

Non-Verbal Reasoning

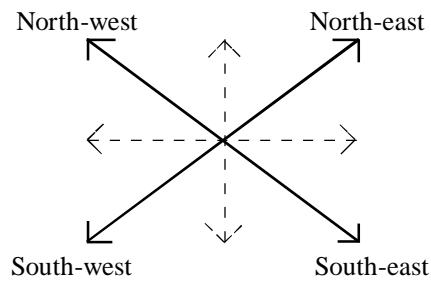
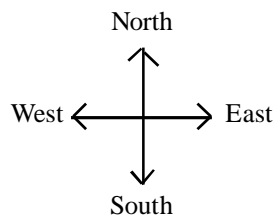
The purpose of non-verbal reasoning is to measure the reasoning power of candidates. In non-verbal reasoning, instead of words and numbers, diagrams are used for expressing ideas. You should carefully study the explanations and examples. Then you should do the practice test. The best method for increasing your speed and

accuracy, is to do more and more practice tests within the allowed time.

Non-verbal reasoning is classified into three groups. They are series, analogy, classification. Most of the questions are from series.

Basic Concepts

Directions: -



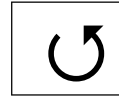
Clockwise direction (CWD)



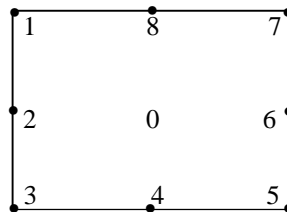
Frame



Anticlockwise direction (ACWD)



The figures are numbered in this way: -



Let us study how an element moves from one place to another. When it moves from 1 to 2, we say that the element moves $\frac{1}{2}$ distance in ACW direction, similarly when it moves from 1 to 3, it is called 1 distance ACW direction. But when it moves from 1 to 8, we say that, the element moves $\frac{1}{2}$ distance CW direction. Similarly when it moves from 1 to 7, it is called 1 distance CW direction.

If we are going to observe it on the basis of Degree, then it is to be followed as below:-

An element moves,

1 to 8 \rightarrow 45° CW direction

1 to 7 \rightarrow 90° CW direction

1 to 6 \rightarrow 135° CW direction

1 to 2 \rightarrow 45° ACW direction

1 to 3 \rightarrow 90° ACW direction and so on.

Mirror Images

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

Water Images

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

SERIES

TYPE - 1

There should be two sets of figures in series section. The first one is question set, which consists of five figures. The second set is answer set. There are five figures and is numbered from 1 to 5. In the question set five figures are formed in a particular series you required. To find the answer figure from answer choices, which should be the sixth figure.

At first you should observe whether there is any change in the shape or number of elements in the figures. Sometimes we can see that the elements in the figures move in a particular manner. Otherwise one of the elements will be replaced by a new one. In some cases both these changes occur at the same time.

Addition

1.

A B C D E

1 2 3 4 5

Ans: (3). Here one + sign is added in A to obtain B and one + sign is added to B to obtain C. The process is repeated again to obtain D and E. Then one + sign is added in E, we get the answer figure (3).

2.

A B C D E

1 2 3 4 5

Ans. (4). Two vertical bars are added in A at a time to obtain B. Similarly, two vertical lines are added in B, and we get C. Then two horizontal bars are added in C to obtain D and two horizontal bars are added in D to obtain E. Again two vertical bars are added in E, we get the figure (4) as answer. Hence figure (4) continues the series.

3.

A	A	AS	AS	ASB
	N	N	N•	N•B
	N	N	N•	N•B
	S	S	S•	S•B
	S	S	S•	S•B

A B C D E

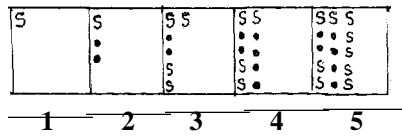
ASBNN	ASB•C	ASB•B	ASB•CC	ASB•DAB
N•BN	N•B•C	N•B•B	N•B•C	N•B•D
N•BN	N•B•C	N•B•B	N•B•C	N•B•D
S•BN	S•B•C	S•B•B	S•B•C	S•B•D
S•BN	S•B•C	S•B•B	S•B•C	S•B•D

1 2 3 4 5

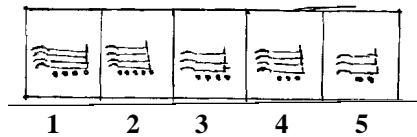
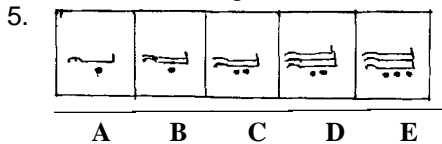
In order to obtain the same element, eliminate the figure (1) and (5). New elements are increasing in the order 1, 2, 3, in each step. Six new elements should come in the answer figure. So eliminate the figures (2) and (3). So the answer is (4).

4.

A B C D E

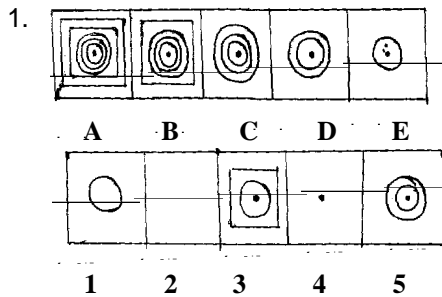


Here 's' and 'dots' are added alternately. The elements increase in an order 1, 2, 3, in each step. Six dots should come in the answer figure. So the answer is (1).

