EXERCISE 6B

Directions : *In each one of the following questions, choose the correct water-image of the figure (x) from amongst the four alternatives (a), (b), (c), (d) given along with it.*

1.

(x)

(a)   (b)   (c)   (d)

2.

(x)

(a)   (b)   (c)   (d)

3.

(x)

(a)   (b)   (c)   (d)

4.

(x)

(a)   (b)   (c)   (d)

15.

(x)

(a)   (b)   (c)   (d)

16.

(x)

(a)   (b)   (c)   (d)

17.

(x)

(a)   (b)   (c)   (d)

18.

(x)

(a)   (b)   (c)   (d)

19.

(x)

(a)   (b)   (c)   (d)

20.

(x)

(a)   (b)   (c)   (d)

21.

(x)

(a)   (b)   (c)   (d)

22.

(x)

(a)   (b)   (c)   (d)

23.

(x)

(a)   (b)   (c)   (d)

24.

(x)

(a)   (b)   (c)   (d)

25.

26.

27.
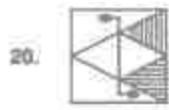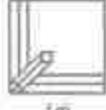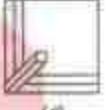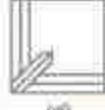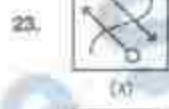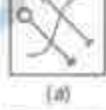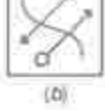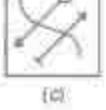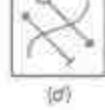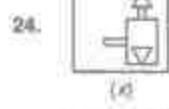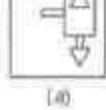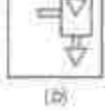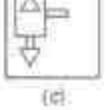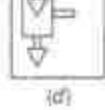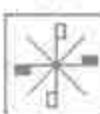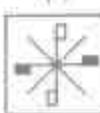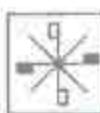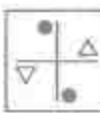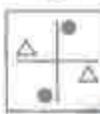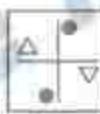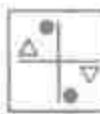
ANSWERS

1. (d)	2. (c)	3. (d)	4. (d)	5. (b)	6. (b)	7. (a)	8. (d)	9. (c)	10. (b)
11. (a)	12. (d)	13. (b)	14. (c)	15. (d)	16. (b)	17. (d)	18. (c)	19. (d)	20. (a)
21. (c)	22. (b)	23. (c)	24. (a)	25. (d)	26. (b)	27. (c)			

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7. SPOTTING OUT THE EMBEDDED FIGURE

Embedded Figure : A figure X is said to be embedded in a figure Y, if Y contains figure X as its part.

TYPE 1 : In such type of problems, a figugre (X) is given, followed by four complex figures in such a way that fig. (X) is embedded in one of the them. One has to choose

Solved Examples

Directions : Fig. (X) is embedded in any one of the four alternative figures. Find the alternative which contains fig. (X).

Ex. 1.
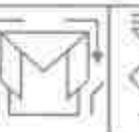
Sol. : On close observation we find that fig. (X) is embedded in fig. (a). This will be more clear from the following figure :

Hence, the answer is (a).

Ex. 2.
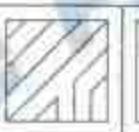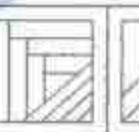
Sol. : Fig (X) can be traced out in fig. (d) as shown below :

Hence, the answer is (d).

Ex. 3.
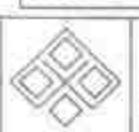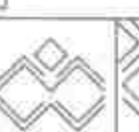
Sol. : Fig. (X) is embedded in fig. (a) as shown below :

Hence, fig. (a) is the correct answer.

5.

(X) (a) (b) (c) (d)

6.

(X) (a) (b) (c) (d) (I. Tax 1994)

7.

(X) (a) (b) (c) (d)

8.

(X) (a) (b) (c) (d) (Asstt. Grade, 1996)

9.

(X) (a) (b) (c) (d)

10.

(X) (a) (b) (c) (d) (S.S.C. 1995)

11.

(X) (a) (b) (c) (d)

12.
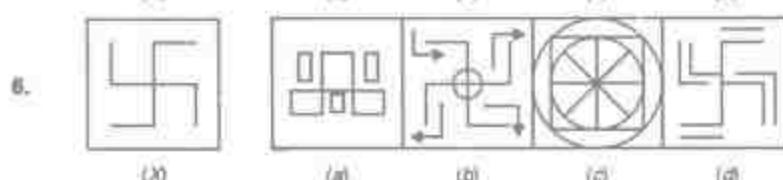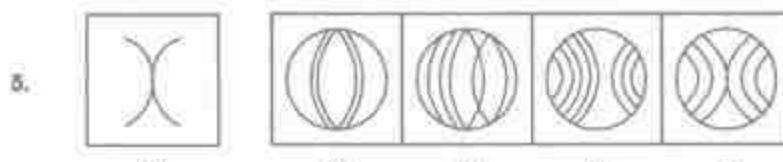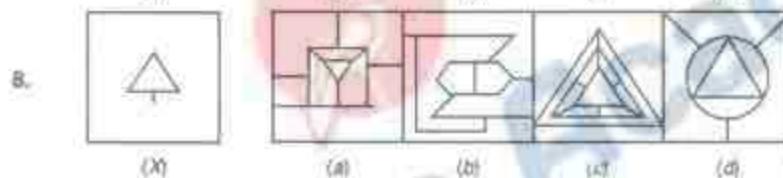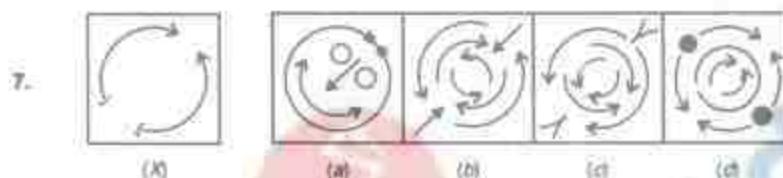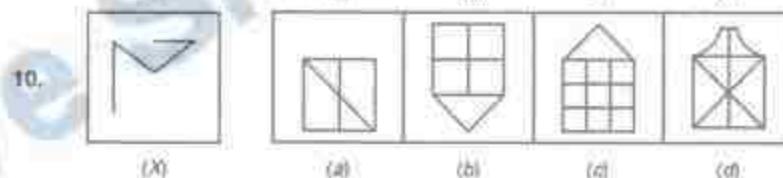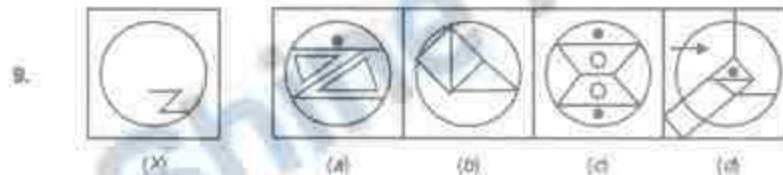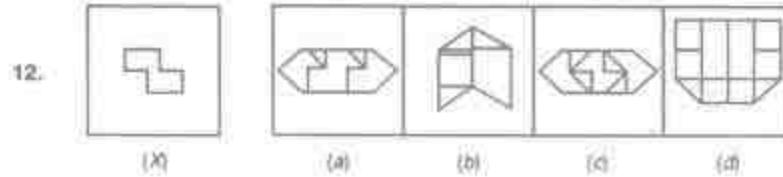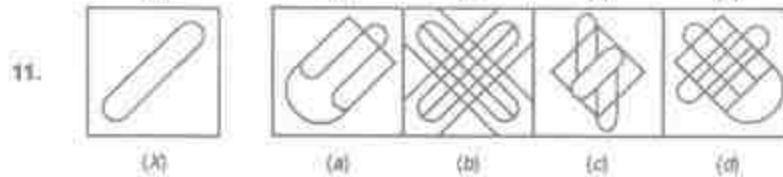
(X) (a) (b) (c) (d) (C.B.I. 1993)

