

CHAPTER

08

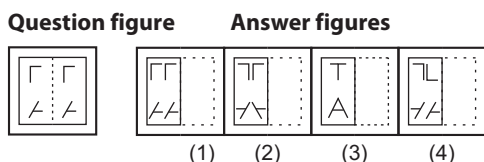
PUNCHED HOLE PATTERN

Paper Folding

Problems based on 'Paper folding' involves folding a transparent sheet along a dotted line so that the design on one side of the dotted line gets superimposed on the design on the other side.

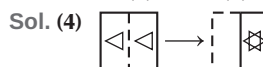
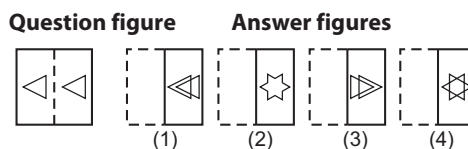
In such type of questions, a transparent sheet having a certain design and a dotted line on it is given. The candidates are required to identify the design (or pattern) that would be formed when the sheet is folded along the dotted line.

Example 1.



When paper is folded along the dotted line the right half goes to left side.

Example 2.



When paper is folded along the dotted line the left half goes to right side.

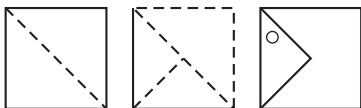
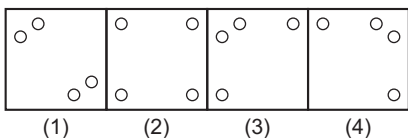
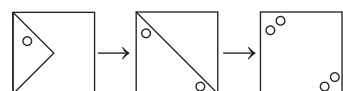
Paper Cutting

In this type of question based on paper cutting, few figures are given showing the way in which a piece of paper is to be folded and then cut from a particular section. The dotted line is the reference line along which the paper is to be folded and the arrow indicates the direction of the fold.

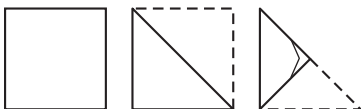
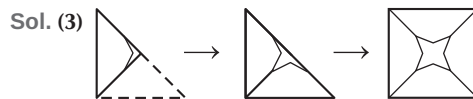
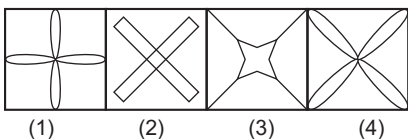
The candidates are required to identify the design or pattern that would be formed when the sheet is unfolded.

Students, while solving these questions must kept following points in mind

- Identify the way in which paper is folded.
- Determine the pattern of dotted lines, it shows the way in which a piece of paper is folded.
- Folded figure may cut from either of the sides as horizontally or vertically.

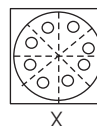
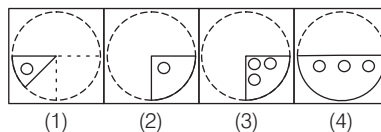
Example 3. Question figures**Answer figure****Sol. (1)**

Answer figure (1) will appear when a piece of paper is folded and punched (cut) as shown in the question figure.

Example 4. Question figures**Answer figure**

Answer figure (3) will appear when a piece of paper is folded and punched (cut) as shown in the question figure.

Example 5. A paper sheet is folded in a particular manner and several punches (cuts) are made. When unfolded the paper sheet looks like the question figure (X). From the given options select the one that follows the manner in which the paper is folded and punched.

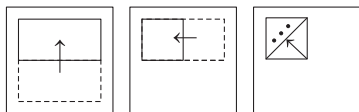
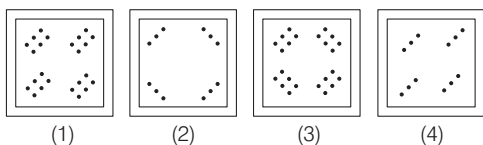
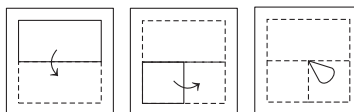
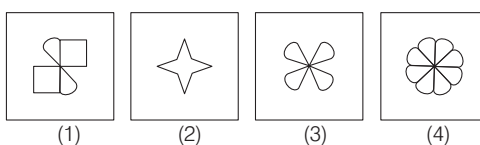
Question Figure**Answer Figures**

Sol. (1) When we fold the question figure, then it looks like as answer figure (1).

