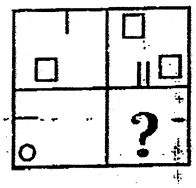
4. Figure Matrix, Figure Formation & Grouping of Identical Figures

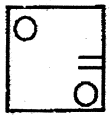
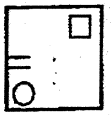
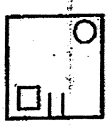
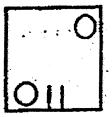
This section deals us with the following types of problems.

1. **Formation of a Figure from its Segments:** In such type of problems all the parts to form a figure are given. A candidate requires to identify the figure so formed out of the four options.
2. **Choosing a Pattern which has the same components as a given Pattern:** In such type of problems, a pattern of several components in given. Only one pattern out of four option patterns contains the same components. A candidate requires to choose such pattern.

Solved Examples

Ex.1 Complete the given pattern.

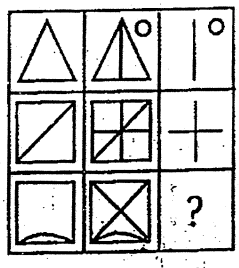


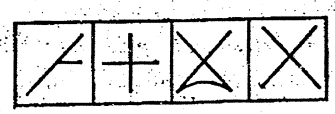
(1) 
(2) 
(3) 


Sol. (1) Let us consider horizontally. The second figure is obtained from the first figure by moving the line segment to the opposite side of the square boundary and replacing it with two similar line segments. Also, the element in the lower-left corner gets replaced by two similar elements – one placed in the upper-left and the other placed in the lower. right corner.

Ex.2 In each of the following questions, find out which of the answer figures (1), (2). (3) and (4) completes the figure matrix ?

Example :



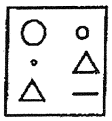


(1) (2) (3) (4)

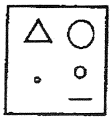
(4) The third figure in each row comprises of parts which are not common to the first two figures.

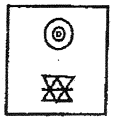
Sol. (1) : The parts of figure in option (1) are in figure (X).

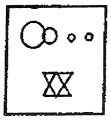
EX.3 Select that option which has the same components as the given figure (X).

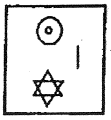


(X)

(1) 

(2) 

(3) 

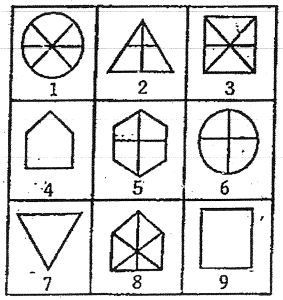
(4) 

Sol. (2) Components of figure (X) and figure (2) are exactly the same

In such of problems a set of some figures is given.

A candidate requires to classify these figures into groups on the basis of some common properties amongst them.

EX.4 Group the following figures into three classes regarding common properties amongst them.



(1) 4 , 7, 9; 2, 5, 8; 1, 3, 6

(2) 4 , 7, 9; 2, 5, 6; 1, 3, 8

(3) 1 , 2, 3; 4, 5, 6; 7, 8, 9

(4) 1 , 2, 3; 4, 7, 9; 5, 6, 8

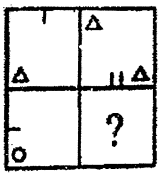
Sol. (2): 4, 7, 9 are blank figures.

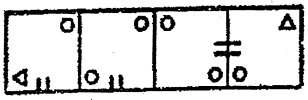
2,5,6 each in divided into 4 parts by two mutually perpendicular lines. 1, 3, 8 each is divided into 6 parts. In such type of problems a 2 x 2 or 3 x 3 grid is given. This grid has some design or symbols to form a pattern. But a cell of the grid is left empty. A candidate requires to fill up the cell. Now, one needs to analyse the grid and identify a rule along row-wise of column-wise I n the grid.

EXERCISE

Directions (Q.1 to Q.5) : In each of the following questions, find out which of the answer figures (1), (2), (3) and (4) completes the figure matrix?

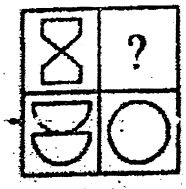
1.

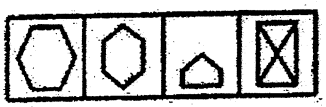




(1) (2) (3) (4)

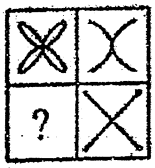
2.

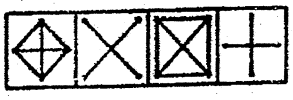




(1) (2) (3) (4)

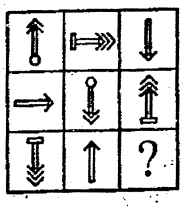
3.

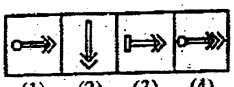




(1) (2) (3) (4)

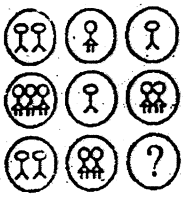
4.

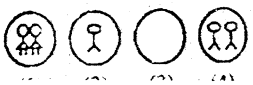




(1) (2) (3) (4)

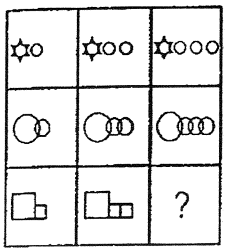
5.





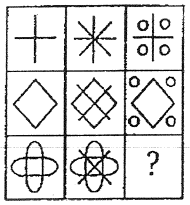
Directions (Q.6 to Q.14) : Find out which of the answer figure completes the figure matrix.