13.
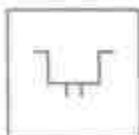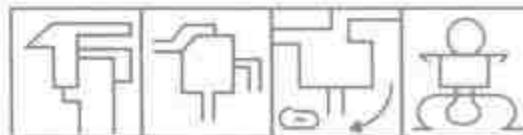
(X)   (a)   (b)   (c)   (d)

14.
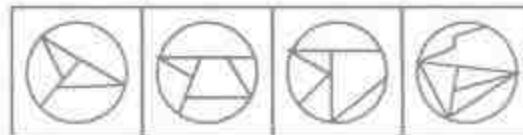
(X)   (a)   (b)   (c)   (d)   (U.D.C. 1995)

15.

(X)   (a)   (b)   (c)   (d)

16.
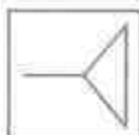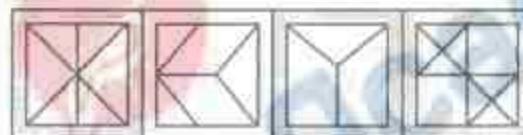
(X)   (a)   (b)   (c)   (d)   (Railways, 1993)

17.
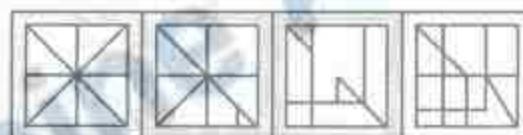
(X)   (a)   (b)   (c)   (d)

18.
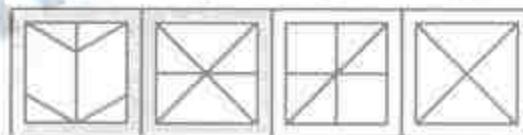
(X)   (a)   (b)   (c)   (d)   (S.S.C. 1994)

19.

(X)   (a)   (b)   (c)   (d)

20.

(X)   (a)   (b)   (c)   (d)   (O.B.I. 1994)

21. (X)   (a)   (b)   (c)   (d)

22. (X)   (a)   (b)   (c)   (d)

23. (X)   (a)   (b)   (c)   (d)

24. (X)   (a)   (b)   (c)   (d)   (I. Tax, 1993)

25. (X)   (a)   (b)   (c)   (d)

26. (X)   (a)   (b)   (c)   (d)   (Railways, 1993)

27. (X)   (a)   (b)   (c)   (d)

28. (X)   (a)   (b)   (c)   (d)   (U.D.C. 1995)

29.

(X)　　(a)　　(b)　　(c)　　(d)

30.

(X)　　(a)　　(b)　　(c)　　(d)

31.

(X)　　(A)　　(b)　　(c)　　(d)　　(Central Excise, 1994)

32.

(X)　　(a)　　(b)　　(c)　　(d)

33.

(X)　　(a)　　(b)　　(c)　　(d)　　(Assistant Grade, 1995)

34.

(X)　　(a)　　(b)　　(c)　　(d)

35.

(X)　　(a)　　(b)　　(c)　　(d)　　(C.B.I. 1994)

36.

(X)　　(a)　　(b)　　(c)　　(d)

37. (X)   (a)   (b)   (c)   (d)   (I. Tax, 1993)

38. (X)   (a)   (b)   (c)   (d)

39. (X)   (a)   (b)   (c)   (d)   (U.D.C. 1995)

40. (X)   (a)   (b)   (c)   (d)

41. (X)   (a)   (b)   (c)   (d)   (Central Excise, 1993)

42. (X)   (a)   (b)   (c)   (d)

43. (X)   (a)   (b)   (c)   (d)   (C.B.I. 1995)

44. (X)   (a)   (b)   (c)   (d)

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Non-Verbal Reasoning
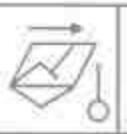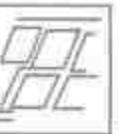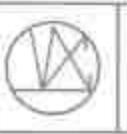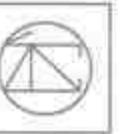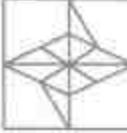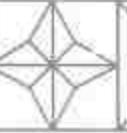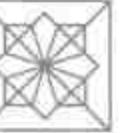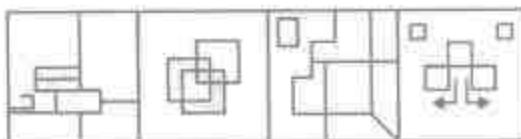
45. (X) (a) (b) (c) (d) (Asstt. Grade, 1996)
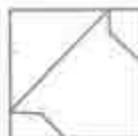
46. (X) (a) (b) (c) (d)
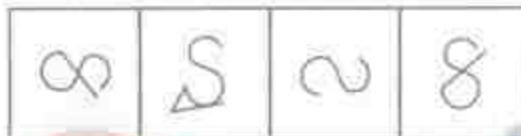
47. (X) (a) (b) (c) (d) (Assistant Grade, 1995)
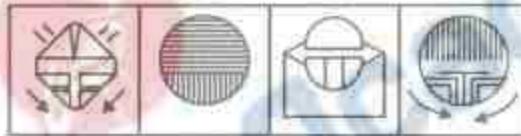
48. (X) (a) (b) (c) (d)
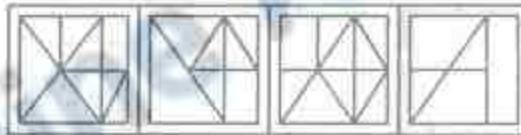
49. (X) (a) (b) (c) (d) (C.B.I. 1993)
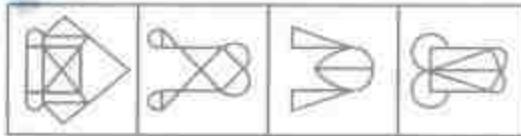
50. (X) (a) (b) (c) (d)
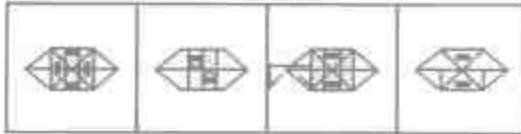
51. (X) (a) (b) (c) (d)
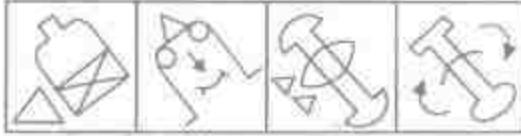
52. (X) (a) (b) (c) (d)

Directions : In each of the following questions, choose the alternative figure which is embedded in the given fig. (X).

