

## NON-VERBAL INTELLIGENCE TEST

### Type1 : Five figure Series

This type of problems on series consist of five figures numbered A, B, C, D and E forming the problem set, followed by five other figures numbered 1, 2, 3, 4 and 5 forming the Answer Set. The five consecutive problem figures form a definite sequence and it is required to choose one of the figures from the Answer Set which will continue the same sequence.

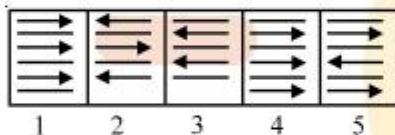
**In each of the following examples find the figure from the answer Set (i.e. figs. 1, 2, 3, 4 and 5) which will continue the series given in the problem Set (i.e. figs. A, B, C, D and E).**

### ◆ EXAMPLES ◆

#### Ex.1 Problem Figures

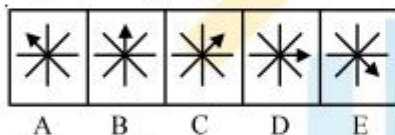


#### Answer Figures

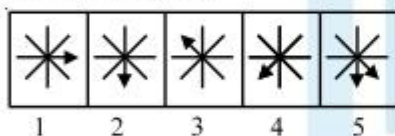


**Sol.** Clearly, arrows and straight lines are added alternately to get subsequent figures. Also all the arrows point towards the right. Hence, fig (4) is the answer.

#### Ex.2 Problem Figures

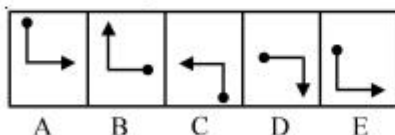


#### Answer Figures

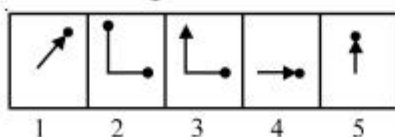


**Sol.** Here, the arrow rotates one step clockwise in every subsequent figure.  
∴ The answer is fig (2).

#### Ex.3 Problem Figures

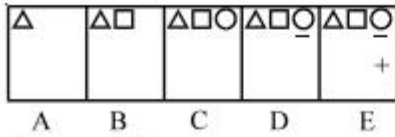


#### Answer Figures

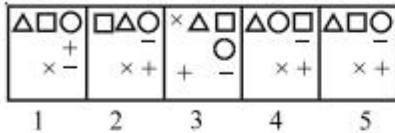


**Sol.** In this case, the pin rotates 90° clockwise and the arrow rotates 90° anticlockwise in each step. Hence, the answer is fig. (3).

**Ex.4 Problem Figures**



**Answer Figures**



**Sol.** New symbols are added in each step in a set order. Hence, the answer is fig (5).

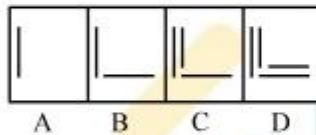
**Type 2 : Four figure Series**

This type of questions are largely similar to those discussed in Type-1; the only difference being that in this case the series or the sequence is indicated by four problem figures and it is required to select a figure from amongst the answer figure, which would be fifth figure the continues the series.

**Directions :**

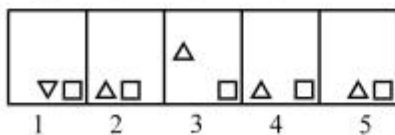
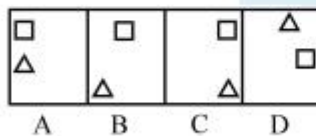
Select a figure from the Answer Set (1, 2, 3, 4, 5) which would continue the series indicated by the four figures of the Problem Set (A, B, C, D).

**Ex.5**



**Sol.** Clearly, vertical and horizontal lines are added alternately and in a set order. To continue this series, fig.(3) should follow fig.(D). Hence, fig.(3) is the answer.

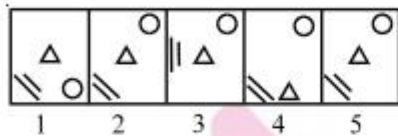
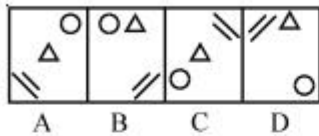
**Ex.6**



**Sol.** Clearly, the square moves one step CW each time (each step being equal to half a side of the square). The triangle moves one, two, three, .... steps ACW in subsequent steps. So, in the next fig., the square should come to the lower right position and the triangle should move four steps ACW to come to the lower middle position.

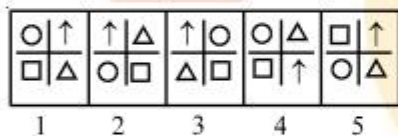
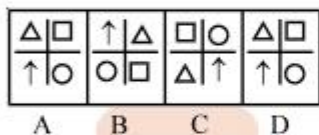
Hence, the answer is (5).

**Ex.7**



**Sol.** The triangle occurs at the central and upper middle positions alternately. The circle moves one step ACW each time. The lines also moves one step ACW but they also get inverted in each step. Hence, the answer is (5).

**Ex.8**

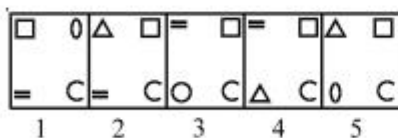
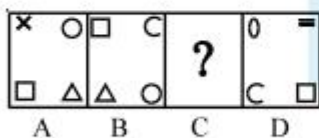


**Sol.** Clearly in one step, the symbols move one step CW and in the next step, the symbols at the vertically opposite positions interchange positions. Hence, the answer is (1).

**Type 3 : Choosing the missing figure in a series**

In this type of questions, you are given a set of four or five figures (labelled A, B, C, D and E) following a certain sequence and hence forming a series. However, the figure at C is missing. The candidate is required to choose this figure from the alternatives 1, 2, 3, 4, and 5.

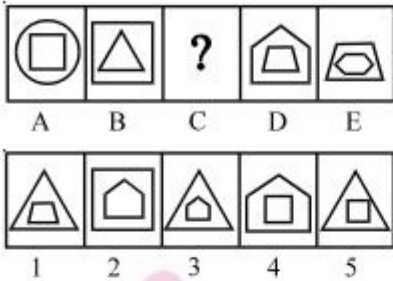
**Ex.9**





**Sol.** Clearly, each of the symbols moves one step CW in every step. Also, the symbols get replaced by new symbols one by one in an ACW direction. Thus, to obtain fig. (C), the symbols in (B) should move one step CW and the triangle should get replaced by a new symbol.  
Hence, the answer is (3).

**Ex.10**

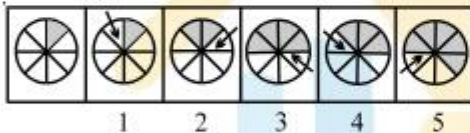


**Sol.** Clearly, the inner small figure become the outer large figure and a new small figure appears inside it in every step.  
Hence, the answer is (3).

**Type 4: Detecting the incorrect order in a series**

The third type of questions on series constants of an un-numbered figure followed by five other figures numbered as 1, 2, 3, 4 and 5. All the six figures together form a series. The un-numbered figure marks the beginning of the series and so its position is fixed. However, the positions of two of the figures in the series are incorrect and the series would be complete if these figures are interchanged. The earlier of the two numbered figures whose positions are interchanged, then the answer is 5.

**Ex.11**

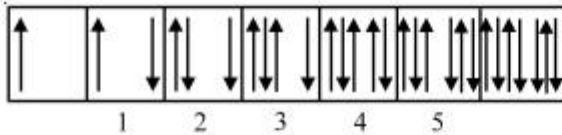


**Sol.** Clearly, in one step an arrow occurs adjacent to a shaded portion of the circle and in the subsequent step, that portion also gets shaded and the arrow is displaced on the other side of the shaded portions. This series will be complete if figures (3) and (4) are interchanged.  
Hence, the answer is (3).