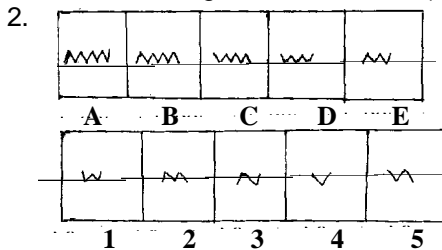


Hooks and dots are increasing alternately. So eliminate the figure (3) and (5). Number of dots in the answer figure should be same as in E. So eliminate the figure (1) and (2). So the answer is (4)

Deletion of elements



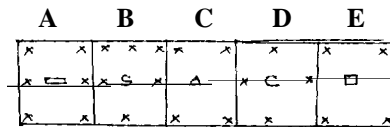
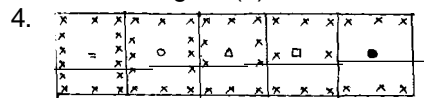
The outer figure loses in each step. In the last step the innermost figure remains in the answer figure. So answer is (4).



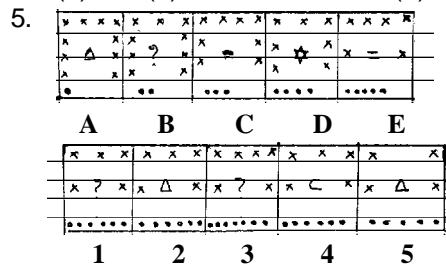
In the first step, one line is lost from the right side. In the next step, one line is lost from the left side. The process continues. Therefore, the answer is (2).



Here addition and deletion occurs simultaneously. One dot increases and one line decreases in each step. Then there should be only dots in the answer figure. Therefore eliminate the figures (1), (2) and (4). Dots should increase in each step. Hence eliminate the figure (3). So the answer is (5).



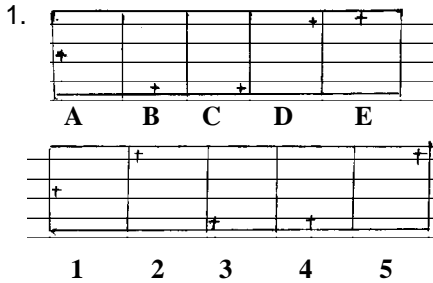
Cross decreases by 2 in each step. Middle figure will always be new. First you should observe the new figure in middle. This is the easiest method for solving this type of questions. By using this method we can select the figures (1), (2) and (4). Again cross mark decreases by 2 from E in answer figure. We can eliminate the figures (1) and (2). So the answer is (4).



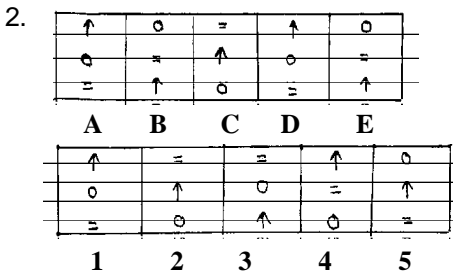
At first observe the middle figure. The '?' should come at the middle of the answer figure. Select the answer figures (1) and (3). Then note the number of crosses. Cross decreases by one in each step. Eliminate the figure (3). So answer is (1).

Movement

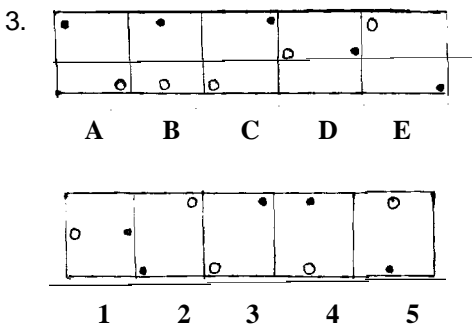
At first watch the direction of movement of element. The element moves either in clockwise direction or in anticlockwise direction.



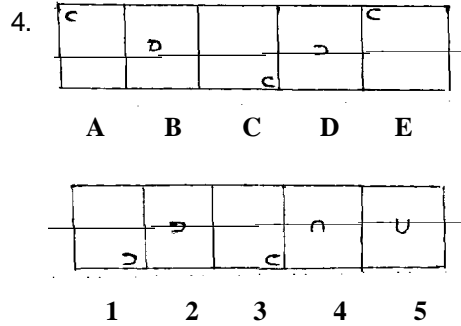
Ans: (1). Here the '+' sign moves anticlockwise direction along the sides of the square. At first the sign moves 1 distance and then it moves 1/2 distance. The process continues. Hence answer fig. (1) continues the series.



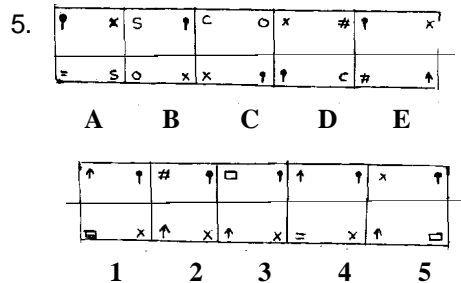
In each step, the elements move in a particular manner. In every step, the second element becomes the topmost element. The topmost element is placed at the bottom and the element at the bottom becomes the second element. Hence figure (2) is the answer.



The dot and circle move half distance clockwise direction. Hence the answer is (5).



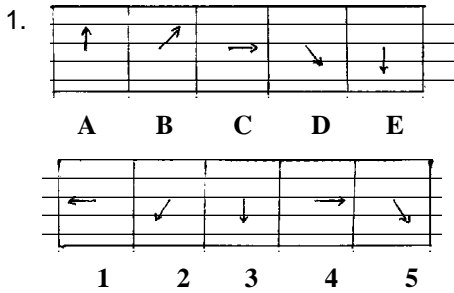
The element moves diagonally and gets inverted in each step. Hence the answer is (2).