61.
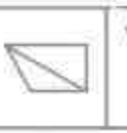
(X)   (a)   (b)   (c)   (d)

62.

(X)   (a)   (b)   (c)   (d)

63.

(X)   (a)   (b)   (c)   (d)

64.

(X)   (a)   (b)   (c)   (d)

(C.B.I. 1995)

65.
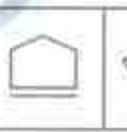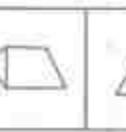
(X)   (a)   (b)   (c)   (d)

66.
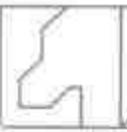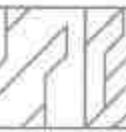
(X)   (a)   (b)   (c)   (d)

67.
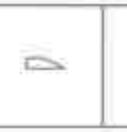
(X)   (a)   (b)   (c)   (d)

(Railways, 1993)

68:
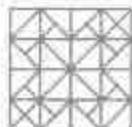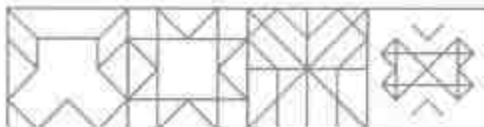
(X)   (a)   (b)   (c)   (d)

69.
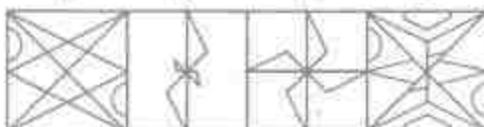
(X)   (a)   (b)   (c)   (d)

Directions : Consider the figures given below:
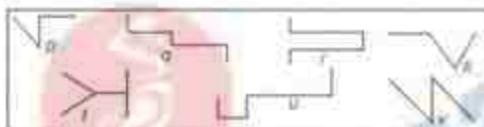
Now answer questions 70 to 74

70. Which of the above figures is embedded in the figure given below? (C.B.I. 1992)

   (a) t   (b) s
   (c) u   (d) p

71. Which of the above figures is not embedded in the figure given below?

   (a) t   (b) s   (c) q
   (d) u   (e) p

72. Which of the above figures is embedded in the following pattern? (C.B.I. 1992)

   (a) q   (b) t
   (c) u   (d) s

73. Which of the above figures is not embedded in the given pattern?
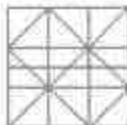
   (a) p   (b) q   (c) t
   (d) u   (e) v

74. Which of the above figures is embedded in the following figure? (C.B.I. 1992)

   (a) s   (b) v
   (c) t   (d) q

ANSWERS

1. (c)
2. (b)
3. (d)
4. (c)

5. (a)
6. (c)
7. (a)
8. (c)

9. (d)
10. (d)
11. (b)
12. (c)

13. (d)
14. (b)
15. (d)
16. (b)
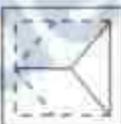
17. (d)
18. (b)
19. (b)
20. (c)

21. (d)
22. (c)
23. (b)
24. (b)

25. (c)
26. (b)
27. (a)
28. (d)

29. (c)
30. (c)
31. (b)
32. (d)

33. (d)
34. (d)
35. (a)
36. (b)

37. (c)

38. (a)

39. (a)

40. (d)

41. (b)

42. (b)

43. (b)

44. (d)

45. (b)

46. (d)

47. (b)

48. (b)

49. (c)

50. (b)

51. (c)

52. (c)

53. (d)

54. (a)

55. (d)

56. (d)

57. (a)

58. (b)

59. (a)

60. (a)

61. (a)

62. (c)

63. (a)

64. (d)

65. (c)

66. (c)

67. (b)

68. (b)

69. (b)
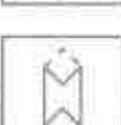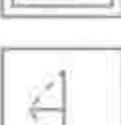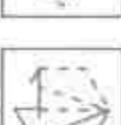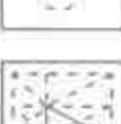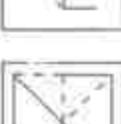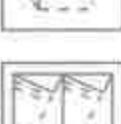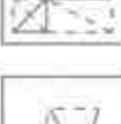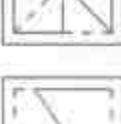
70. (b)
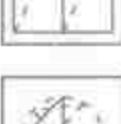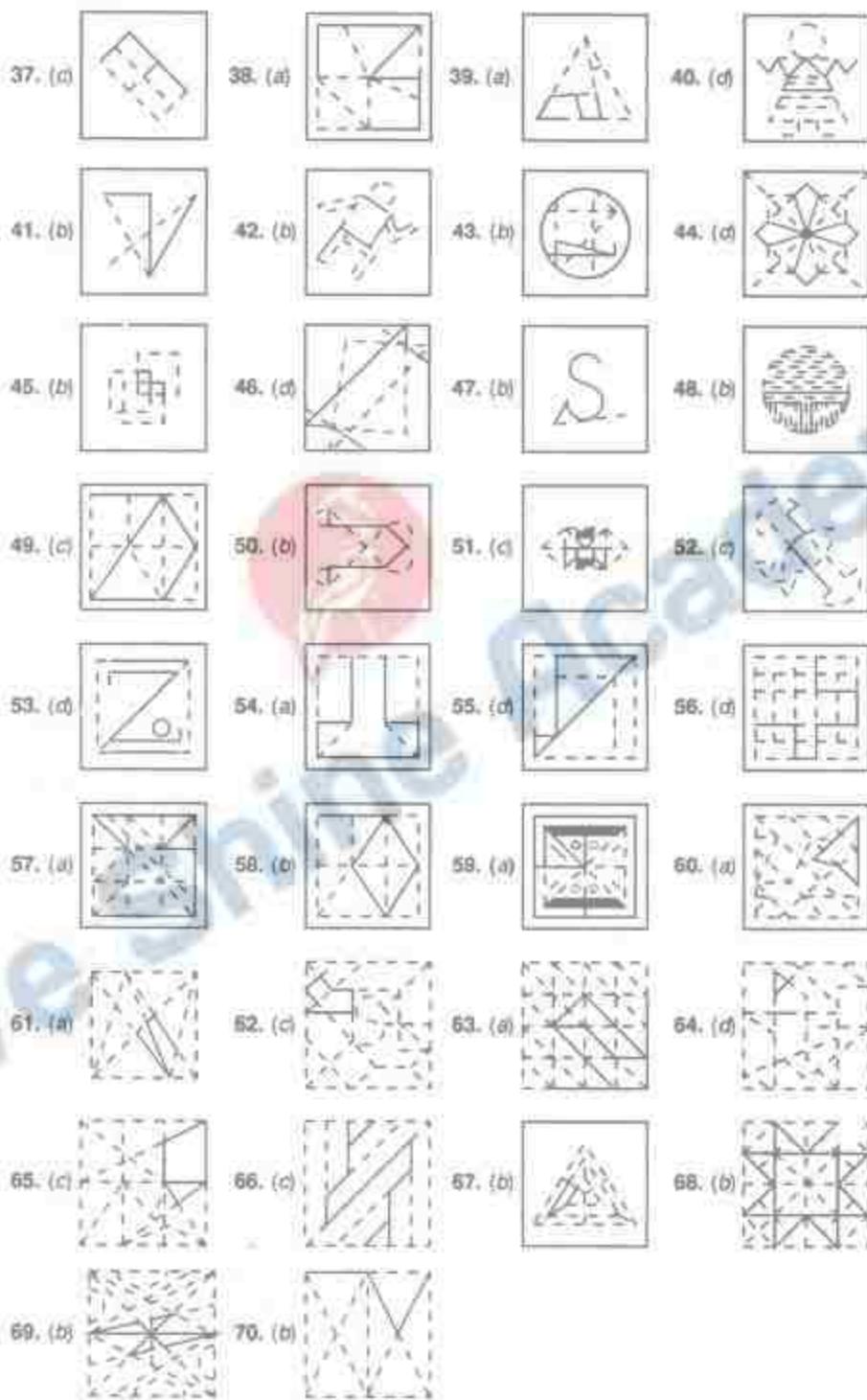
8. COMPLETION OF INCOMPLETE PATTERN