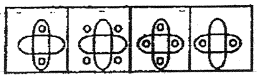
6.



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

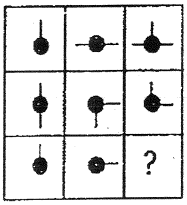
7.

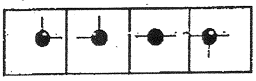




(1) (2) (3) (4)

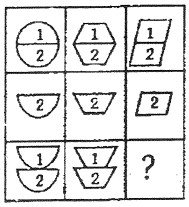
8.

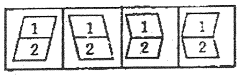




(1) (2) (3) (4)

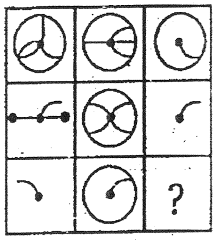
9.

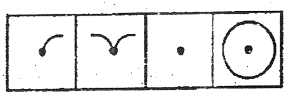




(1) (2) (3) (4)

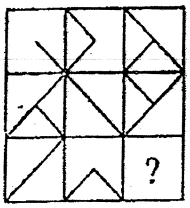
10.





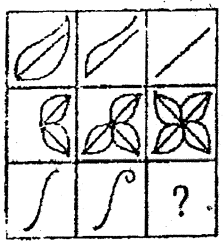
(1) (2) (3) (4)

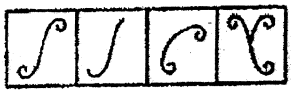
11.



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

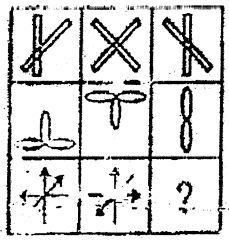
12.

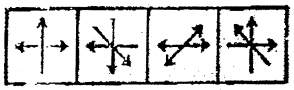




(1) (2) (3) (4)

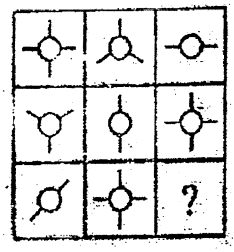
13.

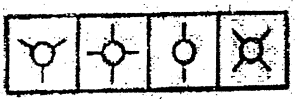




(1) (2) (3) (4)

14.

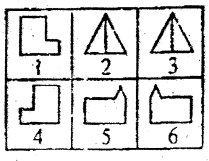




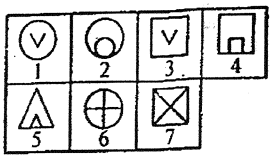
(1) (2) (3) (4)

Directions (Q.15 & Q.16) : In each of the following questions, group the given figures into three classes using each figure only once.

15.

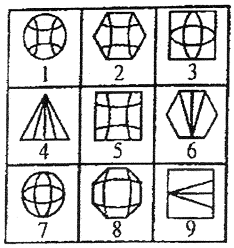


(1) 1, 4; 2, 3; 5, 6 (2) 1, 5; 2, 6; 4, 3 (3) 1, 6; 2, 3; 4, 5 (4) 1, 2; 3, 6; 4, 5

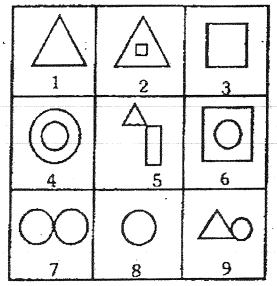
16. 

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

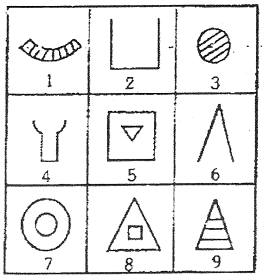
Directions (Q.17 to Q.20) : Group the given figures into three classes using each figures only once.

17. 

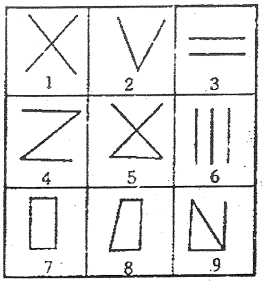
(1) 1, 2, 5; 3, 7, 8; 4, 6, 9
(2) 1, 7, 2;, 3, 9, 6; 4, 5, 8
(3) 2, 3, 8; 4, 6, 9; 1, 5, 7
(4) 5, 6, 9; 3, 4, 1; 2, 7, 8

18. 

(1) 2, 4, 6; 3, 7, 9; 1, 5, 8
(2) 2, 4, 6; 1, 7, 8; 3, 5, 9
(3) 1, 3, 8; 2, 4, 6; 5, 7, 9
(4) 1, 2, 3; 4, 5, 6; 7, 8, 9

19. 

(1) 1, 3, 9; 2, 4, 6; 5, 7, 8
(2) 1, 2, 9; 3, 4, 6; 5, 7, 8
(3) 1, 6, 8; 2, 4, 9; 3, 5, 7
(4) 6, 7, 8; 1, 3, 4; 2, 5, 9

20. 

(1) 1, 2, 3; 4, 5, 6; 7, 8, 9
(2) 1, 3, 5; 2, 4, 6; 7, 8, 9
(3) 1, 5, 9; 3, 6, 2; 4, 7, 8
(4) 1, 9, 7; 2, 8, 5; 3, 4, 6

EXERCISE ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ans.	3	2	3	1	3	1	2	1	3	3	2	1	3	1	1	4	1	3	1	1