**Type 5: Detecting the wrong figure in a series**

This type of questions begin with an un-numbered figure followed by five figures numbered from 1 to 5 and then again an un-numbered figure on the extreme right. These seven figure together form a series which starts at the first (un-numbered) figure and ends at the last (un-numbered) figure. However, one and only one of these figures does not fit into the series. The number of that figure is the answer.

Ex.12



**Sol.** In the above set of figures, the arrows are added to the right and left sides alternately. But in the third figure the arrow which was to be added to the right. Hence, the answer is (3).

### ANALOGY

#### Type 6: Choosing one element of a similarly related pair

This type of Analogy involves problems consisting of four figures marked A, B, C and D forming the Problem Set and five other figures marked 1, 2, 3, 4, and 5 forming the Answer Set. The figures A and B of the Problem set are related in a particular manner and a similar relationship is to be established between figures C and D by choosing a figure from the answer set which would replace the question mark in fig. (D).

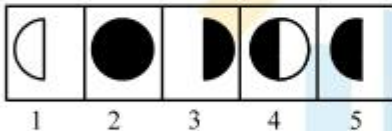
#### Directions:

Figures A and B are related in a particular manner. Establish the same relationship between figures C and D by choosing a figure from amongst the five alternatives, which would replaced the question mark in fig. (D).

Ex.13 Problem Figures

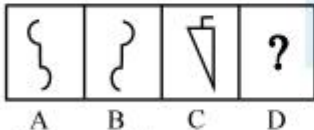


Answer Figures

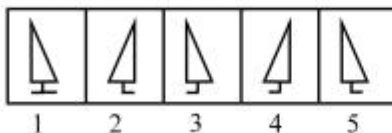


**Sol.** Clearly, the right half of the figure is lost and the remaining portion is shaded to get fig. (B) from fig. (A). Similar relationship will give fig. (5) from fig. (C). Hence fig. (5) is the answer.

Ex.14 Problem Figures



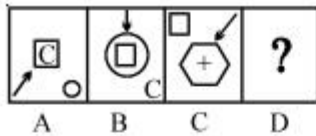
Answer Figures



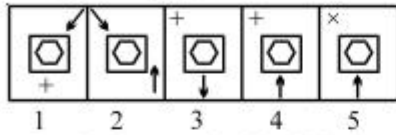
**Sol.** Fig. (B) is the water image of fig. (A). Similarly, the water image of fig. (C) is fig. (2) Hence, the answer is (2).

**Ex.15 Problem Figures**

Problem Figures



Answer Figures



**Sol.** Clearly, the symbol inside the central figure interchanges position with the closed figure at one of the corners. This figure enclosed the central figures. The arrow rotates  $135^\circ$  CW and moves one and a half side of the square in CW direction. Hence the answer is (4).

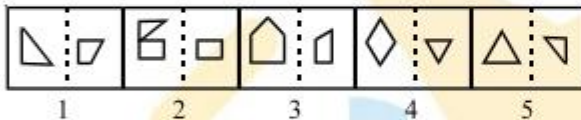
**Type 7: Choosing the set of similarly related figures**

In this type of questions on analogy, a related pair of figures is provided along with five other pairs of figures. The five pairs are numbered as 1, 2, 3, 4, and 5. The examinee has to choose one pair out of these five which most closely resembles the relationship indicated by the separated pair of figures.

**Ex.16 Problem Figures**

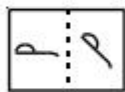


Answer Figures

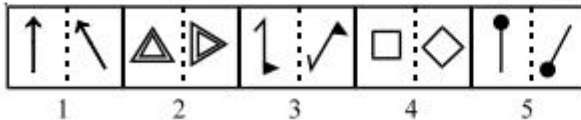


**Sol.** As is clear from the L.H.S. figures, the R.H.S. half of the first figure is lost and the remaining half is inverted to form second figure. A similar relationship is indicated in fig. (5). Hence, fig. (5) is answer.

**Ex.17 Problem Figures**



Answer Figures

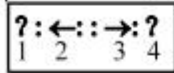
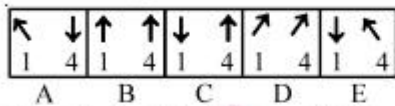


**Sol.** As is clear from the L.H.S. figures, the second figure has been obtained by rotating the first one through  $45^\circ$  in a clockwise direction. A similar relationship is indicated in fig. (4). Hence, fig. (4) is the answer.



**Type 8: Detecting one element of each of the two related pairs**

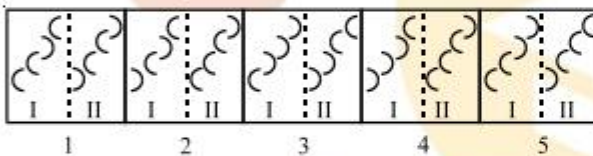
This type of questions based upon analogy consists of figures 1, 2, 3, and 4 in the problem set and figures A, B, C, D and E in the answer Set. Each one of the figures in the answer set further comprises of two more figures. It is required to choose a figure from the answer set such that figures 1 and 2 may be related in the same way as 3 and 4.

**Ex.18 Problem Figures****Answer Figures**

**Sol.** Clearly, L.H.S. figure of (B) when placed at position 1 and R.H.S. figure of (B) when placed at position 4 set up a relation between 1 & 2 and 3 & 4. The fig.(1) rotates  $90^\circ$  anticlockwise to give fig.(2) and similarly. fig.(3) rotates  $90^\circ$  anticlockwise to give fig.(4). Hence (B) is the answer.

**Type 9 : Choosing the odd relationship**

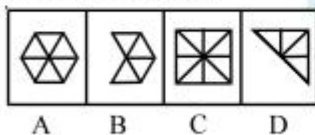
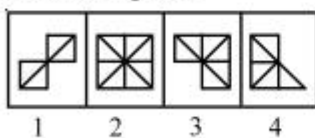
In this type of questions, five pairs of figures are given. The two figures in four out of five pairs are related in a particular manner. We have to select the pair which does not show this relationship.

**Ex.19 Problem Figures**

**Sol.** In all the pairs of figures except in (4); all the arcs except the third one are laterally inverted. Thus, the second element is formed from the first element. Hence, fig. (4) is the answer.

**Type 10 : Detecting the relationship and choosing the correct substitute**

This type of questions contains figures A, B, C, and D in the problem set and figures 1, 2, 3, and 4 in the answer set. It is required to select a figure from the answer set which best substitutes fig. D of the problem set such that element D is related to the element C in the same way as element B is related to element A. If none of the answers is suitable then answer is 5.

**Ex.20 Problem Figures****Answer figures**

**Sol.** Here, two triangles from fig.(A) are lost to form fig.(B). With this relationship we find that with the loss of two triangles from fig.(C), fig.(3) will be formed. So, fig.(3) is the answer.

### CLASSIFICATION

#### Type 11 : Choosing the odd figure

Under this heading, we study problems in each of which we are given five/four figures, out of which all except one are alike in some manner. We have to select the exclusively different figure in the given set.

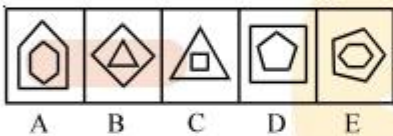
Following examples will make understanding easier:

**Ex.21** Given below are five figures, out of which four are alike in some manner. Find the figure which differs from all other figures.



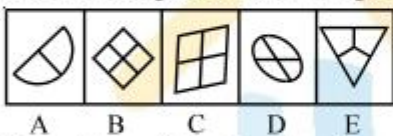
**Sol.** Except in fig (A), in all other figures the figure on either side of the central horizontal line are inverted images of each other. Hence, fig. (A) is the answer.

**Ex.22** Out of the following five figures, four are alike in some manner and one differs from these in that manner. Select the odd figures.



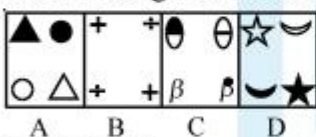
**Sol.** Except in fig (B), in all other figures, the outer figure encloses a figure with one side more than the outer figure. Hence, Fig. (B) is the answer.