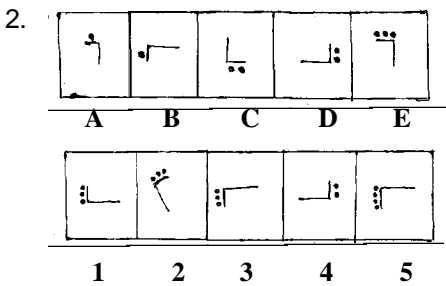
'x' moves clockwise. Hence figure (5) cannot be the answer. The element at the south-east corner in A is shifted to north-west corner in B. Then this element is replaced by a new one in C in the same position. Then this new element is moved to south-east corner in D. Again this element is replaced by a new one in E in the same position. Finally, moved to the north-west corner (1). Hence the figures (2) and (3) can be ruled out. Similar treatment is done with the element at the south-west corner in A. Hence figure (1) continues the series.

Rotation

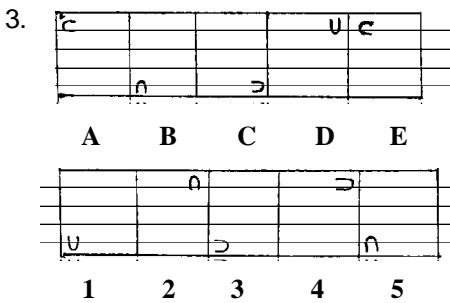
Watch the direction of rotation of element while observing the rotation of elements. They move either in clockwise direction or in anticlockwise direction. Then note, how much degree or by what distance they move. There are two types of rotation. In the first kind the element is stable while rotating. In the second is, the position of element changes while rotating.



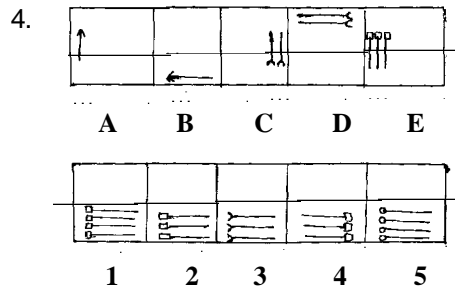
Arrow rotates in clockwise direction. It moves 45° in each step. So the answer is (2).



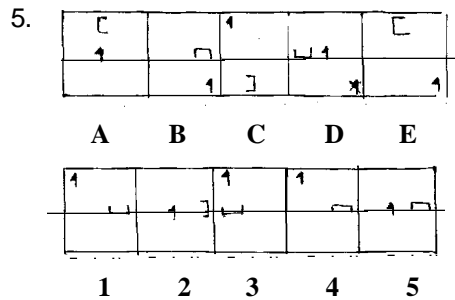
Here the 'L' shape figure rotates 90° anti-clockwise direction. There is the possibility for figure (3) or (5). Now consider the number of dots. The number of dots are same in A and B. Then one dot increased to obtain C. The dots remain same in C and D. Then one dot is increased to obtain E. So figure (5) is eliminated. Hence the answer is (3).



The element rotates 90° clockwise direction. So eliminate the figures (1), (3) and (4). The element is shifted to the next corner in CW direction in each step. So eliminate the figure (2). Hence answer is (5).

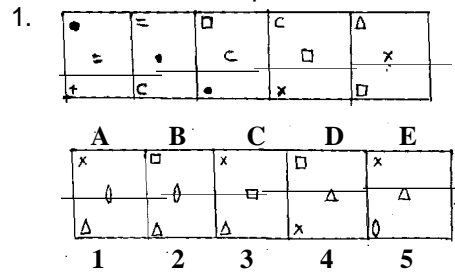


Arrow moves in anticlockwise direction. After every two steps the arrow increases by one and the arrowhead changes. So the answer is (2)

















































































































































































































































































The cup shape element rotates 90° clockwise direction and moves 1 place in CW direction. The arrow moves diagonally. Therefore the answer is (4).

In some cases the positions of elements interchange along with the change in elements. For example:-



In A, the element at the south-west position is replaced by a new element as in B and the position of the other two elements are interchanged. In B the element at the north-west position is replaced by a new element as in C and the positions of other two elements are interchanged. Repeat this process. Thus figure (5) continues the given series.

PRACTICE TEST

1.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">/</td> <td style="text-align: center;">/\</td> <td style="text-align: center;">/X</td> <td style="text-align: center;">/X\</td> <td style="text-align: center;">/XX</td> </tr> <tr> <td style="text-align: center;">A</td> <td style="text-align: center;">B</td> <td style="text-align: center;">C</td> <td style="text-align: center;">D</td> <td style="text-align: center;">E</td> </tr> </table>	/	/\	/X	/X\	/XX	A	B	C	D	E	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">/XX/</td> <td style="text-align: center;">\XX/</td> <td style="text-align: center;">XXX</td> <td style="text-align: center;">\XX\</td> <td style="text-align: center;">/XX\</td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> </tr> </table>	/XX/	\XX/	XXX	\XX\	/XX\	1	2	3	4	5
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11.

A	B	C	D	E

1	2	3	4	5

12.

A	B	C	D	E

1	2	3	4	5

13.

A	B	C	D	E

1	2	3	4	5

14.

A	B	C	D	E

1	2	3	4	5

15.

A	B	C	D	E

1	2	3	4	5

16.

A	B	C	D	E

1	2	3	4	5

17.

A	B	C	D	E

1	2	3	4	5

18.

A	B	C	D	E

1	2	3	4	5

19.