In this type of problems, a figure or a matrix containing a set of figures following a particular sequence or pattern is given, in which a part, generally a quarter is left blank. This problem figure is followed by four alternative figures. The candidate is required to choose the one which best fits into the blank space of problem figure so as to complete the original pattern?

ILLUSTRATIVE EXAMPLES

Ex. 1. *Select a figure from the four alternatives, which when placed in the blank space of fig (x) would complete the pattern.*

Sol. Clearly, fig. (d) will complete the pattern when placed in the blank space of fig (x) as shown below.

Hence, the answer is (d)

Ex. 2. *Complete the pattern in fig (x) by selecting one of the figures from the four alternatives :*

Sol. Clearly, fig (d) when placed in the blank space of fig (x) will complete the pattern, as shown below.

Hence, the answer is (d).

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EXERCISE 8

Directions : *In each of the following questions, complete the missing portion of the given pattern by selecting from the given alternatives (a), (b), (c) and (d).*

1.

(x)   (a)   (b)   (c)   (d)   (U.D.C. 1993)

2.

(x)   (a)   (b)   (c)   (d)

3.

(x)   (a)   (b)   (c)   (d)

4.

(x)   (a)   (b)   (c)   (d)

5.

(x)   (a)   (b)   (c)   (d)   (C.B.I. 1988)

6.

(x)   (a)   (b)   (c)   (d)

7.

(x)   (a)   (b)   (c)   (d)   (S.S.C. 1993)

16.

(x)   (a)   (b)   (c)   (d)

(U.D.C. 1993)

17.

(x)   (a)   (b)   (c)   (d)

18.

(x)   (a)   (b)   (c)   (d)

19.

(x)   (a)   (b)   (c)   (d)

20.

(x)   (a)   (b)   (c)   (d)

21.

(x)   (a)   (b)   (c)   (d)

(Asstt. Grade, 1993)

22.

(x)   (a)   (b)   (c)   (d)

23.
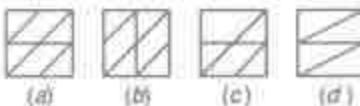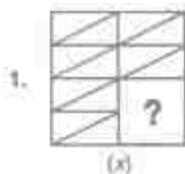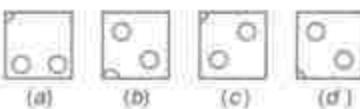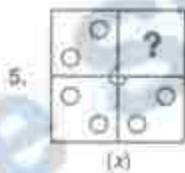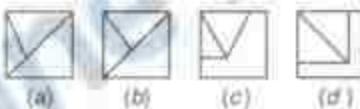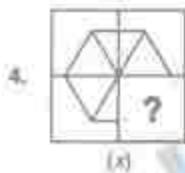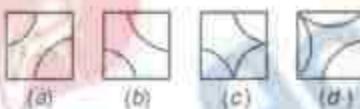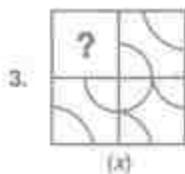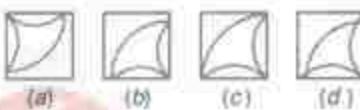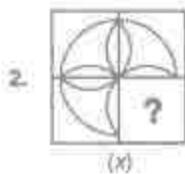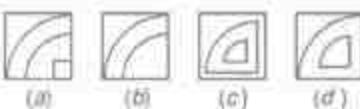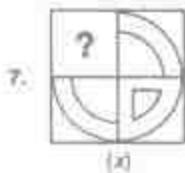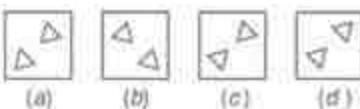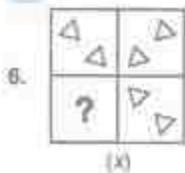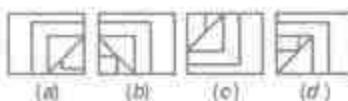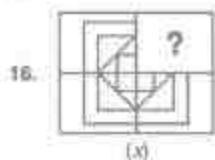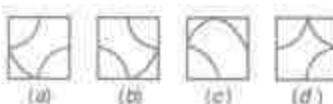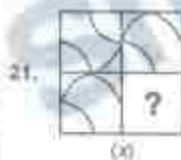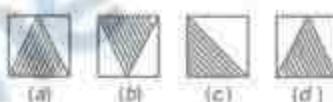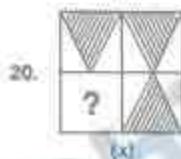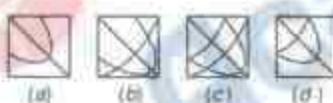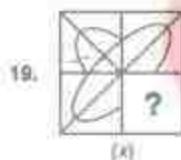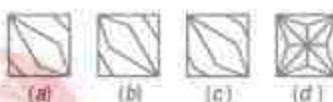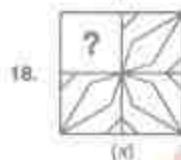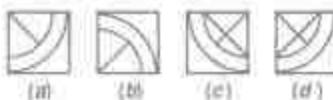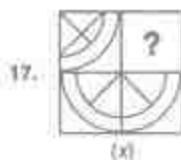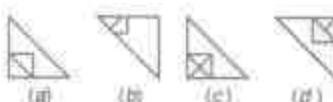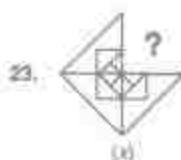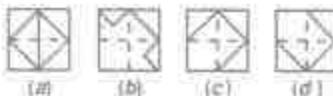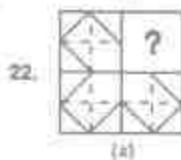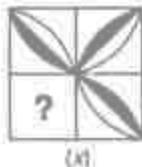
(x)   (a)   (b)   (c)   (d)