**Ex.23** From amongst the following five figures, select the one which is different from all others.



**Sol.** Except fig. (D), all other figures are divided into equal parts. Hence, fig. (D) is the answer.

**Ex.24** From amongst the following four figures, select the one which is different from all others.



**Sol.** In all the figures except fig. (C), the similar symbols (one black and the other white) appear at diagonally opposite corners while in fig.(C), they appear in adjacent corners.



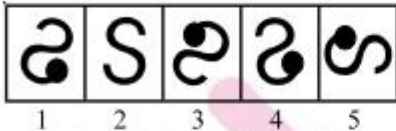
### Type 12 : Choosing a similar figure

The problems on this type of classification, involve four un-numbered figures followed by five other figures numbered as 1, 2, 3, 4 and 5. The four un-numbered figures forming the problem set are alike in a certain manner. A figure, from amongst the numbered ones forming the answer set, is to be chosen such that it is similar to the problem figures in that manner.

#### Ex.25 Problem Figures



#### Answer Figures



**Sol.** Clearly, all the problem figures can be rotated into each other. Fig. (5) is also similar to these in that respect.

Hence, fig. (5) is the answer.

### Type 13 : Choosing the figure with same properties

This type of questions contain two figures forming the problem set followed by five other figures forming the answer set. The problem figures have some common characteristics. The candidate is required to select one of the figures from the answer set which also exhibits the same characteristics.

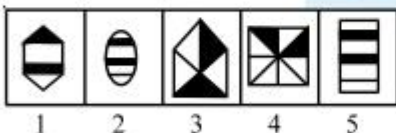
#### Ex.26



**Sol.** Each one of the two figures on the left has been formed by four distinct lines. Similarly, fig. (3) is made up of four lines.

Hence, fig. (3) is the answer.

#### Ex.27



**Sol.** Each one of the two problem figures has been divided into six equal parts and two of these parts are made black. Fig. (5) follows the same pattern.

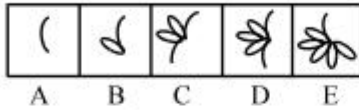
Hence, the answer is (5).

## EXERCISE

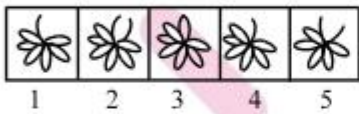
**Directions :**

Each of the following questions consists of five figures marked A, B, C, D and E called the problem figures followed by five other figures marked 1, 2, 3, 4 and 5 called the answer figures. Select a figure from amongst the answer figures which will continue the same series as established by the five problem figures.