A	B	C	D	E

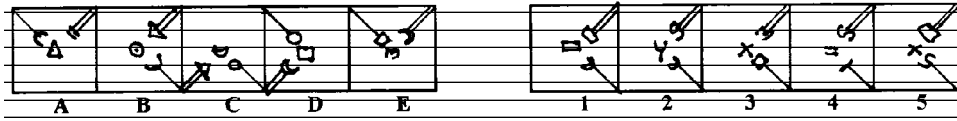
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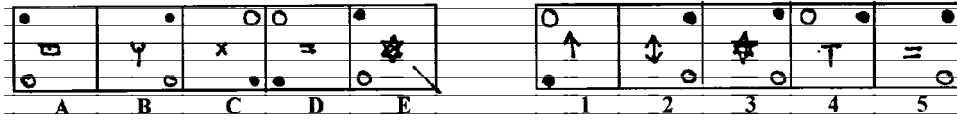
A	B	C	D	E

1	2	3	4	5

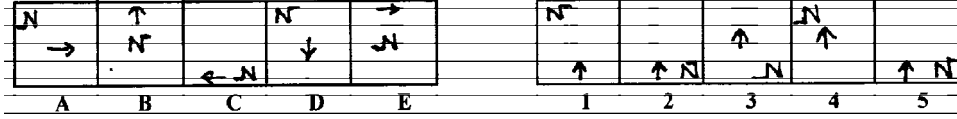
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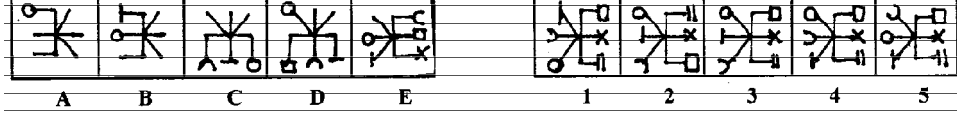
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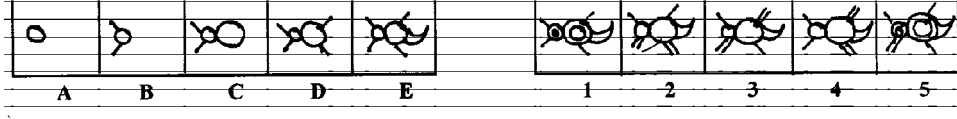
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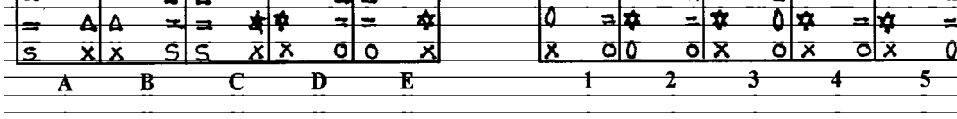
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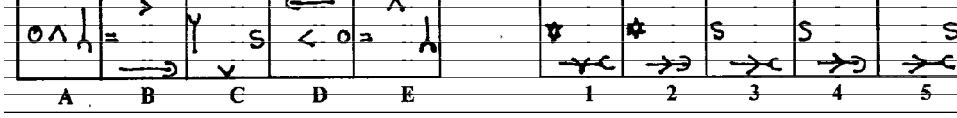
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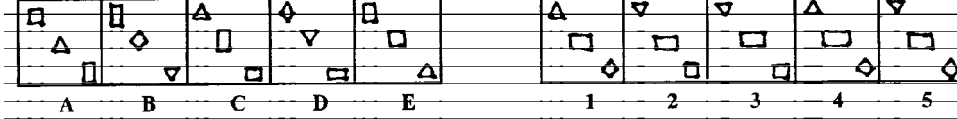
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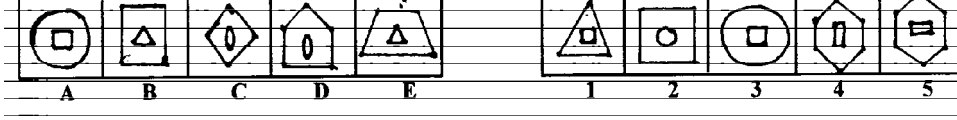
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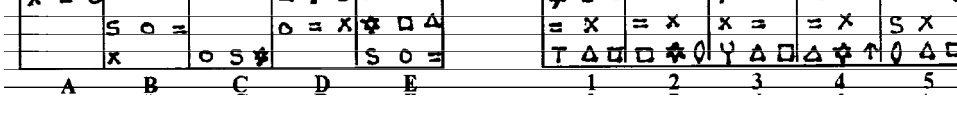
28.



29.



30.



31.

*	□	=	T	S	○	T	S	△	□
=	□								
△	○	○	*	□	T	○	=	S	C
A	B	C	D	E					

C	Y	C	○	=	#	=	C	=	△
□		□		□		□		□	
○	=	Y	=	C	○	↑	○	C	○
1	2	3	4	5					

32.

		○	+	=		
○	+	=	*	○	□	+
	○	+	=	*	○	
A	B	C	D	E		

*	○	C	+	□	○	*	+	*	○
=	C	=	○	△	*	△	=	S	=
□	+	□	*	=	+	□	○	□	+
1	2	3	4	5					

33.

X		S	X	X	*	S	□	*	X	
=	○		=	=						
○	X	=	*	*	○	○	C	C	S	○
A	B	C	D	E						

C	S	C	□	△	C	□	*	C	□	X	*	△	S	
□	○	*	S	△	X	*	=	C	○					
*	X	=	X	=	○	S	○	=	△	S	○	□	X	=
1	2	3	4	5										

34.

X	S	=	*	○	○	Y	□	#	○	
○	C	S	○	*	○	T	*	□	○	T
=	↑	↑	Y	Y	=	#	○	○	↑	
A	B	C	D	E						

□	△	○	T	○	T	△	T	□	△
Y	□	○	△	○	□	○	△	T	○
↑	*	↑	□	↑	#	↑	#	#	○
1	2	3	4	5					

35.

