Musician     (5) Audience

**Ans.** **(3)**

**Sol.** Editor edit Newspaper in the same way directors Edit Film

**35.** Smoke : Pollution : : War : .....?.....

(1) Victory     (2) Death     (3) Army     (4) Enemy     (5) Treaty

**Ans.** **(2)**

**Sol.** Smoke led to Pollution in the same way War led to Death

**Direct ions :**

**(Questions 36 to 40) :** In each of the following questions, in four out of the five figures of element I is related to element II in some particular way. Find out the figure in which the element is not related to element II.

**36.**



**Ans.** **(1)**

**Sol.** By observation

**37.**



**Ans.** **(4)**

**Sol.** By observation

**38.**



**Ans.** **(3)**

**Sol.** By observation

**39.**



| (1) | (2) | (3) | (4) | (5) |

**Ans. (5)**

**Sol.** By observation

**40.**
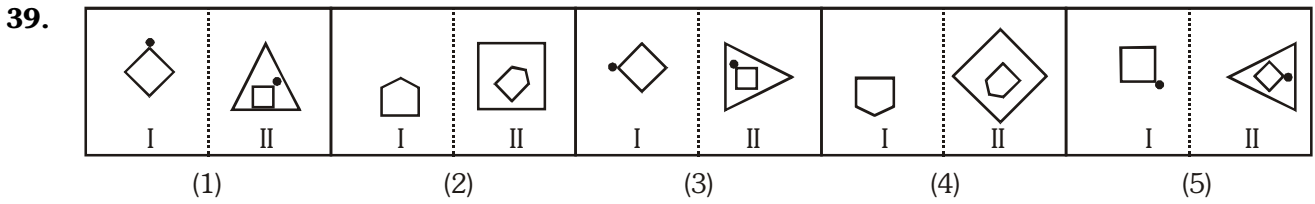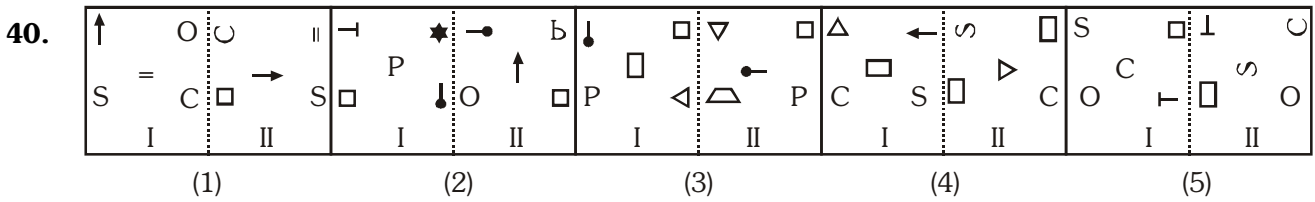


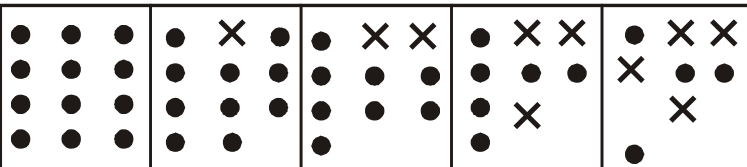| (1) | (2) | (3) | (4) | (5) |

**Ans. (2)**

**Sol.** By observation

**Direction :**

**(Questions 41 to 45) :** Out of the five figures (1), (2), (3), (4) (5) given in each problem, four are similar in a certain way. Choose the figure which is different from the other figures.