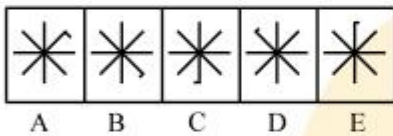
**Q.1** Problem Figures



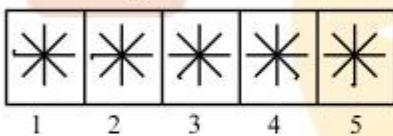
Answer Figures



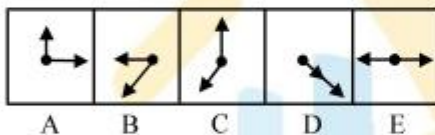
**Q.2** Problem Figures



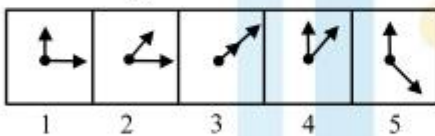
Answer Figures



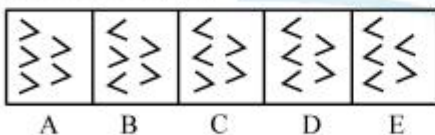
**Q.3** Problem Figures



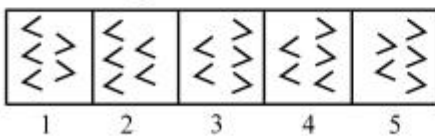
Answer Figures



**Q.4** Problem Figures



Answer Figures



**Q.5** Problem Figures



A B C D E

Answer Figures



1 2 3 4 5

**Q.6** Problem Figures



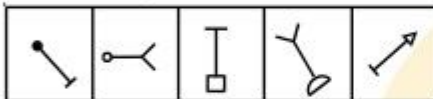
A B C D E

Answer Figures



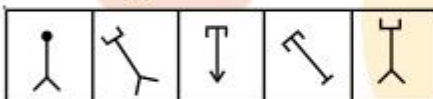
1 2 3 4 5

**Q.7** Problem Figures



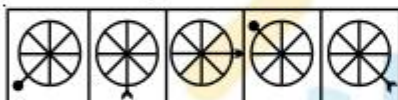
A B C D E

Answer Figures



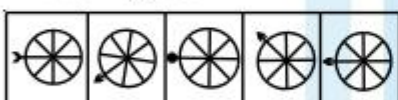
1 2 3 4 5

**Q.8** Problem Figures



A B C D E

Answer Figures



1 2 3 4 5

**Q.9** Problem Figures



A B C D E

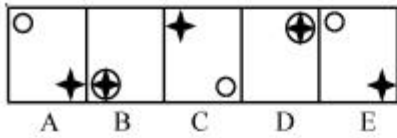
Answer Figures



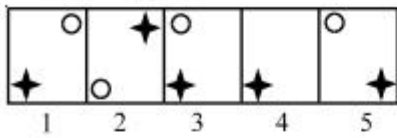
1 2 3 4 5



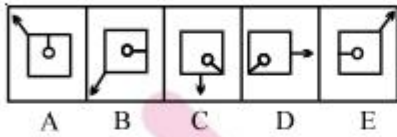
**Q.10** Problem Figures



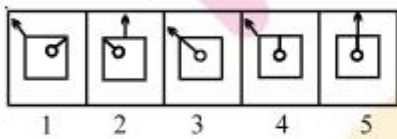
Answer Figures



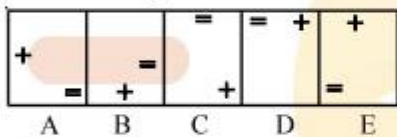
**Q.11** Problem Figures



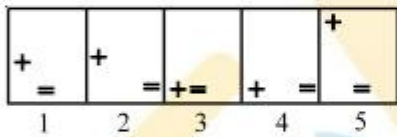
Answer Figures



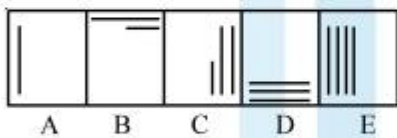
**Q.12** Problem Figures



Answer Figures



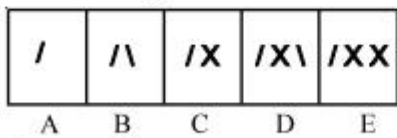
**Q.13** Problem Figures



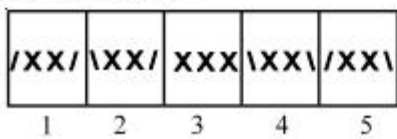
Answer Figures



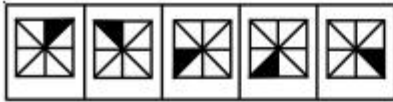
**Q.14** Problem Figures



Answer Figures

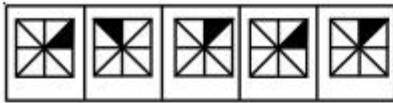


**Q.15** Problem Figures



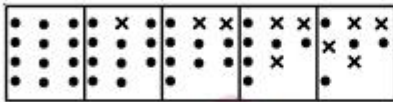
A B C D E

Answer Figures



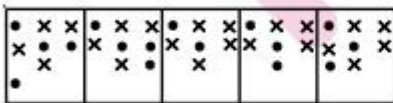
1 2 3 4 5

**Q.16** Problem Figures



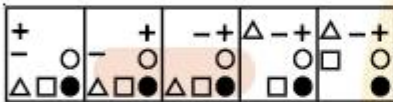
A B C D E

Answer Figures



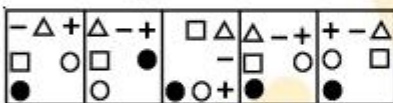
1 2 3 4 5

**Q.17** Problem Figures



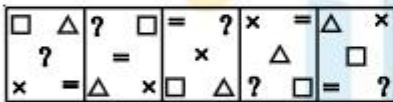
A B C D E

Answer Figures



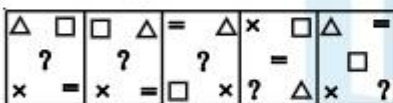
1 2 3 4 5

**Q.18** Problem Figures



A B C D E

Answer Figures



1 2 3 4 5

**Q.19** Problem Figures



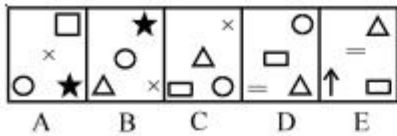
A B C D E

Answer Figures

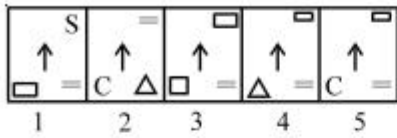


1 2 3 4 5

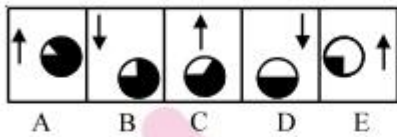
**Q.20** Problem Figures



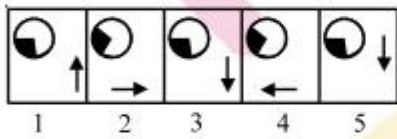
Answer Figures



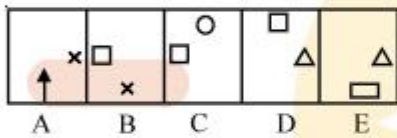
**Q.21** Problem Figures



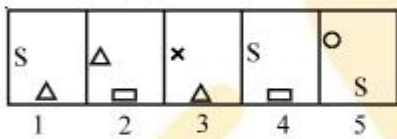
Answer Figures



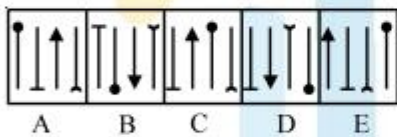
**Q.22** Problem Figures



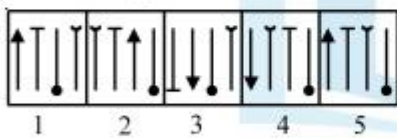
Answer Figures



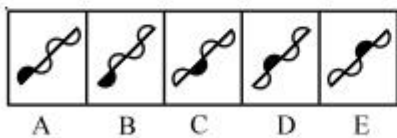
**Q.23** Problem Figures



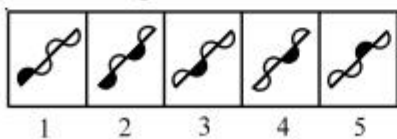
Answer Figures



**Q.24** Problem Figures

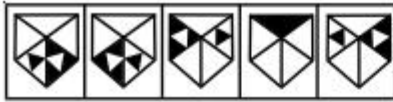


Answer Figures



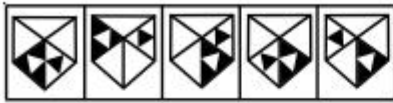


**Q.25** Problem Figures



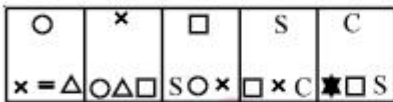
A B C D E

Answer Figures



1 2 3 4 5

**Q.26** Problem Figures



A B C D E

Answer Figures



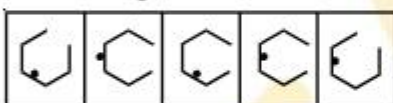
1 2 3 4 5

**Q.27** Problem Figures



A B C D E