(C.B.I. 1994)

32.
(x)   (a)   (b)   (c)   (d) (Transmission Executives', 1994)
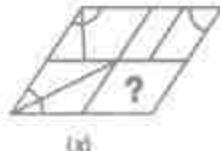
33.
(x)   (a)   (b)   (c)   (d)   (U.D.C. 1993)
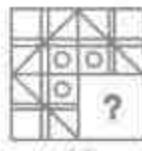
34.
(x)   (a)   (b)   (c)   (d)

35.
(x)   (a)   (b)   (c)   (d)
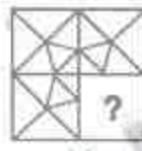
36.
(x)   (a)   (b)   (c)   (d)   (C.B.I. 1994)
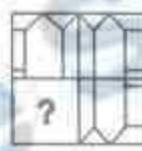
37.
(x)   (a)   (b)   (c)   (d)
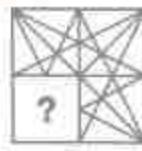
38.
(x)   (a)   (b)   (c)   (d) (Transmission Executives', 1994)

39.
(x)   (a)   (b)   (c)   (d)
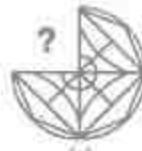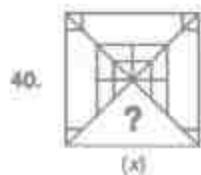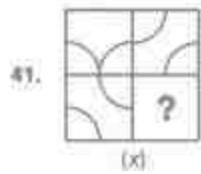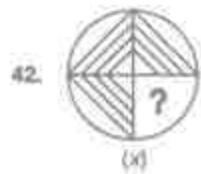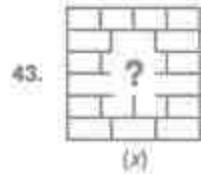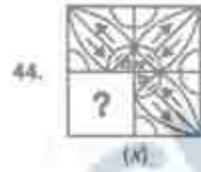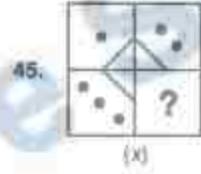
40. (x) (a) (b) (c) (d) (U.D.C. 1995)

41. (x) (a) (b) (c) (d) (Asstt. Grade, 1995)

42. (x) (a) (b) (c) (d) (S.S.C. 1993)

43. (x) (a) (b) (c) (d) (U.D.C. 1993)

44. (x) (a) (b) (c) (d)

45. (x) (a) (b) (c) (d) (Asstt. Grade, 1995)

46. (x) (a) (b) (c) (d)

47. (x) (a) (b) (c) (d) (U.D.C. 1995)

48.

(x)   (a)   (b)   (c)   (d)

49.

(x)   (a)   (b)   (c)   (d)

50.

(x)   (a)   (b)   (c)   (d)   (U.D.C. 1995)

51.

(x)   (a)   (b)   (c)   (d)   (Asst. Grade, 1995)

52.

(x)   (a)   (b)   (c)   (d)

53.

(x)   (a)   (b)   (c)   (d)   (S.S.C. 1995)

54.

(x)   (a)   (b)   (c)   (d)

55.

(x)   (a)   (b)   (c)   (d)   (U.D.C. 1995)

37. (c)

38. (d)

39. (a)

40. (d)

41. (a)

42. (d)

43. (d)

44. (d)

45. (c)

46. (d)

47. (a)

48. (c)

49. (d)

50. (b)

51. (c)

52. (d)

53. (c)

54. (c)

55. (a)
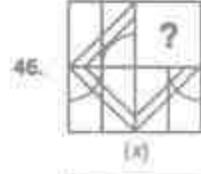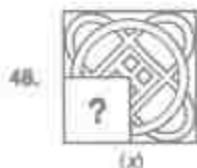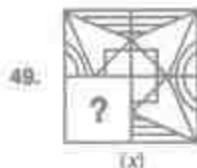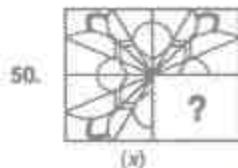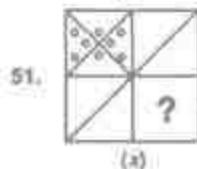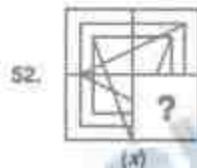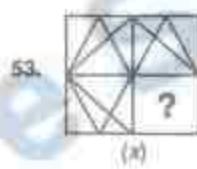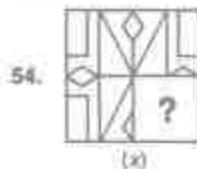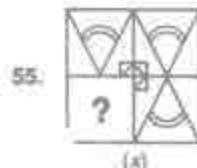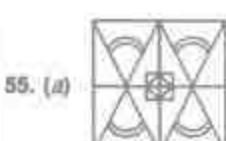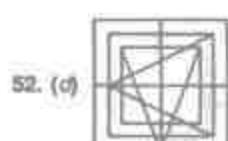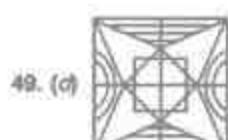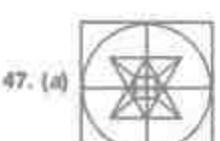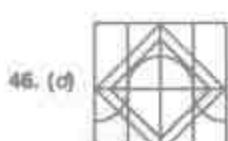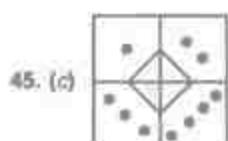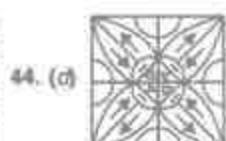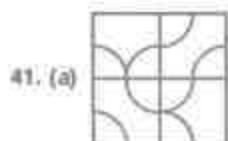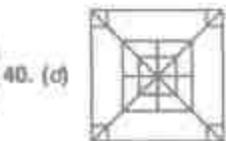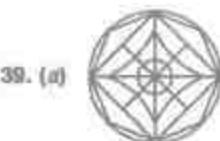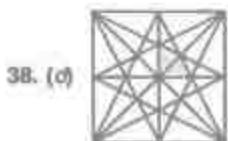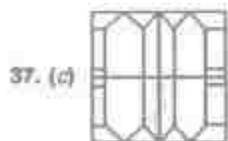
9. FIGURE MATRIX

In this type of questions, more than one set of figures is given in the form of a matrix, all of them following the same rule. The candidate is required to analyse the complete sets; find out the common rule and then on its basis, find the missing figure in the incomplete set.