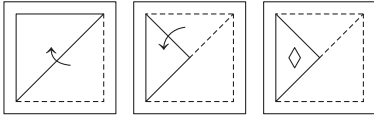


Entrance Corner

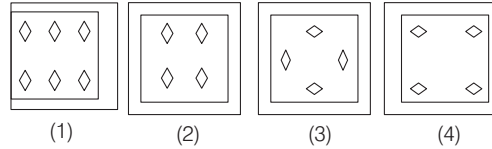
Directions (Q. Nos. 1-19) *In the given questions, there is a question figure, four the answer figures (1), (2), (3) and (4). Find out which answer figure can appear when a piece of paper is folded, punches and opened?*

1. Question figures**Answer figures****2. Question figures****Answer figures**

3. Question figures

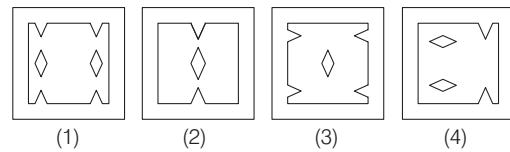
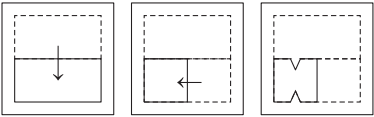


Answer figures



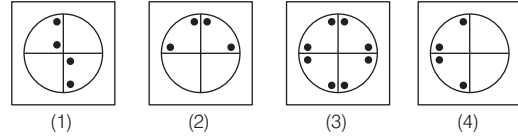
[JNV 2016]

4.



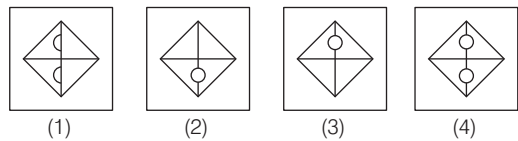
[JNV 2015]

5.



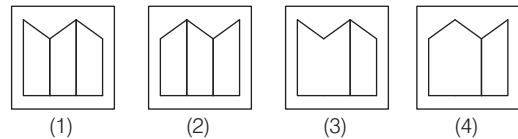
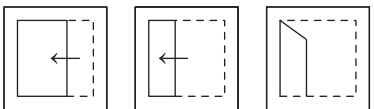
[JNV 2015]

6.



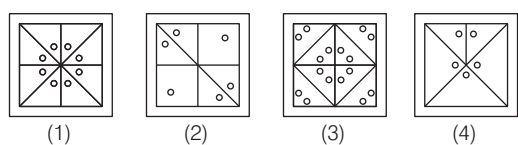
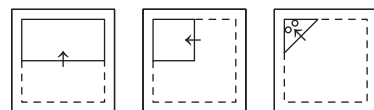
[JNV 2014]

7.



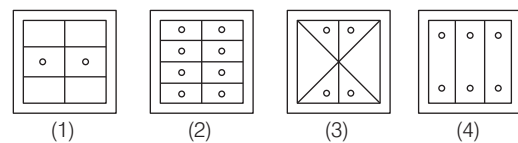
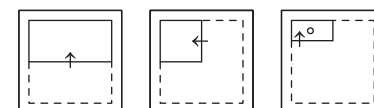
[JNV 2014]

8.



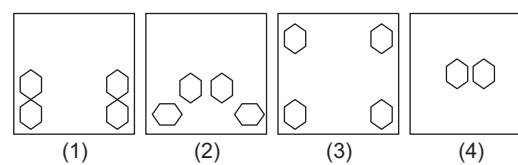
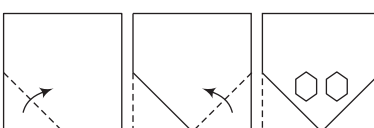
[JNV 2013]

9.



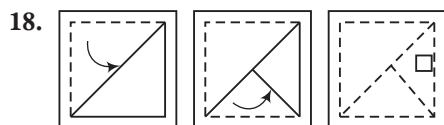
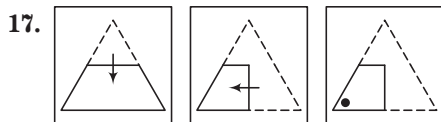
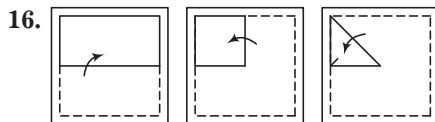
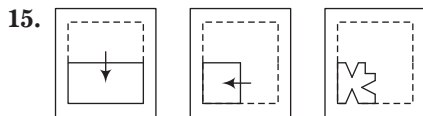
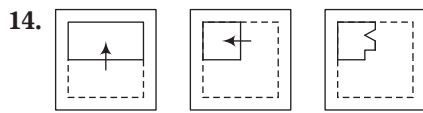
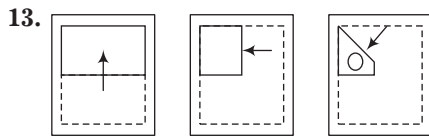
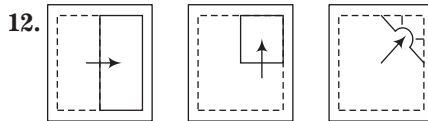
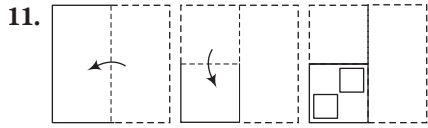
[JNV 2013]

10.