Answer Figures



1 2 3 4 5

**Q.28** Problem Figures



A B C D E

Answer Figures



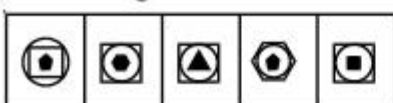
1 2 3 4 5

**Q.29** Problem Figures



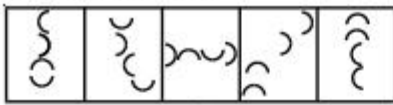
A B C D E

Answer Figures



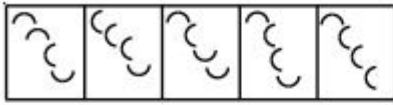
1 2 3 4 5

**Q.30** Problem Figures



A B C D E

Answer Figures



1 2 3 4 5

**Q.31** Problem Figures



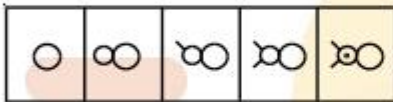
A B C D E

Answer Figures



1 2 3 4 5

**Q.32** Problem Figures



A B C D E

Answer Figures



1 2 3 4 5

**Q.33** Problem Figures



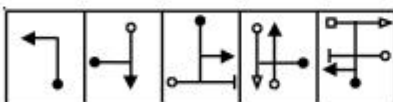
A B C D E

Answer Figures



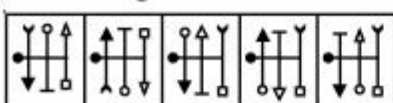
1 2 3 4 5

**Q.34** Problem Figures



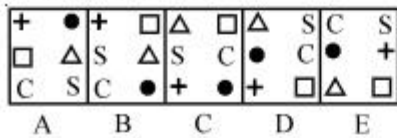
A B C D E

Answer Figures

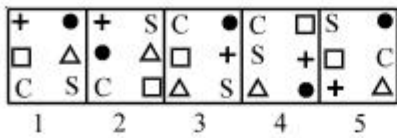


1 2 3 4 5

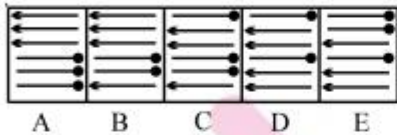
**Q.35** Problem Figures



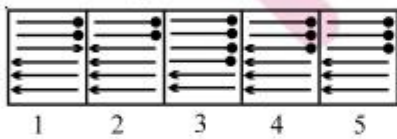
Answer Figures



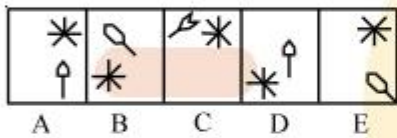
**Q.36** Problem Figures



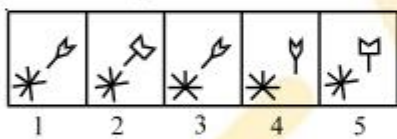
Answer Figures



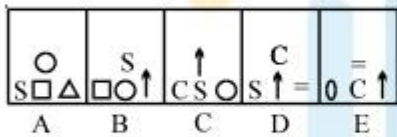
**Q.37** Problem Figures



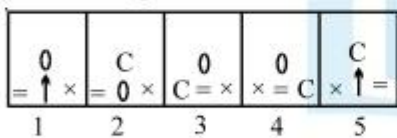
Answer Figures



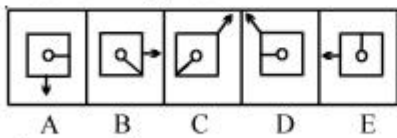
**Q.38** Problem Figures



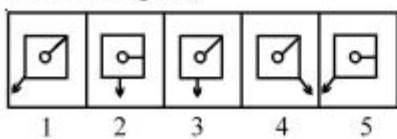
Answer Figures



**Q.39** Problem Figures

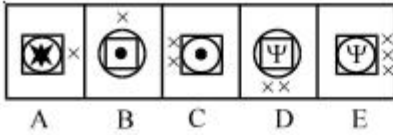


Answer Figures

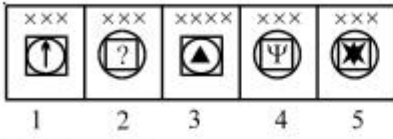




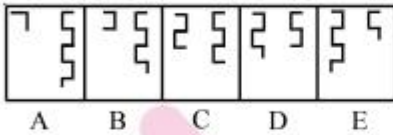
**Q.40** Problem Figures



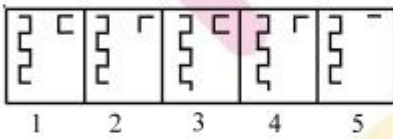
Answer Figures



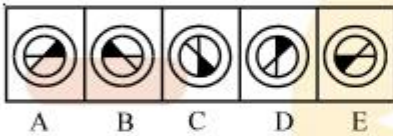
**Q.41** Problem Figures



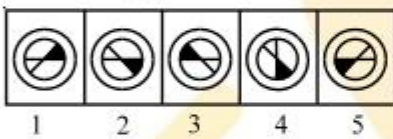
Answer Figures



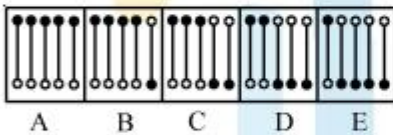
**Q.42** Problem Figures



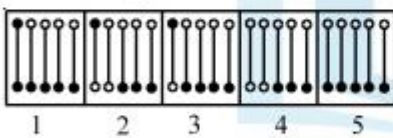
Answer Figures



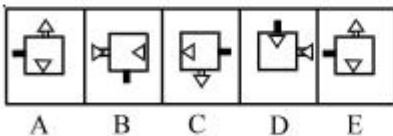
**Q.43** Problem Figures



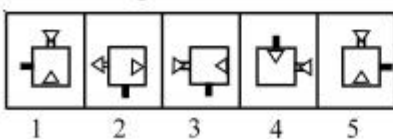
Answer Figures



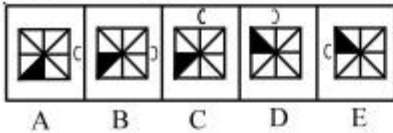
**Q.44** Problem Figures



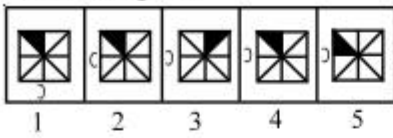
Answer Figures



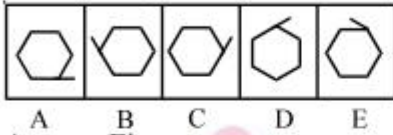
**Q.45** Problem Figures



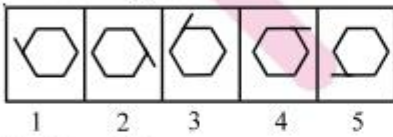
Answer Figures



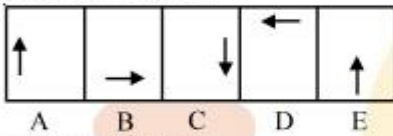
**Q.46** Problem Figures



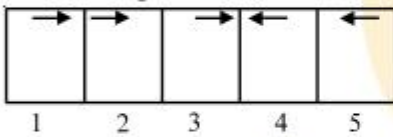
Answer Figures



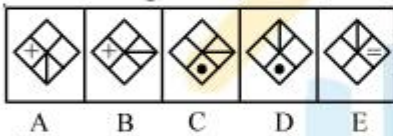
**Q.47** Problem Figures



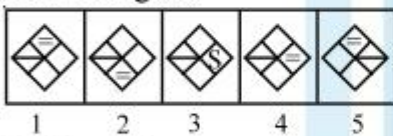
Answer Figures



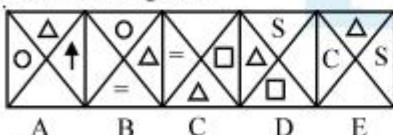
**Q.48** Problem Figures



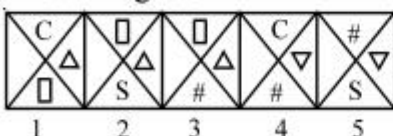
Answer Figures



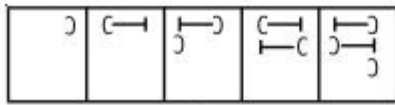
**Q.49** Problem Figures



Answer Figures

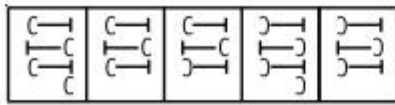


**Q.50** Problem Figures



A B C D E

Answer Figures

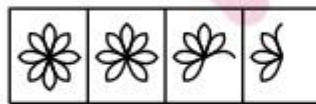


1 2 3 4 5

**Directions :**

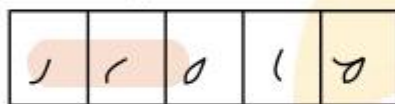
Each of the following problems, contains four problem figures marked A, B, C and D and five answer figures marked 1, 2, 3, 4 and 5. Select a figure from amongst the answer figures which will continue the same series as given in the problem figures.