Example 1 : *Select one alternative figure out of (a), (b), (c) and (d), which completes the given matrix.*

(a) (b) (c) (d)
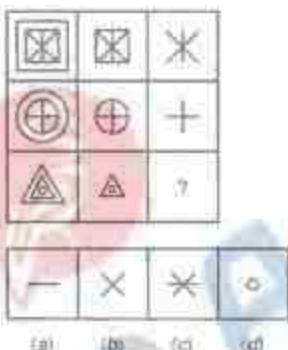
(Assistant Grade, 1994)

Solution : Clearly, in the first and second rows, the second figure is the inner part of the first figure and the third figure is the inner part of the second figure.
Thus, the missing figure should be the inner part of the second figure in third row, i.e. a small circle.
Hence, the answer is (d).

EXERCISE 9

Directions : In each of the following questions, find out which of the answer figures (a),
(b). (c) and (d) completes the figure - matrix ?

1.

(Asstt. Grade, 1995)

(a)   (b)   (c)   (d)

2.
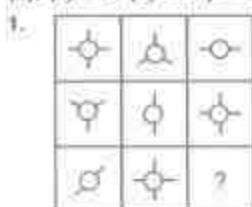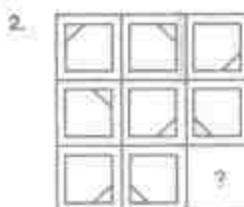
(Railways, 1994)

(a)   (b)   (c)   (d)

3.

(a)   (b)   (c)   (d)

4.

(a)   (b)   (c)   (d)

5.
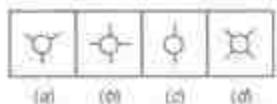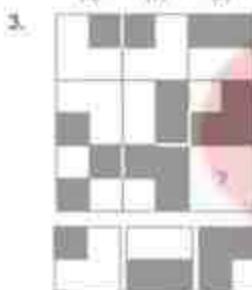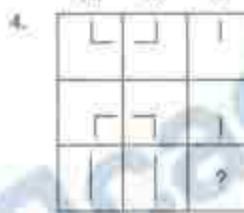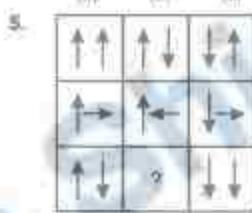
(Railways, 1993)

(a)   (b)   (c)   (d)

6.

(a)   (b)   (c)   (d)

7.
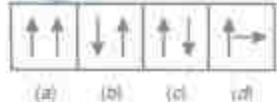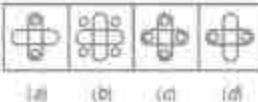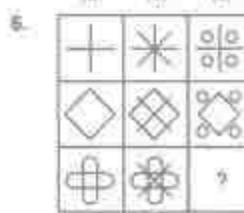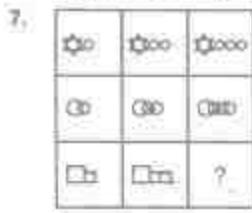
(Assistant Grade,
1995)

(a)   (b)   (c)   (d)

8.

(a)   (b)   (c)   (d)

9.

(P.C.S. 1995)

(a) (b) (c) (d)

10.

(a) (b) (c) (d)

11.

(C.B.I. 1993)

(a) (b) (c) (d)

12.

(a) (b) (c) (d)

13.

(Asstt. Grade, 1995)

(a) (b) (c) (d)

14.

(a) (b) (c) (d)

15.
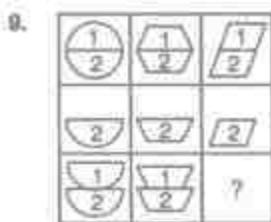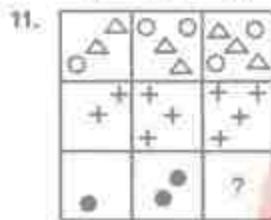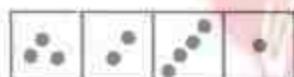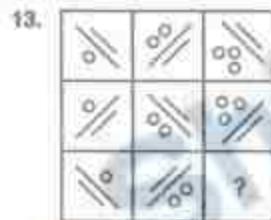
(a) (b) (c) (d)

(Investigators' Exam, 1992)

16.

(a) (b) (c) (d)

25.

(a) (b) (c) (d)

26.

(C.B.I. 1993)

(a) (b) (c) (d)

27.

(a) (b) (c) (d)

28.

(Assistant Grade, 1996)

(a) (b) (c) (d)

29.

(a) (b) (c) (d)

30.

(Investigators' Exam, 1992)

(a) (b) (c) (d)

31.

(a) (b) (c) (d)

32.

(Asstt. Grade, 1994)

(a) (b) (c) (d)

33.

(a) (b) (c) (d)

34.

(S.S.C. 1995)

(a) (b) (c) (d)