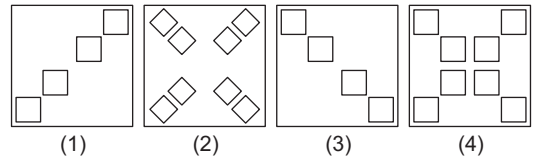


[JNV 2017]

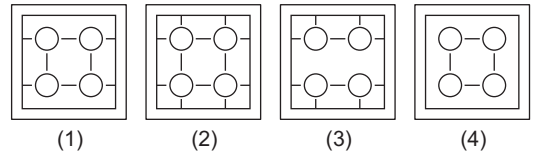
Question figures



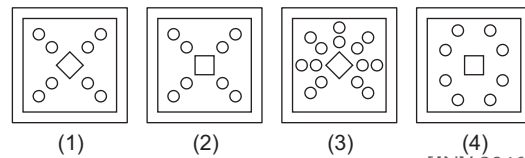
Answer figures



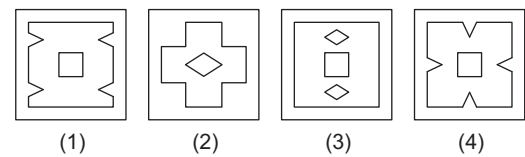
[JNV 2017]



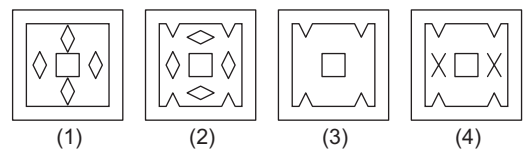
[JNV 2016]



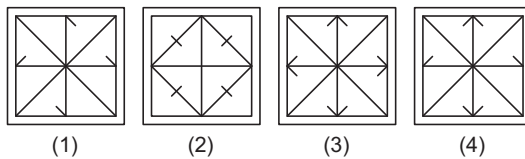
[JNV 2016]



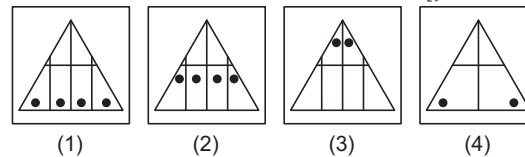
[JNV 2015]



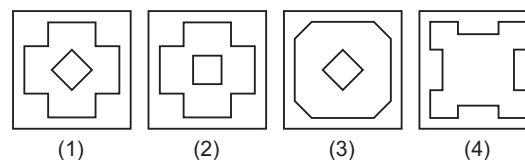
[JNV 2015]



[JNV 2014]

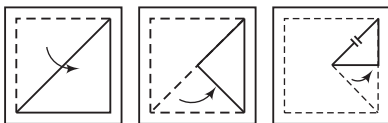


[JNV 2014]

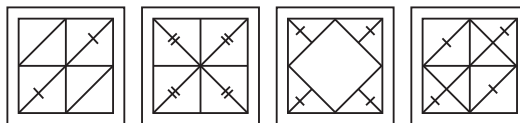


[JNV 2013]

19. Question figures



Answer figures



(1)

(2)

(3)

(4)

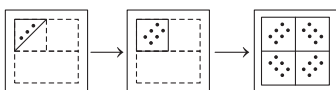
[JNV 2013]

Answers

| | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 (3) | 2 (3) | 3 (3) | 4 (1) | 5 (3) | 6 (4) | 7 (1) | 8 (3) | 9 (2) | 10 (2) |
| 11 (4) | 12 (2) | 13 (4) | 14 (3) | 15 (2) | 16 (3) | 17 (4) | 18 (4) | 19 (2) | |

Hints and Solutions

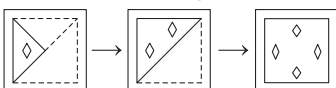
1. (3) When the paper is unfolded, it will appear as shown in answer figure (3).



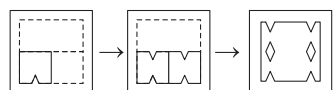
2. (3) When the paper is unfolded, it will appear as shown in answer figure (3).