**Q.51** Problem Figures



A B C D

Answer Figures



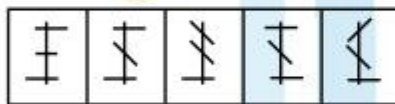
1 2 3 4 5

**Q.52** Problem Figures



A B C D

Answer Figures



1 2 3 4 5

**Q.53** Problem Figures



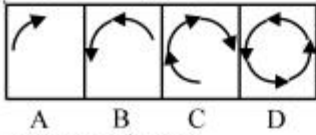
A B C D

Answer Figures

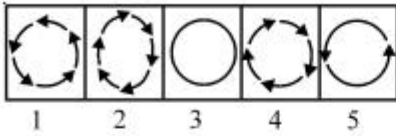


1 2 3 4 5

**Q.54** Problem Figures



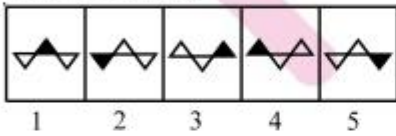
Answer Figures



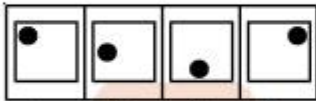
**Q.55** Problem Figures



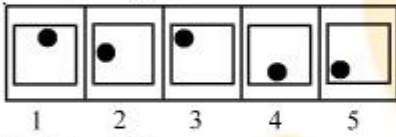
Answer Figures



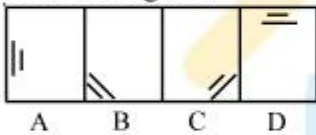
**Q.56** Problem Figures



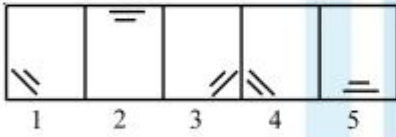
Answer Figures



**Q.57** Problem Figures



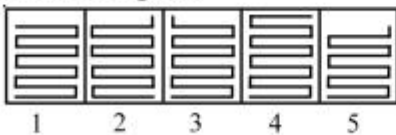
Answer Figures



**Q.58** Problem Figures

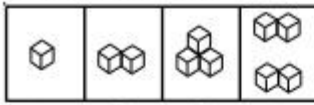


Answer Figures



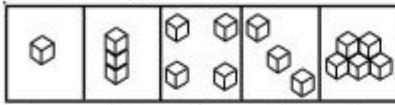


**Q.59** Problem Figures



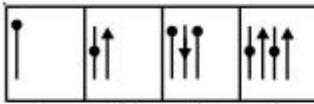
A B C D

Answer Figures



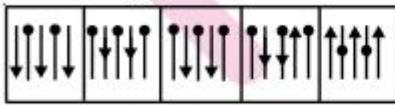
1 2 3 4 5

**Q.60** Problem Figures



A B C D

Answer Figures



1 2 3 4 5

**Q.61** Problem Figures



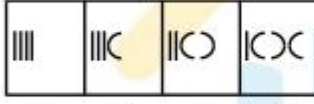
A B C D

Answer Figures



1 2 3 4 5

**Q.62** Problem Figures



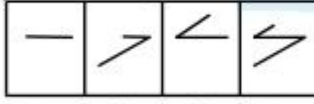
A B C D

Answer Figures



1 2 3 4 5

**Q.63** Problem Figures



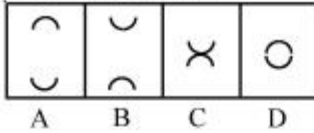
A B C D

Answer Figures

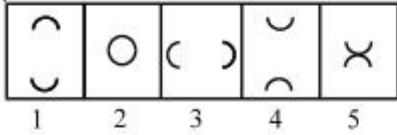


1 2 3 4 5

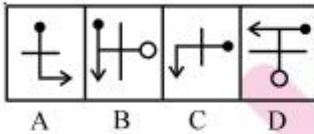
**Q.64** Problem Figures



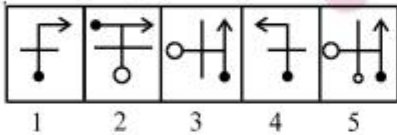
Answer Figures



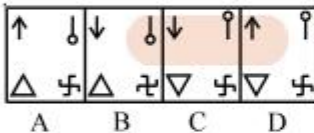
**Q.65** Problem Figures



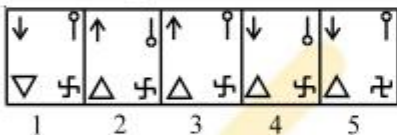
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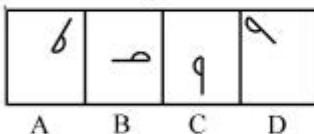
**Q.66** Problem Figures



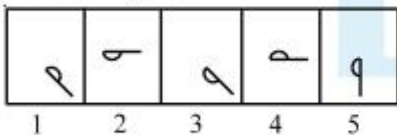
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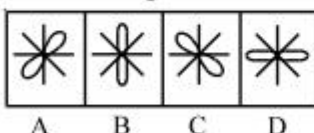
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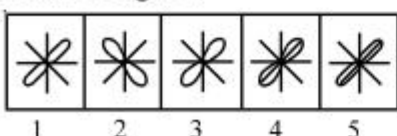
Answer Figures



**Q.68** Problem Figures



Answer Figures



**Q.69** Problem Figures



A B C D

Answer Figures



1 2 3 4 5

**Q.70** Problem Figures



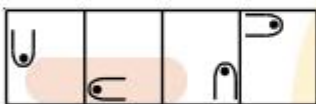
A B C D

Answer Figures



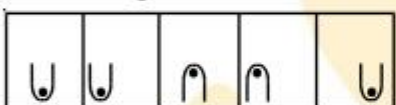
1 2 3 4 5

**Q.71** Problem Figures



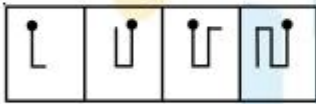
A B C D

Answer Figures



1 2 3 4 5

**Q.72** Problem Figures



A B C D

Answer Figures



1 2 3 4 5

**Q.73** Problem Figures



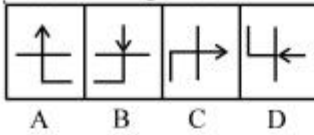
A B C D

Answer Figures

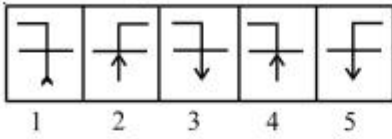


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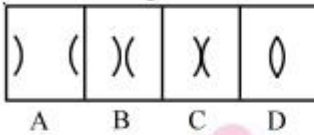
**Q.74** Problem Figures