35.
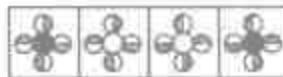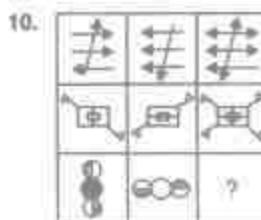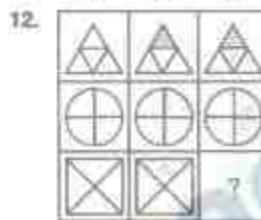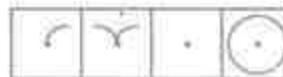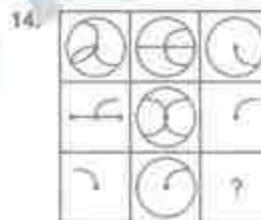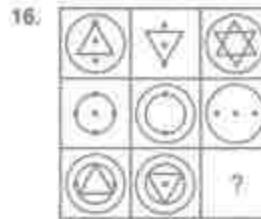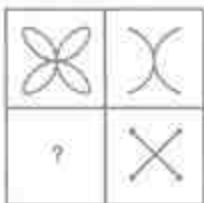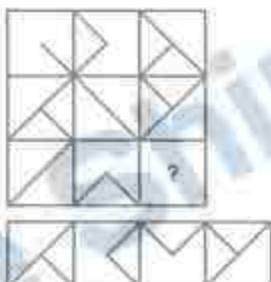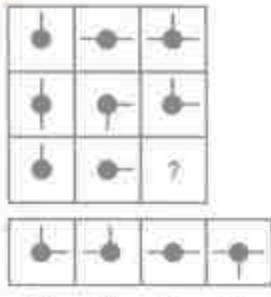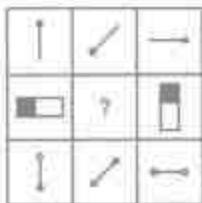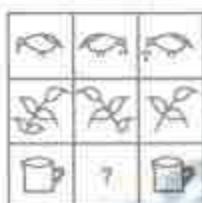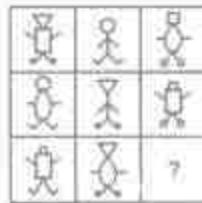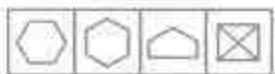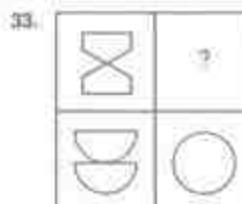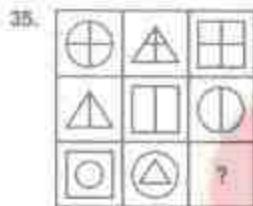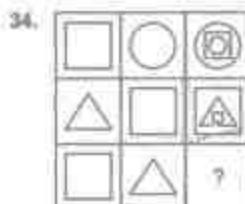
(S.S.C. 1995)

(a) (b) (c) (d)

ANSWERS

1. (b) : Each row of the matrix contains one circle with two bars, one with three bars and one circle with four bars.

2. (b) : The line inside the square moves from one corner to another, clockwise, as we move from left to right in a row.

3. (d) : The third tile from the left, in a row has design which is a union of the designs of the two tiles on its left.

4. (c) : The third coloumn contains the line which is common to the designs in the first two columns.

5. (a) : Second figure in each row consists of first arrow of the first figure as such and the second one in an inverted position. The third figure consists of the first arrow of the first figure in an inverted position and the second arrow as such.

6. (b) : As we move from the first to the second figure in a row, the figure gets intersected by two mutually perpendicular lines. In the next step, dots appear at the ends of these lines and the lines disappear to give the third figure.

7. (a) : In each row, the number of smaller figures increase by one at each step from left to right.

8. (c) : There are 3 outer figures (circle, triangle & square), 3 inner figures (circle, triangle and square) and 3 types of shading—plane, line and dark.

9. (c) : Each figure in third row comprises of fig. 1 of first row in inverted position and fig. 2 as it is.

10. (d) : The third figure in each row is the union of first two figures.

11. (a) : The number of objects increases by 1 at each step from left to right in each row.

12. (b) : The first figure in each row is completely unshaded, the second one has one-fourth part shaded and the third one is half shaded.

13. (b) : In each figure, the circles are towards the longer line. The number of circles increases by 1 at each step from left to right in each row. Also, the positions of the lines in the first and third figures are identical.

14. (e) : The third figure in each row comprises of the parts common to the first two figures.

15. (a) : In the third row, the inner circle with the bar moves 90° clockwise at each step. Also, there are 3 types of side figures—triangle, circle and square, of which only square remains unused in the third row.

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

17. (b) : The number of squares follow the pattern +1 in first row, +2 in second row and +3 in third row.

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

19. (a) : There are three types of arrows—a single arrow with a line, a double arrow and a triple arrow. There are 3 positions of arrows—upwards, downwards and sideways towards right. The arrows have 3 types of bases—plane, rectangular and circular. Each of these features is used once in each row.

20. (d) : The number of dots in the second figure is thrice the number in the first figure in each row.

21. (b) : The number of each type of figures decreases by 1 at each step from left to right in each row.

22. (d) : There are 3 types of faces, 3 types of hands and 3 types of legs. Each type is used once in each row. So, the features not used in the first two figures of the third row would together from the missing figure.

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

10. PAPER FOLDING

The problems based on paper folding involve the process of selecting a figure which would most closely resemble the pattern that would be formed when a transparent sheet carrying designs on either side of a dotted line, is folded along this line. The figure has to be selected from a set of four alternatives.

Directions : *In each one of the following examples, find from amongst the four response figures, the one which resembles the pattern formed when the transparent sheet, carrying a design is folded along the dotted line.*

Example 1 :
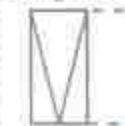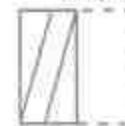
Transparent Sheet   Response Figures

Solution : The right halves of the response figures being dotted, indicate that the right half of the transparent sheet has been folded and placed over the left half. Visualising the combination of the designs on the two parts, we obtain fig. (D).
Hence, fig. (D) is the correct answer.

Example 2 :
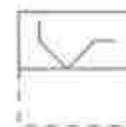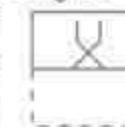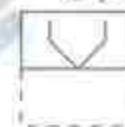
Transparent Sheet   Response Figures

Solution : Clearly, the lower half of the square sheet has been folded over the upper half. Hence, the bent line in the lower half will be inverted over the other half so that a 'V' shaped figure is formed.
Hence, the answer is (B).

Example 3 :

Transparent Sheet   Response Figures

Solution : The circular sheet of transparent paper has been folded along the dotted line such that left half overlaps the right half and consequently the smaller arrows will appear to penetrate inside the larger ones.
Hence, fig. (C) is the answer.

Example 4 :

Transparent Sheet   Response Figures
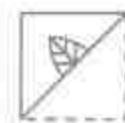
Solution : Here, the sheet has been folded diagonally and the designs on the either side of
          the dotted line combine to form fig. (D).
          Hence, fig. (D) is the answer.

EXERCISE 10

Directions : In each one of the following problems, a square transparent sheet with a pattern
is given. Figure out from amongst the four alternatives as to how the pattern would appear
when the transparent sheet is folded at the dotted line.