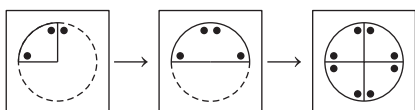
3. (3) When the paper is unfolded, it will appear as shown in answer figure (3).



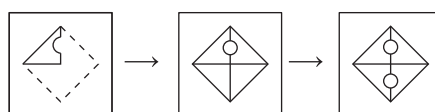
4. (1) When the paper is unfolded, it will appear as shown in answer figure (1).



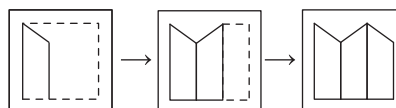
5. (3) When the paper is unfolded it will appear as shown in answer figure (3)



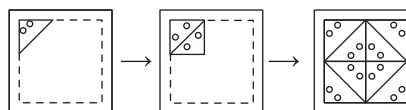
6. (4) When the paper is unfolded, it will appear as shown in answer figure (4)



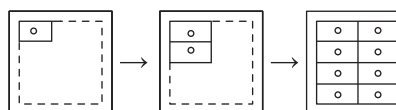
7. (1) When the paper is unfolded, it will appear as shown in answer figure (1)



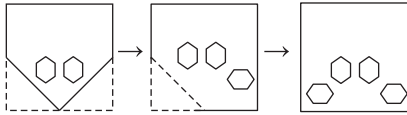
8. (3) When the paper is unfolded, it will appear as shown in answer figure (3)



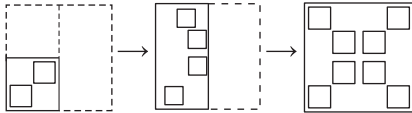
9. (2) When the paper is unfolded, it will appear as shown in answer figure (2).



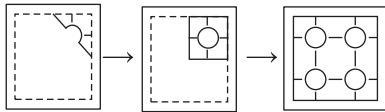
10. (2) When the paper is unfolded, it will appear as shown in answer figure (2)



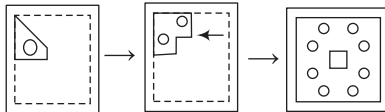
11. (4) When the paper is unfolded, it will appear as shown in answer figure (4)



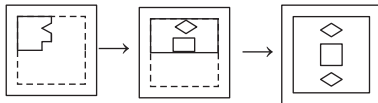
12. (2) When the paper is unfolded, it will appear as shown in answer figure (2).



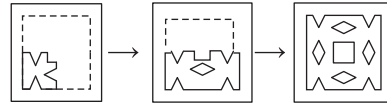
13. (4) When the paper is unfolded, it will appear as shown in answer figure (4)



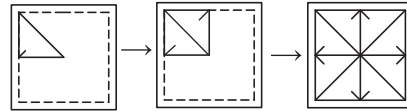
14. (3) When the paper is unfolded, it will appear as shown in answer figure (3)



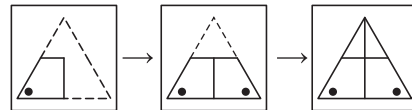
15. (2) When the paper is unfolded, it will appear as shown in answer figure (2).



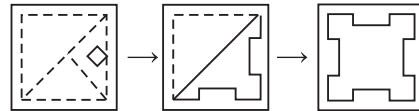
16. (3) When the paper is unfolded, it will appear as shown in answer figure (3)



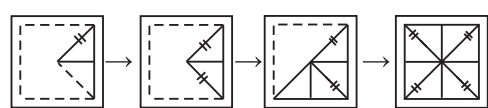
17. (4) When the paper is unfolded, it will appear as shown in answer figure (4)



18. (4) When the paper is unfolded, it will appear as shown in answer figure (4)



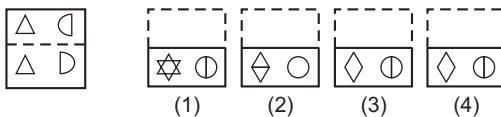
19. (2) When the paper is unfolded, it will appear as shown in answer figure (2).



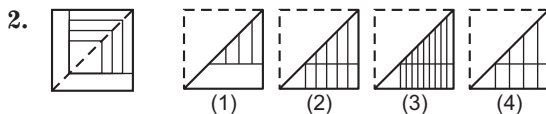
Practice Exercise

Directions (Q. Nos. 1-12) In each of the following questions a square transparent sheet (question figure) with a pattern is given. Figure out from amongst the four alternatives as to how the pattern would appear when the transparent sheet (question figure) is folded at the dotted line?