Answer Figures



**Q.75** Problem Figures



Answer Figures



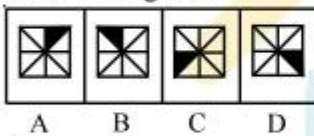
**Q.76** Problem Figures



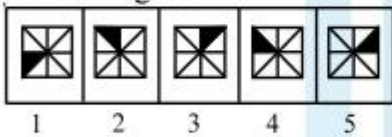
Answer Figures



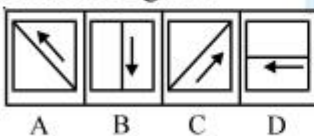
**Q.77** Problem Figures



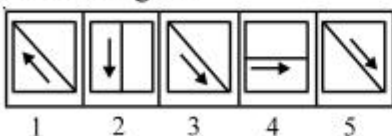
Answer Figures



**Q.78** Problem Figures

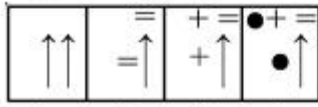


Answer Figures



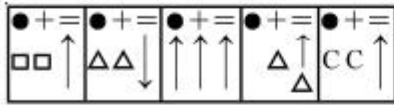


**Q.79** Problem Figures



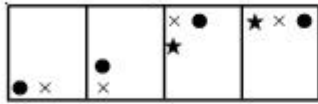
A B C D

Answer Figures



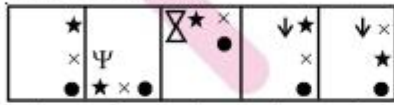
1 2 3 4 5

**Q.80** Problem Figures



A B C D

Answer Figures



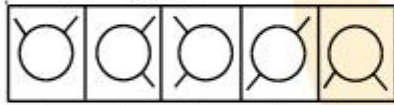
1 2 3 4 5

**Q.81** Problem Figures



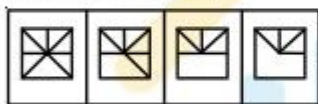
A B C D

Answer Figures



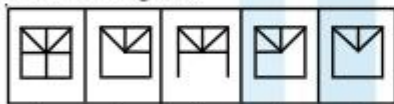
1 2 3 4 5

**Q.82** Problem Figures



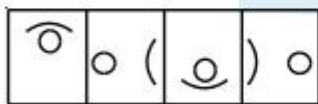
A B C D

Answer Figures



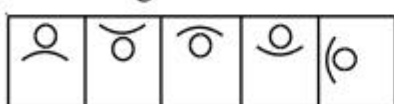
1 2 3 4 5

**Q.83** Problem Figures



A B C D

Answer Figures



1 2 3 4 5

**Q.84** Problem Figures



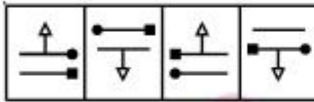
A B C D

Answer Figures



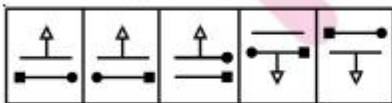
1 2 3 4 5

**Q.85** Problem Figures



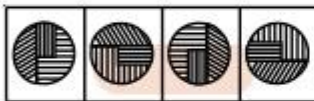
A B C D

Answer Figures



1 2 3 4 5

**Q.86** Problem Figures



A B C D

Answer Figures



1 2 3 4 5

**Q.87** Problem Figures



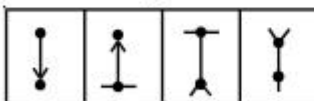
A B C D

Answer Figures



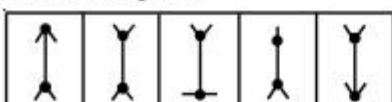
1 2 3 4 5

**Q.88** Problem Figures



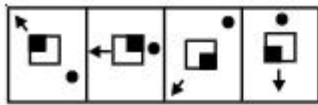
A B C D

Answer Figures



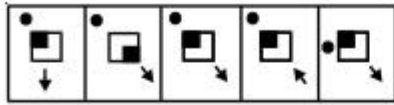
1 2 3 4 5

**Q.89** Problem Figures



A B C D

Answer Figures



1 2 3 4 5

**Q.90** Problem Figures



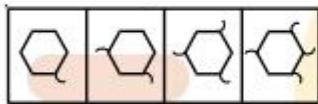
A B C D

Answer Figures



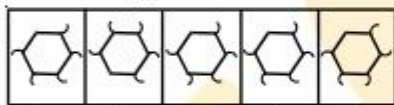
1 2 3 4 5

**Q.91** Problem Figures



A B C D

Answer Figures



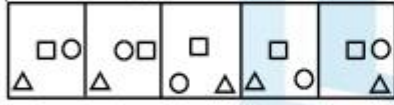
1 2 3 4 5

**Q.92** Problem Figures



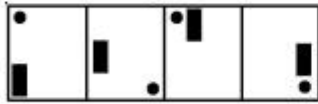
A B C D

Answer Figures



1 2 3 4 5

**Q.93** Problem Figures



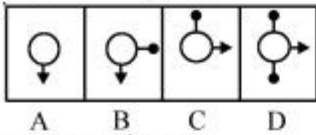
A B C D

Answer Figures

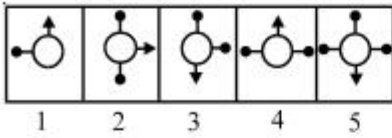


1 2 3 4 5

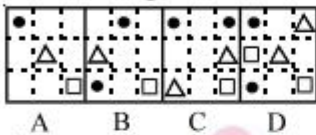
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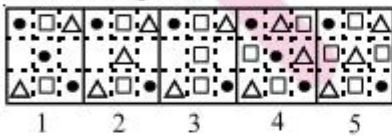
Answer Figures



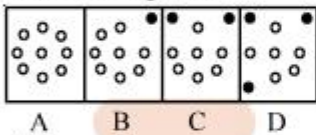
**Q.95** Problem Figures



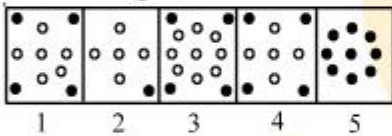
Answer Figures



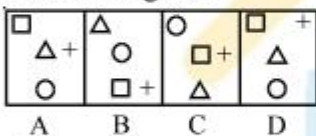
**Q.96** Problem Figures



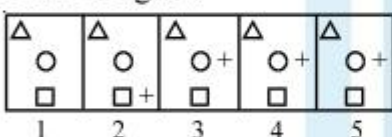
Answer Figures



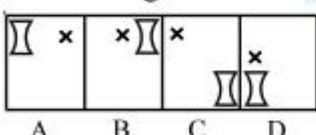
**Q.97** Problem Figures



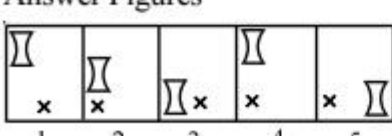
Answer Figures



**Q.98** Problem Figures

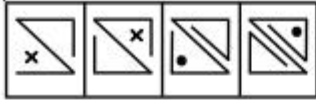


Answer Figures





**Q.99** Problem Figures



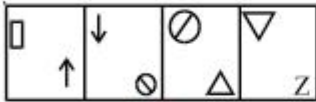
A B C D

Answer Figures



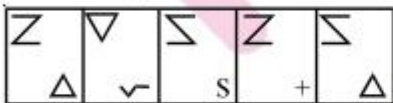
1 2 3 4 5

**Q.100** Problem Figures



A B C D

Answer Figures



1 2 3 4 5







## ANSWER KEY

Q.No	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Ans.	1	5	4	2	4	1	5	5	5	4	4	1	1	5	1	3	4	2	4	5	3	1	4	4	4
Q.No	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Ans.	2	4	2	3	4	4	4	3	3	3	2	1	3	3	2	2	2	5	3	4	4	2	4	1	2
Q.No	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Ans.	3	2	5	4	4	5	5	3	5	2	4	3	1	1	3	2	3	3	5	4	1	4	4	3	4
Q.No	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Ans.	5	4	3	1	4	1	5	3	1	3	2	5	5	3	5	4	3	5	4	1	4	5	4	3	3

## HINTS & SOLUTION

1. Two, three, four, five, ..... half leaves are added sequentially.
2. The figure rotates sequentially 2, 1, 3, 1, 4, ..... steps in a clockwise direction.
3. The smaller arrow rotates ACW through  $90^\circ$  and  $45^\circ$  alternately while the bigger arrow rotates through  $135^\circ$  CW in each step.
4. One arrowhead reverses its direction in each step.
5. The outer cup-shaped figure rotates  $45^\circ$  and  $90^\circ$  CW alternately. The inner figure rotates  $90^\circ$  and  $45^\circ$  ACW alternately and gets laterally inverted each time.
6. Two and one half leaves are alternately added to the figure and the figure rotates  $45^\circ$  ACW.
7. The figure rotates  $45^\circ$  and  $90^\circ$  ACW alternately and in each step, the figure at one end of the line is replaced by a new one and the straight line at the other end of the line changes alternately into an arrowhead.
8. The arrow moves through 1, 2, 3, 4, ..... steps ACW and a similar arrowhead reappears in every third step.
9. The shading rotates through two and three steps alternately in a clockwise direction.
10. In each step, the circle shifts to the next corner in anticlockwise direction and the other figure shifts to the next corner in clockwise direction.
11. The arrow moves ACW  $90^\circ$  and  $45^\circ$  alternately and the pin moves CW  $90^\circ$  and  $45^\circ$  alternately.
12. First the '+' sign moves two steps ACW and '=' sign moves one step ACW. Next, the '+' sign moves one step ACW and '=' sign moves two steps ACW.
13. The lines rotate in a clockwise direction and a half and a full line are alternately added to the figure.
14. One extra line is added in each step in a set pattern.
15. All the lines in the square move  $45^\circ$  ACW in each step and the shading moves one step ACW.
16. Two dots are lost and one cross appears in each subsequent figure.
17. One of the symbols shifts by two steps in every subsequent figure, in a sequence




18. In each step, the symbols move in the order 
19. The arrow moves vertically and the arrowhead moves horizontally and reverses its direction in each step. The other symbol moves half, one, one and a half, two, ..... sides of the square ACW sequentially and is replaced from a dot to '+' sign and then to a star and again to a dot.
20. The symbols move in the order . Each time the symbol that reaches the lower left corner gets replaced by a new one.
21. Each time the arrow moves one step CW and gets inverted and the circle moves one step CW with the white sector increasing by an angle of  $45^\circ$ .
22. The two symbols move CW from side to side and are alternately replaced by new symbols.
23. All the arrow get inverted in each step and the position is interchanged between first and second, second and third, third and fourth arrows sequentially. The process is repeated to continue the series.
24. The wave pulses reverse their phases in each subsequent figure and the dark pulse progresses by one step after every two figures.
25. One of the shaded portions moves in clockwise and one in the anticlockwise direction.
26. The upper symbol interchanges position with the symbol in the lower left corner and the remaining two symbols interchange positions; the symbol that reaches the lower right corner gets replaced by a new one. In the next step, the upper symbol interchanges position with the symbol in lower right corner and the other two symbols interchange positions; the symbol that reaches the lower left corner gets replaced by a new one. The process repeats.
27. The main figure rotates one step ACW in each turn and the dot moves one step CW in each turn and also gets inside and outside the main figure alternately.
28. The line inside the smaller circle gets outside and inside the circles alternately and also moves  $45^\circ$  CW in each step. The T outside the larger circle gets inside and outside the circles alternately, moves  $45^\circ$  ACW in every second step and is replaced by other symbols in every second step. The lines between the two circles move  $45^\circ$  ACW in each step and an extra line is added each time.
29. The inner black figure replaces the outermost figure and a new black figure appears at the centre in each step.
30. The figure rotates  $45^\circ$  ACW in each step. In one step, the first and the third arcs rotate  $90^\circ$  ACW and in the next step all the arcs rotate  $90^\circ$  ACW. The process repeats.
31. The pre-existing figure enlarges and a new figure is enclosed inside it while in the next step the outer figure is lost.
32. A new feature is added at each step.
33. One dot and one line segment is added in each step.
34. In each step, the figure rotates  $90^\circ$  CW and a new type of arrow displaces the last arrow. The displaced arrow displaces a new arrow and in this way all the arrows are displaced.
35. In one step the symbols move in the order  and in the next step the symbols move in the order . The two steps are repeated alternately.