○*	○□	○?	○*	○□
A	B	C	D	E

○?	○??	○??	○□□	○?
1	2	3	4	5

36.

X	C	△	○	P	C	△	T	X	C
△	T	X	□	△	○	P	C	△	T
S	□	T	S	□	S	○	X	○	P
A	B	C	D	E					

△	T	□	T	△	T	△	T	△	○
X	S	X	C	X	C	X	○	X	C
C	□	○	P	S	P	S	□	P	□
1	2	3	4	5					

37.

○	X	○	C	□	
C	=	○	□	↑	S
A	B	C	D	E	

T	*	*	S	*
↑	□	↑	↑	↑
S	↑	S	T	P
1	2	3	4	5

38.

S	S	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○
A	B	C	D	E					

○	○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○
1	2	3	4	5					

39.

○	○	○	○	○
A	B	C	D	E

○	○	○	○	○
1	2	3	4	5

40.

○	○	○	○	○
A	B	C	D	E

○	○	○	○	○
1	2	3	4	5

PRACTICE SET :

ANSWERS AND EXPLANATIONS

- (5) . An extra line is added in each step in a set pattern.
- (2) . In one step one line is added to the left side and two lines are lost from the right side. In the next step two lines are added to the left side and one line is lost from the right side. These two steps are repeated alternately.
- (4) . Plus and dot sign moves $1\frac{1}{2}$ sides ACW in alternate figures. So figures (2), (3) and (4) are ruled out. The arrow moves ACW $1\frac{1}{2}$ sides in even numbered figures and the arrow rotates 90° CW direction in each step. The figure (1) is ruled out.
- (5) . The dotted bar moves 90° CW in each step. So figures (1), (2) and (4) are eliminated. The other bar (T-bar) moves ACW 45° , 90° , 135° , 180° respectively. So figure (3) is ruled out.
- (2) . The element at the right end in each figure is moved to the left end in the next figure - after rotating 90° ACW. The figures (1), (3) and (5) are eliminated. A new element appeared at the right end in each step. So figure (4) is eliminated.
- (4) . B is the mirror image of A. The next figure C is the water image of B. These two steps are repeated alternately.
- (3) . Half side of the triangle is removed in CW direction and the figure is rotated 90° ACW direction.
- (2) . One plus is added and a cross is lost in each step. The plus and cross are shifted to opposite corners in each step.
- (5) . Addition of one unit in alternate figures.
- (1) . The smallest line at the bottom interchange its position with the other lines. Finally it reaches the top and then it comes back to its initial position.
- (5) . The shading portion moves anticlockwise in each step. After every second step an extra portion is added to it.
- (5) The figure moves 45° and 270° anticlockwise alternately. The cross moves to the other side of the wave in each step.
- (5) . $A \rightarrow D$: 90° CW rotation with line segment converted into semicircle outside. $B \rightarrow E$: 90° CW rotation with line segment converted into semicircle inside. Similarly $C \rightarrow \textcircled{5}$ as $A \rightarrow D$.
- (3) . The arrow interchanges position with the dot and the triangle interchanges position with the arc in first step. In the next step, the figure moves 45° ACW. This goes on alternately.
- (5) . The dark leaf move 0° , 45° , 90° , ACW and CW alternately in each step and a white leaf is added to it.
- (2) . Arc moves 45° CW direction and pin moves 45° ACW direction.
- (4) . The first and the second, the second and the third and the first and the third symbols interchange positions in subsequent steps. The arrow and the pin get laterally inverted alternately.
- (1) . In one step, the first and second symbols (counting in CW direction) interchange positions and in the next step, the first and the third symbols interchange positions. This goes on alternately. The remaining Symbol moves to the vacant portion and gets replaced by a new symbol in each step.
- (1) : Two units and three units are rotated alternately. with respect to horizontal in order.
- (4) : The lower left figure rotates 90° ACW and gets enlarged; the upper large figure rotates 90° ACW gets diminished, the third figure is replaced by a new one and all the figures then rotate one step CW.
- (3) : The central figure is attached to the double bar and the single bar alternately in the next. The single bar appears two times continuously with the same element. So, \square must appear with the single bar. Middle element is a new one.