1. Question figure Answer figures

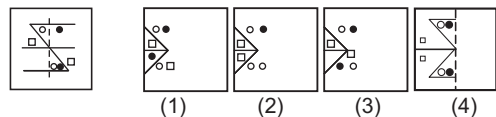


(1) (2) (3) (4)

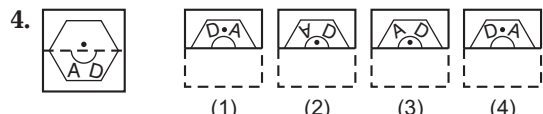


(1) (2) (3) (4)

3. Question figure Answer figures

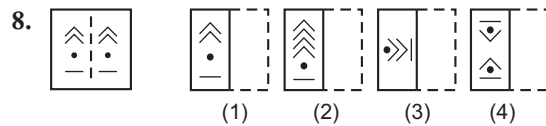
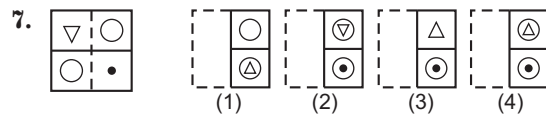
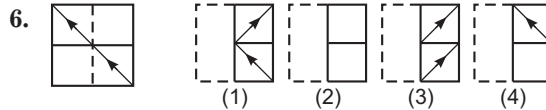
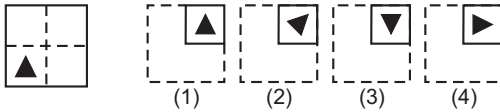


(1) (2) (3) (4)

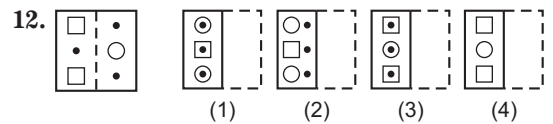
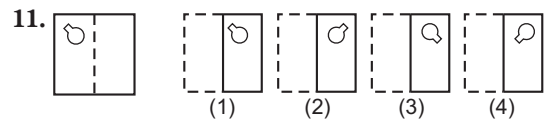
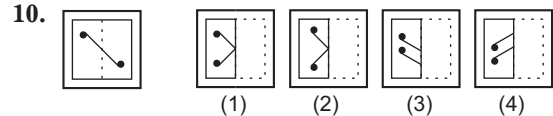
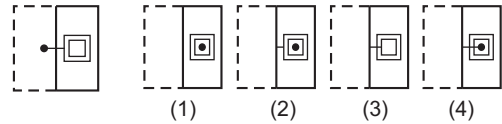


(1) (2) (3) (4)

5. Question figure Answer figures

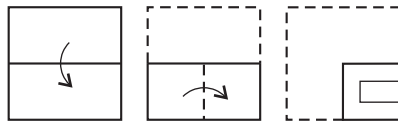


9. Question figure Answer figures

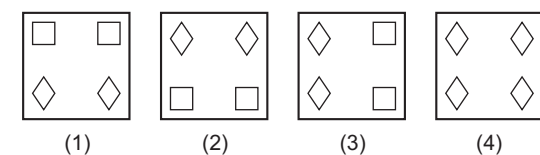
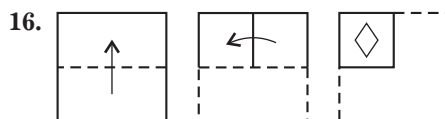
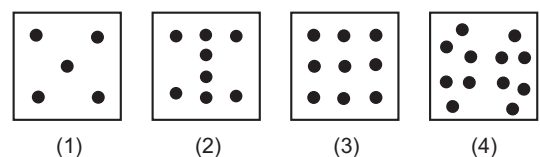
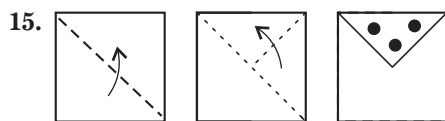
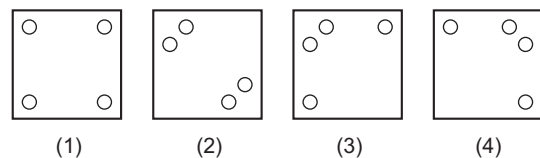
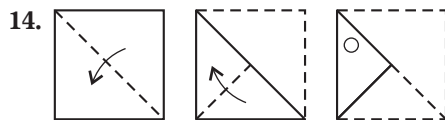
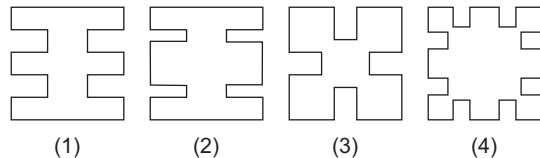