**41.** (1)  (2)  (3)  (4)  (5) 
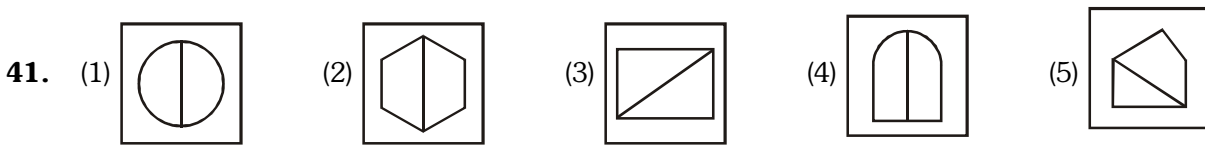
**Ans. (5)**

**Sol.** Line divide figure into 2 equal parts.

**42.** (1)  (2)  (3)  (4)  (5) 

**Ans. (5)**

**Sol.** By observation

**43.** (1)  (2)  (3)  (4)  (5) 

**Ans. (4)**

**Sol.** By observation

**44.** (1)  (2)  (3)  (4)  (5) 
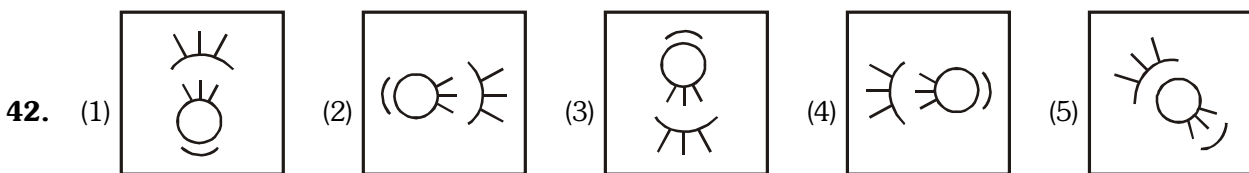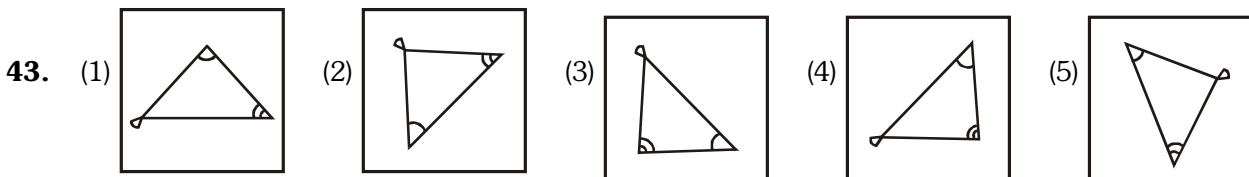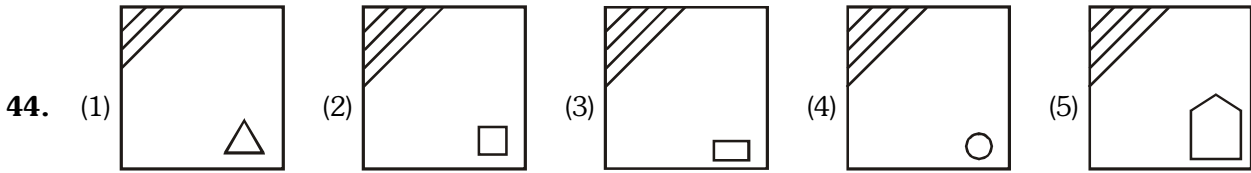
**Ans. (1)**

**Sol.** Number of lines in top left Corner.

**45.** (1) T (2) V (3) X (4) I (5) L
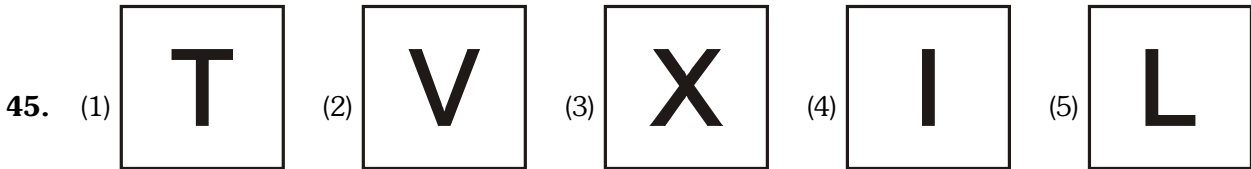
**Ans. (3)**

**Sol.** Two lines are used

**Directions:**

**(Questions 46 to 50) :** Each of the following questions consists of the five figures marked A, B, C, D and E called the problem figures followed by five alternatives marked 1, 2, 3, 4 and 5 called the answer figures. Select a figure which will continue the same series established by the five problem figures.

Problem Figures
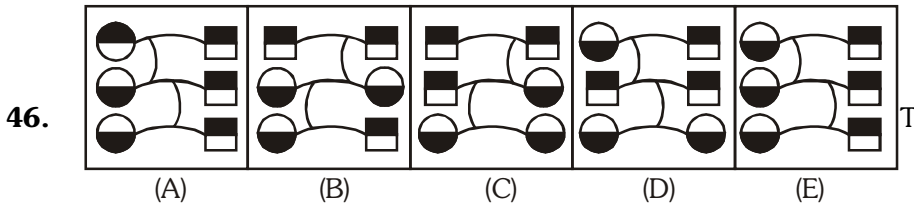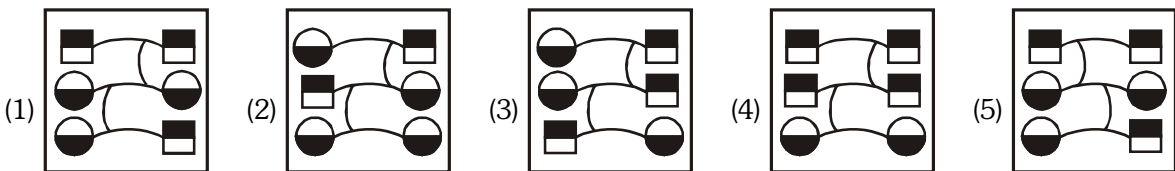
**46.**



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

Answer Figures

(1)  (2)  (3)  (4)  (5) 