22. (2) : Central element is a new one in each step. The dot and circle move one side CW and ACW alternately.
23. (5) : See the movement of N and the line segment attached to N. The arrow move after 90° ACW direction.
24. (3) : See the movement of the small elements and addition of new elements in a set of pattern.
25. (1) : In even numbered figures, two identical units are introduced eg:- bars, circles, etc.
26. (3) : The left side symbols interchange their positions with the right side symbols in each step. One of the right side symbols is replaced by a new one in each time.
27. (4) : The 'V' shaped symbol rotates 90° CW in each step and moves upwards along the central vertical line and once it reaches the topmost position, it comes to the lowermost position in the next step. The hook-shaped arrow 90° ACW and moves the adjacent side in CW in each step. Also the arc get inverted in each step. The third symbol changes position from right to left and viceversa in every second step and changes from 'o' to '=' to 's' to 'o'.
28. (5) : The symbols move downwards along the diagonal and in each step the lowermost symbol becomes the uppermost. The triangle gets inverted, the rectangle rotates through 90° and the square rotates through 45° in each step.
29. (1) : The rectangle should come on the inner figure. So the figures (2), (4) and (5) are ruled out. Outer element is different in each case. So figure (3) ruled out.
30. (1) : 's' moves ACW first two steps, then four and then five steps. figure (5) is ruled out. With respect to '=' and 'x' signs, figure (3) is ruled out. From B to answer figure, the new element appears in the beginning of row 2, in the end of row 3, in the beginning of row 1, in the end of row2 and in the beginning of row 3 respectively. So figures (2) and (4) ruled out.
31. (3) : '=' sign moves along the diagonal in a set order. figure (1) and (2) ruled out. Each time one new element appears. Figure (5) is ruled out. ie, an element once disappeared, cannot reappears again. The elements disappear from A \rightarrow E in the following order : SW, SE, NE, NW, SW. The new elements which replace these elements appear from B to answer figure at the opposite corners diagonally.
32. (5) : With respect to the movement of circle, figures (2) and (4) are ruled out. With respect to the movement of '=' sign, figures (1) and (3) are ruled out.
33. (2) : Number of elements increase by one in successive figures, figure (1) is ruled out '=' sign moves two step ACW (A \rightarrow B and B \rightarrow C), 4 steps ACW (C \rightarrow D and D \rightarrow E), 6 steps ACW (E \rightarrow answer figure) figures (3), (4) and (5) are ruled out.
34. (4) : Each element appears at the most three times in three consecutive figures.
35. (2) : The dot moves 45° CW and the triangle moves 45° ACW in each step. A new symbol appears inside the circle in first three figures and then these figures reappear in a duplicated form.
36. (5) : The symbols move in the order in one step and in the order in the next step. The two steps are repeated alternately.
37. (5) : The symbols lie along one diagonal in one step; along the midline in the next-step and along the other diagonal in the third step. In each step, the third and the fourth symbols from the top become the first and the second symbols respectively. The second symbol becomes the third and a new symbol appears at the fourth position.
38. (2) : If we label the four 's' shaped symbols as then their pattern of movement is:
1 \rightarrow laterally inverted in first step and then in alternate steps.

2 → gets laterally inverted in every second step.

3 → rotates through 180° in every third step.

4 → rotates through 180° in first step and then in every third step.

The pin reverses its direction in every second step.

39. (1) : Problem figures are rotated 90° ACW each time with circle and equal to sign inter changed. Figures (2), (4), and (5) are ruled out. Three elements on the line segment take their positions in cyclic order as can be seen in the transformation $A \rightarrow E$, $B \rightarrow$ answer figure (1).
40. (4) : The shaded portion of the south-west element is shifted to other side ($A \rightarrow B$). Then shaded portion of the north-west element is shifted to other side ($C \rightarrow D$). Then shaded portion of the north-west element is shifted to other side. ($E \rightarrow$ answer figure).
41. (3) : The north-west element in each figure becomes central element in the next. Figure (5) is ruled out. The element in the middle of the top row becomes north-west in the next. Figures (1) and (4) are ruled out. The north-east element moves to opposite side along the diagonal. Figure (2) is ruled out.
42. (5) : The small bar in the first unit in A rotates 180° as the second unit in B. Similarly $C \rightarrow D$ and $E \rightarrow$ Answer figure. Figure (2) is ruled out. Figure (4) is ruled out with respect. to P ($A \rightarrow B$, $C \rightarrow D$, $E \rightarrow$ Answer figure). Figure (1) is ruled out because the semicircle moves from bottom to top and then from top to bottom in a set order ($A \rightarrow B$, $B \rightarrow C$, and $D \rightarrow E$ Answer figure). The small bar in unit 1 moves in a set order along the vertical bar from $A \rightarrow B \rightarrow C \rightarrow D \rightarrow E \rightarrow$ figure (5).
43. (1) : One element increases in each step. The elements are moved in a particular manner. The element at the end becomes a new one and new element is added to it in each step.
44. (4) : The element at the north-west moves to the north-east in each step. Figures (1) and (5) are ruled out. New element is placed at south-east in each step. Figure (3) is ruled out. The middle figure 'N' becomes 'Z' in each step. So figure (2) is ruled out.
45. (5) : $A \rightarrow B :: C \rightarrow D :: E \rightarrow (5)$
The unit at the north moves to the west. The unit at the west moves to the east. The unit at the south is replaced by a new one.
46. (2) : $A : B :: C : D :: E : (2)$
47. (2) : The first and the second elements in each problem figure become second and third elements in the next after 135° CW rotation. The third element is replaced by a new and a different one.
48. (3) : $A \rightarrow C \rightarrow E$: Second and third elements of the top row are interchanged. $B \rightarrow D \rightarrow$ figure (3). First and second elements of the bottom row are interchanged.
49. (1) : Number of shaded leaves increases by one in alternate figures. Figures (3), (4) and (5) are ruled out. Half leaf away is towards the centre after being away from the centre (when one leaf is added) in the previous figure (see $B \rightarrow C$). Therefore $E \rightarrow (1)$.
50. (2) : '↑' moves in a set order. Figure (5) is ruled out. With respect to the element '□', $A : B$ is same as $C : D$ is same as $E : \text{Answer figure}$. So figure (1) is ruled out. The top element in the first column in A disappears in B. Similarly, $C \rightarrow D$, $E \rightarrow$ Answer figure. (Figure (3) is ruled out). Each time, one element is replaced by a new one in the middle and the right position alternately of the bottom row. Therefore, 'X' being already present in A. Figure (4) is ruled out.

There are various types of questions in series. They can be solved by the assumptions used in type - 1

PRACTICE TEST

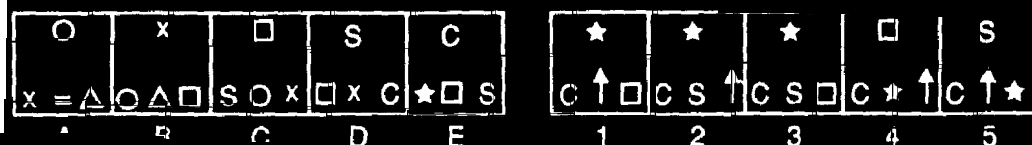
Directions (Qs. 1-40): Each of the following questions consists of five figures marked A, B, C, D and E called the Problem figures followed by five other figures marked 1, 2, 3, 4 and 5 called the Answer figures. Select a figure from amongst the Answer figures which will continue the same series as established by the five Problem figures.