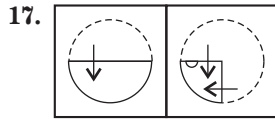
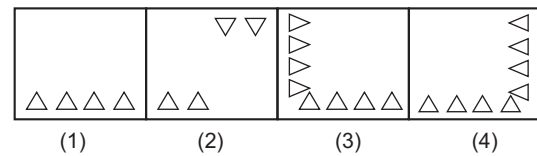
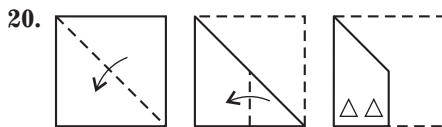
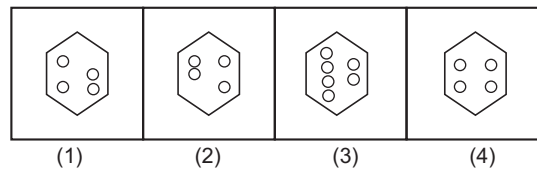
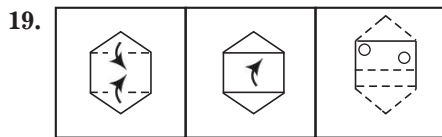
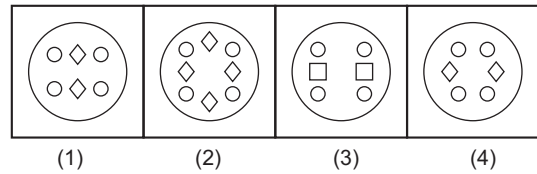
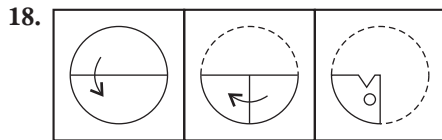
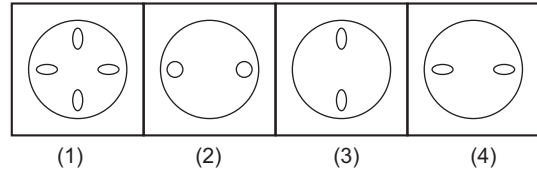
Directions (Q.Nos. 13-20) In the given questions, there is a question figure and four the answer figures. (1), (2), (3) and (4). Find out which answer figure can appear when a piece of paper is folded, punches and opened?

13. Question figures

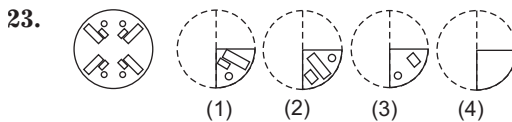
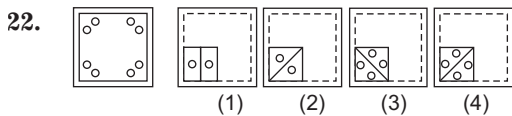
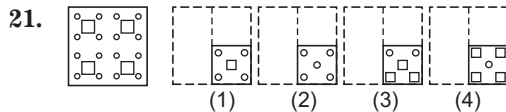
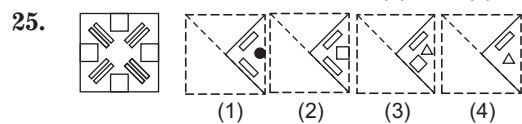
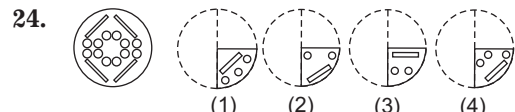


Answer figures



Question figures**Answer figures**

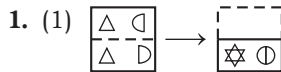
Directions (Q. Nos. 21-25) In each of the following question, a sheet (square/circle/triangle) of paper is folded and punch is made. When unfolded the paper sheet looks like the question figure. See the answer figures and select the one that follows the manner in which the paper is folded and punch is made.

Question Figure**Answer Figures****Question Figure****Answer Figures**

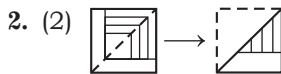
Answers

| | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 (1) | 2 (1) | 3 (4) | 4 (2) | 5 (3) | 6 (1) | 7 (2) | 8 (1) | 9 (4) | 10 (1) |
| 11 (2) | 12 (3) | 13 (1) | 14 (2) | 15 (4) | 16 (4) | 17 (2) | 18 (4) | 19 (3) | 20 (4) |
| 21 (1) | 22 (2) | 23 (1) | 24 (4) | 25 (2) | | | | | |

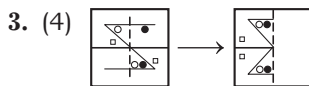
Hints and Solutions



When a paper is folded along the dotted line the upper half figure goes to lower half.