36. In one step, one of the pins gets inverted and replaced by an arrow. In the next step, one of the arrows gets inverted and replaced by a pin. The two steps are repeated alternately and in a specified order.
37. The asterisk (\*) rotates  $135^\circ$  CW each time and moves to the lower left and top right corner alternately. The other figure rotates  $45^\circ$ ACW,  $90^\circ$ CW,  $45^\circ$ ACW,  $45^\circ$ ACW,  $90^\circ$ CW, ..... sequentially and moves up and down along the diagonal from lower right to upper left corner. It also changes shape which repeats in every third step.
38. In one step, the symbol in the lower right corner is replaced by a new one and all the other symbols move CW. In the next step, the symbol in the lower left corner is replaced by a new one while all other symbol move CW. The process repeats.
39. The pin rotates  $45^\circ$ CW and  $90^\circ$ CW alternately while the arrow moves two steps and one step ACW alternately.
40. In one step, the circle comes out of the square; the symbol at the centre gets replaced by a new one and the crosses outside the main figure moves ACW. In the next step, the square comes out of the circle; the number of crosses increases by one and the crosses move ACW. The two steps are repeated alternately.
41. In one step, two lines are lost from the R.H.S. portion of the figure and one lines is added to the L.H.S. portion. In the next step, one line is lost from the R.H.S. portion of the figure and two lines are added to the L.H.S. portion. The two steps are repeated alternately.
42. The figure rotates  $135^\circ$  ACW in each step.
43. One of the pins gets inverted in each step.
44. The outer arrow moves ACW and its head gets reversed in each step. The dark rectangle also moves to the adjacent side in ACW direction. The inner triangle first moves to the adjacent side and then to the opposite side.
45. The shading moves CW in every second step. The arc gets laterally inverted in one step and moves to the adjacent side in an ACW direction in the next step.
46. Similar figure reappears in every second step and each time the first figure reappears, it gets rotated in ACW direction while each time the second figure reappears, it gets rotated in CW direction.
47. The arrow moves  $45^\circ$ ,  $90^\circ$ ,  $135^\circ$ ,  $180^\circ$ , ..... successively in an ACW direction and also rotates  $90^\circ$  CW in each step.
48. The line inside the rhombus moves ACW in every alternate figure and the symbol moves one step ACW and gets replaced by a new one in alternate figures.
49. All the symbols move CW in each step and the symbols before and after the triangle get replaced by new ones alternately.
50. Arcs and T's are added alternately and in each step the arcs and the T's reverse their directions.
51. Two, three, four, ..... half leaves are sequentially removed.
52. Similar figure repeats in alternate steps.
53. The white figure gets its lower half shaded in first step; gets shaded completely in the second step and gets replaced by a new white figure in the third step and then the above steps are repeated. Also, the figure moves from top to bottom sequentially.
54. One curved arrow is added and the direction of arrows is reversed each time.
55. Similar figure repeats in alternate steps.
56. The dot moves one, two, three, ..... steps ACW sequentially along the sides of the square.
57. The two lines together moves one, two, three, ..... steps ACW sequentially.



- 58 Two, three, four, ..... lines are added sequentially to the figure.
- 59 Number of cubes increases by one in every subsequent figure.
- 60 Arrows and pins are added to the figure alternately. Also, in one step the heads of the pins move to the middle position and in the next step, they return to their initial position while the arrow heads get inverted and move to the middle position.
- 61 The upper half of a figure gets attached to its other half in one step and the upper half of a new figure appears in the next step. The process repeats.
- 62 In each step, a line gets replaced by an arc in a set pattern while the pre-existing arcs get laterally inverted.
- 63 Every figure contains half a line more than the preceding figure.
- 64 The two arcs get inverted in the first step; come to the centre in second step; get inverted in the third step and move to the opposite sides again.
- 65 Similar figures appear alternately and each time a figure reappears, it rotates  $90^\circ$  CW.
- 66 In one step the elements on one diagonal are turned upside down and in the next step, the elements on the other diagonal are inverted.
- 67 The figure rotates ACW through angles of  $135^\circ$ ,  $90^\circ$ ,  $45^\circ$ ,  $0^\circ$  and moves CW one two, three, ..... steps sequentially.
- 68 Similar figure appears alternate steps and each time a figure reappears, it gets rotated  $90^\circ$  ACW.
- 69 The figure gets inverted and moves three steps ACW each time. Also, it rotates  $90^\circ$  CW and  $90^\circ$  ACW alternately.
- 70 A line is removed from the upper part and added on to the lower part in a set pattern.
- 71 The figure rotates  $90^\circ$  CW in each step and moves one, two, three, ..... steps ACW sequentially.
- 72 The figure gets laterally inverted in each step and an extra line is added to it in a set pattern.
- 73 The cross moves left and right but movement takes place in every second step. The arcs get separated in one step, remain as such in next step, get laterally inverted and come together in the third step and then they repeat these three steps.
- 74 Similar figure appears in alternate steps and each time it reappears, it rotates  $90^\circ$  CW.
- 75 The two arcs approach each other to meet at the centre in two steps and get laterally inverted in the third step. They again get separated and reach the extreme positions in two steps and so on.
- 76 One line is removed from one end of the figure and one line is added to the other end of the figure, in each step.
- 77 The shading moves ACW one, two, three, ..... steps sequentially.
- 78 The line inside the square rotates by  $45^\circ$  and so does the arrow. But each time, the arrow reverses its direction.
- 79 Two identical signs appear while one of the initially existing identical signs disappears in each step.
- 80 In one turn, the symbols move one step CW. In the next turn, they move two steps CW and a new symbol is added behind the pre-existing symbols. The process repeats.
- 81 Similar figure appears in alternate steps and each time it reappears, it gets rotated through an angle of  $180^\circ$ .
- 82 Lines are removed from the L.H.S. and R.H.S. alternately.
- 83 The circle moves two steps ACW while the arc rotates  $90^\circ$  ACW and moves two steps CW in each step.

- 84 The cross moves vertically down in one step and the '-' sign moves to the left in the alternate step.
- 85 The circle and the square move end to end in an ACW direction, while triangle moves up and down alternately.
- 86 Figure rotates 90° CW in each step. So, fig. (A) should repeat.
- 87 The exchange of positions of signs takes place, first up and down and then sideways.
- 88 The small lines at the two ends of the central vertical line first open out 45° successively and then converge again by 45° successively.
- 89 In each step, the shading moves one step CW and the dot and the arrow moves one step ACW.
- 90 The similar central figures repeat in alternate steps and the trapezium resting on the side of the square boundary, moves 90° CW in each step.
- 91 Each time, all the existing arcs get reversed and a new arc is added moving two, two, one, two, ..... steps clockwise sequentially.
- 92 The same figure repeats in every three steps. So, figure (B) should repeat.
- 93 The circle moves to the diagonally opposite corner each time and the rectangle moves one, two, two, one, ..... steps CW sequentially.
- 94 In one step, a pin is added and in the next step, the figure rotates 90° ACW. This goes on alternately.
- 95 In first step, a circle is added; in the second step, a triangle is added and in the third step, a square is added. The three steps are repeated sequentially.
- 96 In each step, one of the circles gets black and moves to a corner of the square boundary.
- 97 The square, triangle and circle move in the order . The element that comes to the centre, gets enlarged and the element that comes to the upper-left corner becomes smaller. The '+' sign moves up and down vertically.
- 98 The cross moves half a side of the square boundary, in an ACW direction and other element moves to the adjacent corner CW in each step.
- 99 A line is added to the main figure in each step. The element inside the figure moves to the other side in one step and gets replaced by a new element in the next step. This goes on alternately.
- 100 The element in the lower-right corner gets inverted and enlarged and moves to the upper left corner and a new element appears in the lower right corner in each step.