**Ans. (1)**

**Sol.** By observation

Problem Figures

**47.**
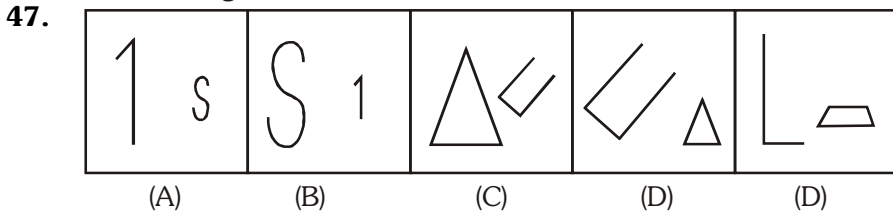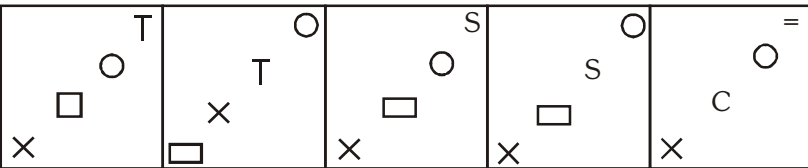


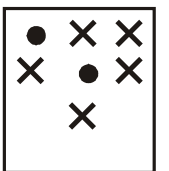(A)          (B)          (C)          (D)          (D)

Answer Figures
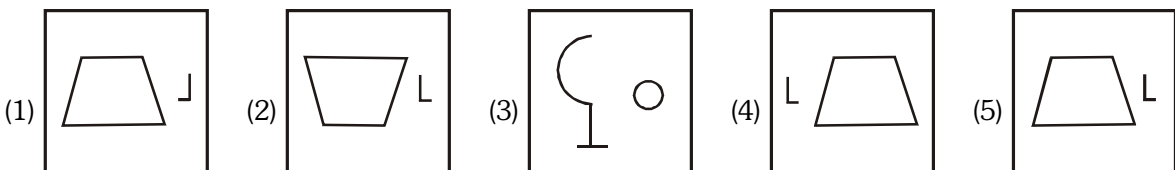
(1)  (2)  (3)  (4)  (5) 

**Ans. (5)**
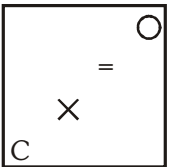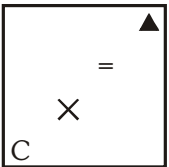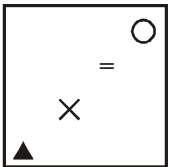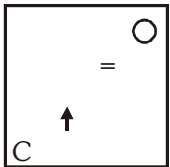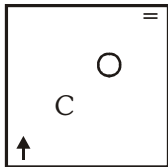
**Sol.** By observation

Problem Figures

**48.**



|  |  |  |  |  |
|---|---|---|---|---|
| (A) | (B) | (C) | (D) | (D) |

Answer Figures
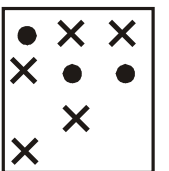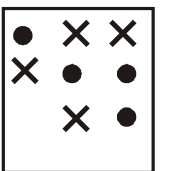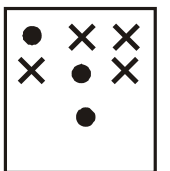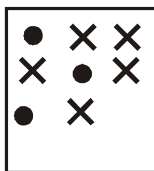


(1)   (2)   (3)   (4)   (5)

**Ans.** **(3)**

**Sol.** By observation

Problem Figures

**49.**
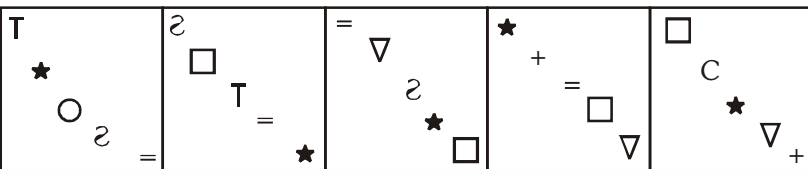


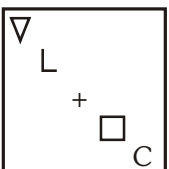|  |  |  |  |  |
|---|---|---|---|---|
| (A) | (B) | (C) | (D) | (E) |



(1)   (2)   (3)   (4)   (5)

**Ans.** **(3)**
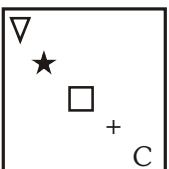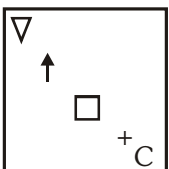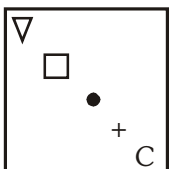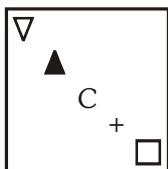
**Sol.** By counting the dots and cross

Problem Figures

**50.**



|  |  |  |  |  |
|---|---|---|---|---|
| (A) | (B) | (C) | (D) | (D) |

Answer Figures



(1)   (2)   (3)   (4)   (5)

**Ans.** **(3)**

**Sol.** By observation