	PROBLEM FIGURES					ANSWER FIGURES				
1.										
	A	B	C	D	E	1	2	3	4	5
2.										
	A	B	C	D	E	1	2	3	4	5
3.										
	A	B	C	D	E	1	2	3	4	5
4.										
	A	B	C	D	E	1	2	3	4	5
5.										
	A	B	C	D	E	1	2	3	4	5
6.										
	A	B	C	D	E	1	2	3	4	5
7.										
	A	B	C	D	E	1	2	3	4	5

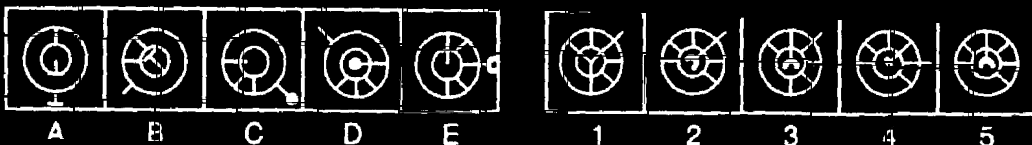
8.



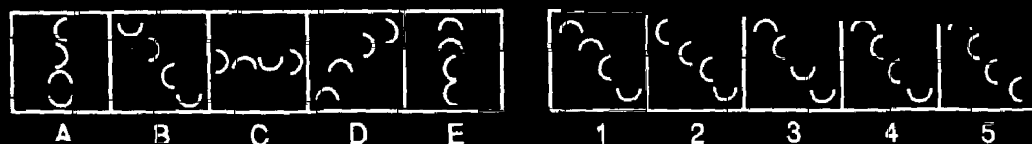
9.



10.



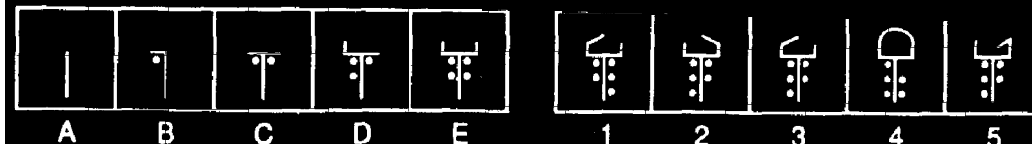
11.



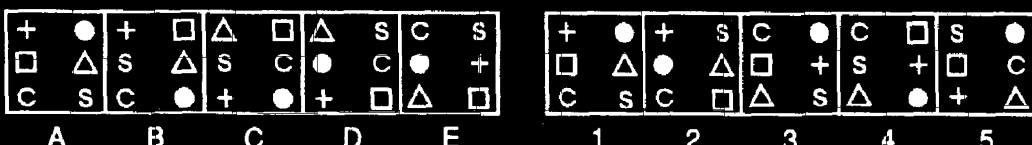
12.



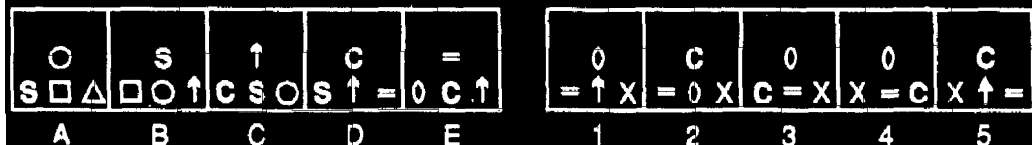
13.



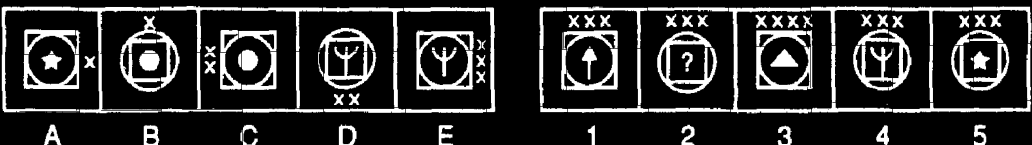
14.



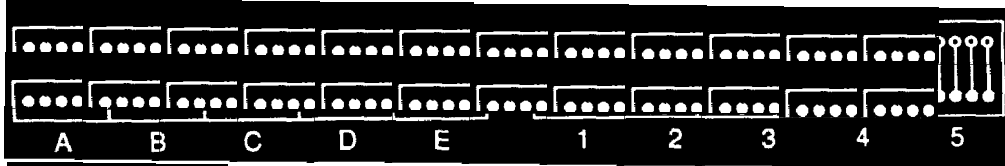
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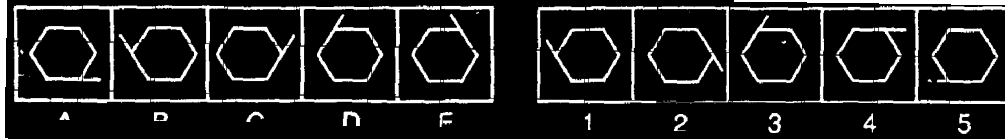
16.



17.



18.



19.



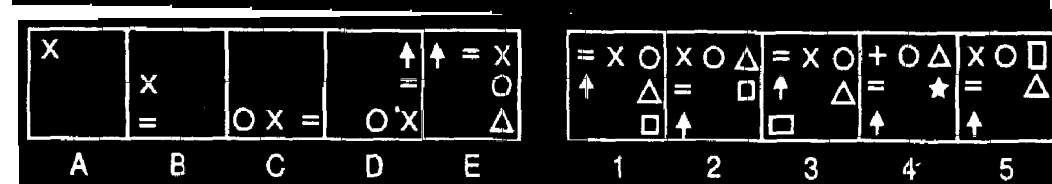
20.