When a paper is folded along the dotted line the left half figure goes to right half.



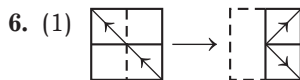
When a paper is folded along the dotted line the right half figure goes to left half.



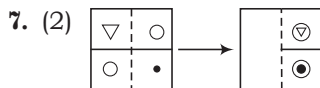
When a paper is folded along the dotted line the lower half figure goes to upper half.



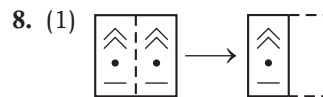
When a paper is folded along the dotted line the lower left figure goes to upper left and then goes to right corner.



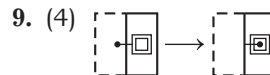
When a paper is folded along the dotted line the left half figure goes to right half.



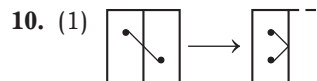
When a paper is folded along the dotted line the left figure goes to right half.



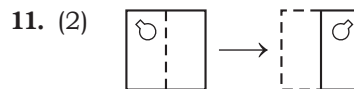
When a paper is folded along the dotted line the right half figure goes to left half.



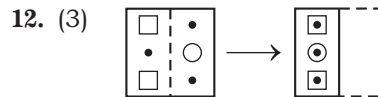
When a paper is folded along the dotted line the left half figure goes to right half.



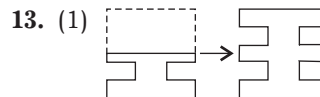
When a paper is folded along the dotted line the right half figure goes to left half.



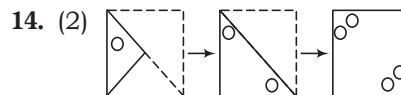
When a paper is folded along the dotted line the left half figure goes to right half.



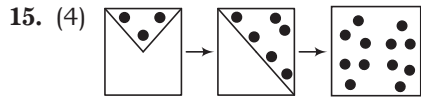
When a paper is folded along the dotted line the right half figure goes to left half.



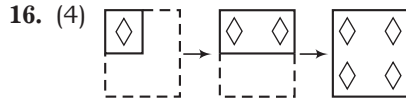
When the paper is unfolded, it will appear as shown in answer figure (1).



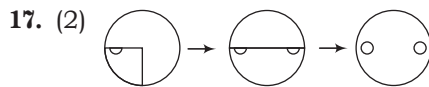
When the paper is unfolded, it will appear as shown in answer figure (2)



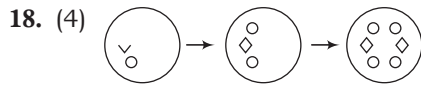
When the paper is unfolded, it will appear as shown in answer figure (4)



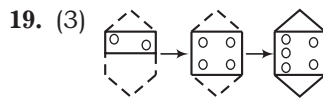
When the paper is unfolded, it will appear as shown in answer figure (4)



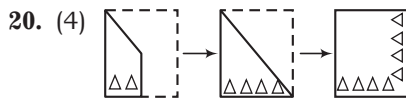
When the paper is unfolded, it will appear as shown in answer figure (2)



When the paper is unfolded, it will appear as shown in answer figure (4)

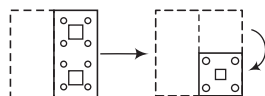


When the paper is unfolded, it will appear as shown in answer figure (3)

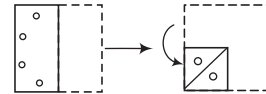


When the paper is unfolded, it will appear as shown in answer figure (4)

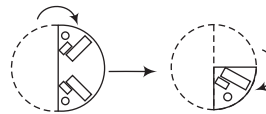
21. (1) The left half of the transparent sheet is folded along the dotted line and is placed on the right half. Then, the upper half of the sheet is folded along the dotted line and placed on lower half of the sheet. The figure, thus obtained resembles the figure as shown in option (1)



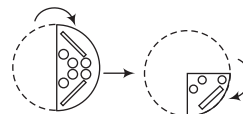
22. (2) The right half of the transparent sheet is folded along the dotted line and is placed on the left half. Then, the upper half of the sheet is folded along the dotted line and placed on lower half of the sheet. The figure, thus obtained resembles the figure as shown in option (2)



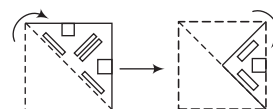
23. (1) The left half of the transparent sheet is folded along the dotted line and is placed on the right half. Then, the upper half of the sheet is folded along the dotted line and placed on lower half of the sheet. The figure, thus obtained resembles the figure as shown in option (1)