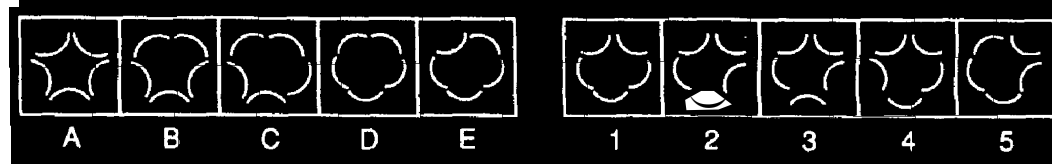
21.



22.



23.



24.



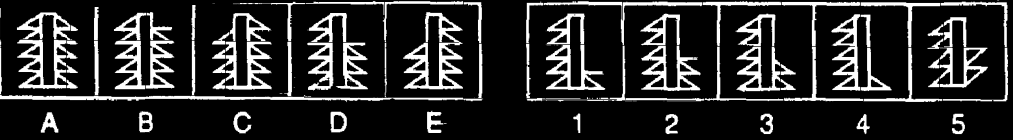
25.



26.



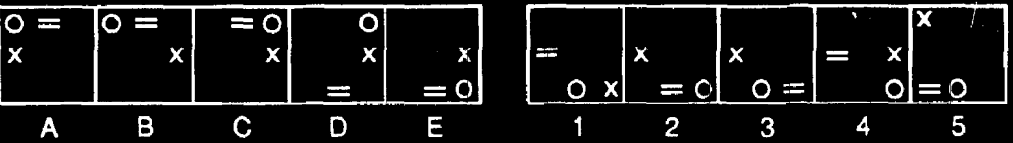
27.



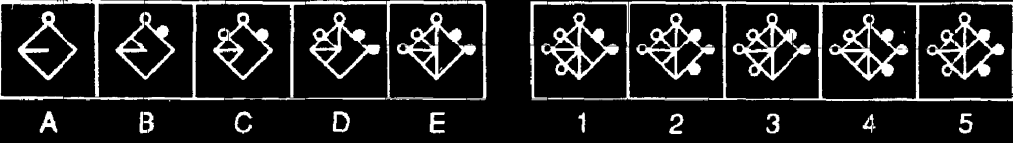
28.



29.



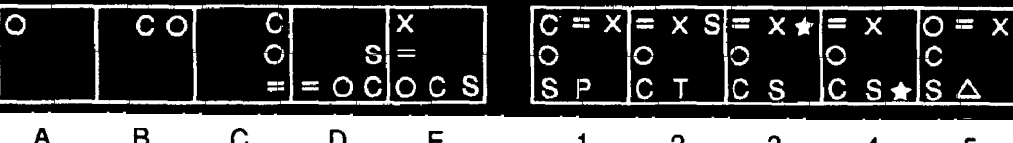
30.



31.



32.




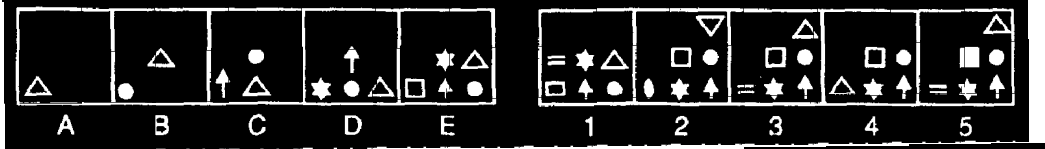
33.

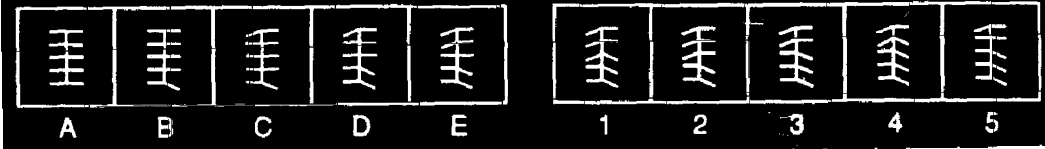



34.




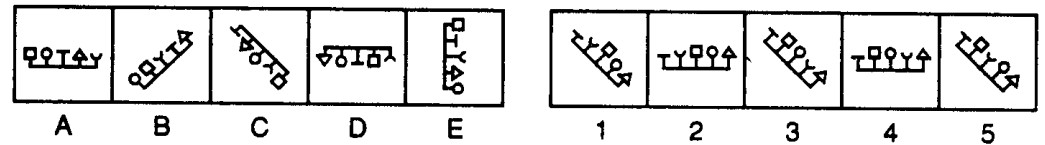
35. 

36. 

37. 

38. 

39. 

40. 

Answers

- | | | | | | |
|-------|-------|-------|-------|-------|-------|
| 1(1) | 2(4) | 3(1) | 4(5) | 5(1) | 6(1) |
| 7(4) | 8(4) | 9(2) | 10(2) | 11(4) | 12(4) |
| 13(3) | 14(3) | 15(3) | 16(2) | 17(5) | 18(4) |
| 19(2) | 20(2) | 21(4) | 22(3) | 24(3) | 25(1) |
| 26(2) | 27(2) | 28(5) | 29(2) | 30(2) | 31(5) |
| 32(5) | 33(3) | 34(1) | 35(2) | 36(3) | 37(3) |
| 38(5) | 39(3) | 40(3) | | | |