24. (4) The left half of the transparent sheet is folded along the dotted line and is placed on the right half. Then, the upper half of the sheet is folded along the dotted line and placed on lower half of the sheet. The figure, thus obtained resembles the figure as shown in option (4)



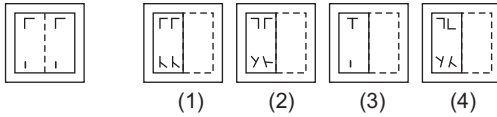
25. (2) The bottom left half of the transparent sheet is folded along the dotted line and is placed on the top right half. Then, the upper half of the sheet is folded along the dotted line and placed on lower half of the sheet. The figure, thus obtained resembles the figure as shown in option (2)



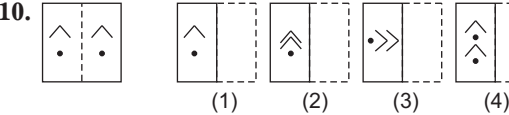
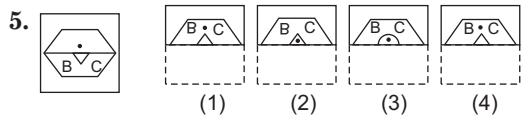
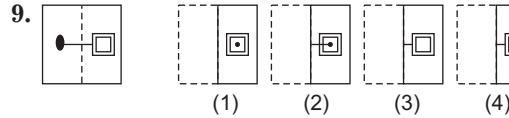
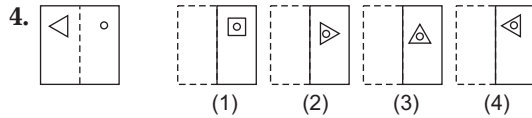
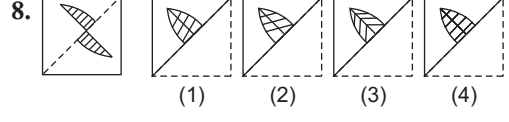
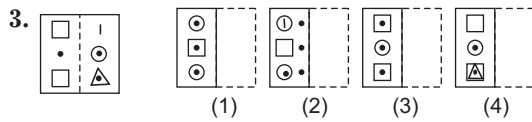
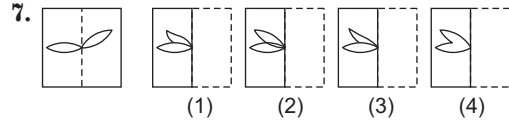
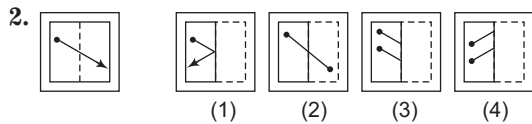
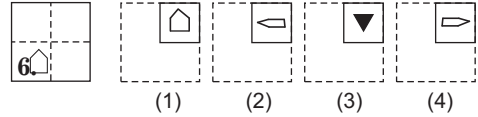
Self Practice

Directions (Q.Nos. 1-10) In each of the following questions a square transparent sheet (question figure) with a pattern is given. Figure out from amongst the four alternatives as to how the pattern would appear when the transparent sheet (question figure) is folded at the dotted line?

1. Que. fig. Ans. Fig.

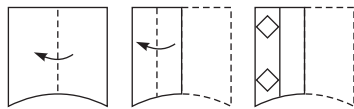


Que. fig. Ans. Fig.

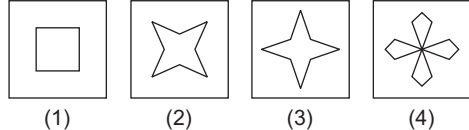
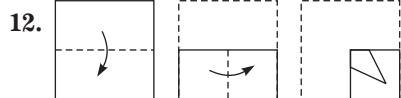
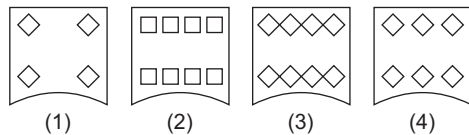


Directions (Q.Nos. 11 and 12) In the given questions, there is a problem figure, four the answer figures (1), (2), (3) and (4). Find out which answer figure can appear when a piece of paper is folded, punches and opened?

11. Question figures



Answer figures



Answers

| | | | | | | | | | |
|--------|--------|-------|-------|-------|-------|-------|-------|-------|--------|
| 1 (3) | 2 (1) | 3 (3) | 4 (4) | 5 (2) | 6 (3) | 7 (2) | 8 (4) | 9 (2) | 10 (1) |
| 11 (3) | 12 (2) | | | | | | | | |