Transparent Sheet   Response Figures
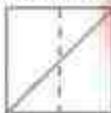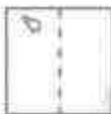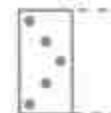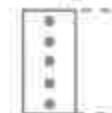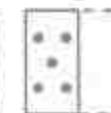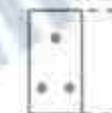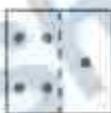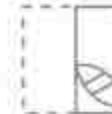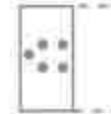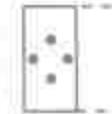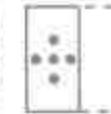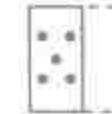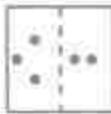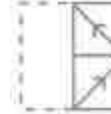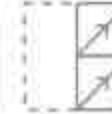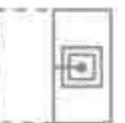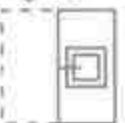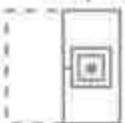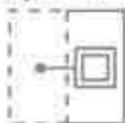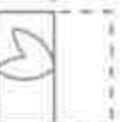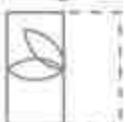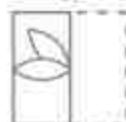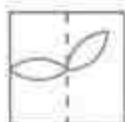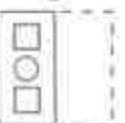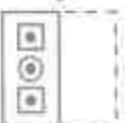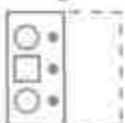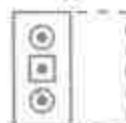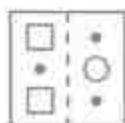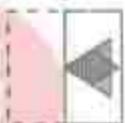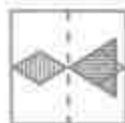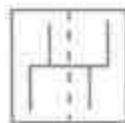
(C.B.I. 1989)

(C.B.I. 1990)

Transparent Sheet

Response Figures

7.

   A   B   C   D

8.

   A   B   C   D

9.

   A   B   C   D

10.

    A   B   C   D

11.

    A   B   C   D

12.

    A   B   C   D

(Delhi Police, 1989)

13.

    A   B   C   D

14.

    A   B   C   D

15.

    A   B   C   D
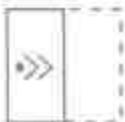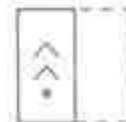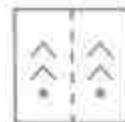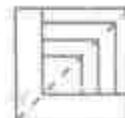
(C.B.I. 1990)
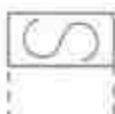
Transparent Sheet   Response Figures

16.

17.

18.

19.

20.

21.

22.

(C.B.I. 1990)

23.

24.
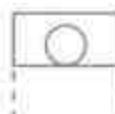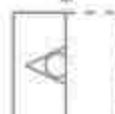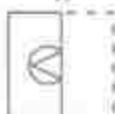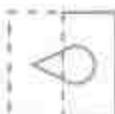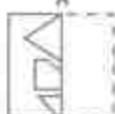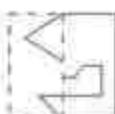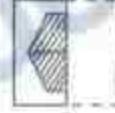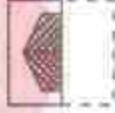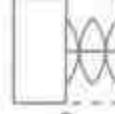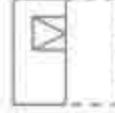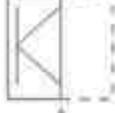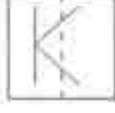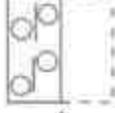
11. PAPER CUTTING

In this chapter we shall study the problems relating to the analysis of pattern that is formed when a folded piece of paper has been cut in a definite design.

Problems on Paper Cutting : In this type of questions, a set of three figures showing the manner in which a piece of paper has been folded, are being given. In each of the first two figures, a dotted line together with an arrow on it has been given. The dotted line is the reference line along which the paper has to be folded and the arrow indicates the direction of the fold. In the third figure, there are marks showing the position and the nature of the cut made in the folded sheet. The examinee has to select one of the figures from the set of four answer figures A, B, C and D which would most closely resemble the pattern when the paper is unfolded.

Remark : Evidently, the designs of the cut will appear on each one of the folds made in the paper.

Ex. 1. *Consider the following three figures, marked X, Y, Z showing one fold in X, another in Y and cut in Z. From amongst the answer figures A, B, C and D, select the one, showing the unfolded position of Z.*
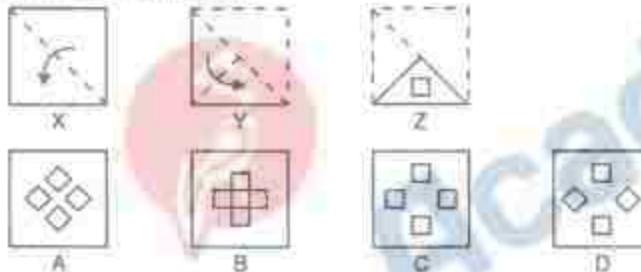

Sol. In fig. X, the upper triangular half of the paper has been folded over the lower half.

In fig. Y, the paper is refolded to a quarter triangle.

In fig. Z, a square has been punched in the folded paper.

Clearly, the square will appear in each of the triangular quarters of the paper.

Thus, when the paper is unfolded, four squares will appear symmetrically over it and it will resemble fig. (C).

Ex. 2. *Consider the figures X and Y showing a rectangular sheet of paper folded in fig. X and punched in fig. Y. From amongst the answer figures A, B, C and D, select the figure, which will most closely resemble the unfolded position of fig. Y.*
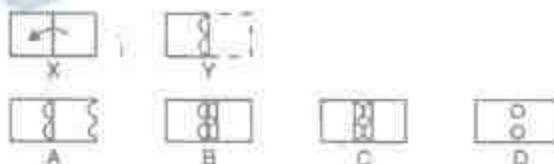
Sol. In fig. X, the right half of the rectangular paper sheet is folded over the left half. In fig. Y, two semicircles are punched into the folded paper. When the paper is unfolded, the semicircles in the two halves will join to form circles. Thus, two circles will appear in the unfolded position of fig. Y. Hence, fig. (D) is the correct answer.

Ex. 3. *In the following question, three figures X, Y, Z, showing a sequence of folding a paper are given. The third figure depicts the cuts made in the folded paper. Select the figure from the answer figures marked A, B, C and D which would most closely resemble the third paper when unfolded.*
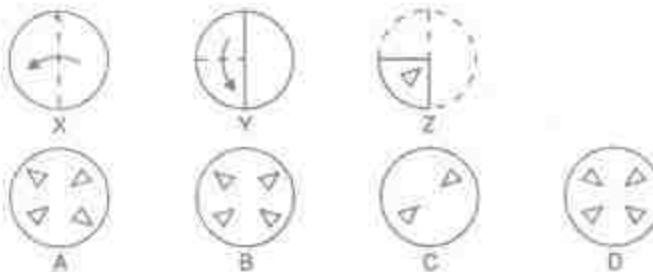
Sol. Here, the circular sheet of paper is once folded along a diameter such that one semicircle lies above another. Now, the sheet is refolded along the line of symmetry such that all the quarter circles lie one above another. Then a triangular cut is made on the folded sheet. When this sheet is unfolded once, it will appear as shown below :

This sheet when completely unfolded will contain triangles on each quarter and will appear as fig. (D).

Hence, the answer is fig. (D).

EXERCISE 11

Directions : *The questions that follow contain a set of three figures X, Y and Z showing a sequence of folding of a piece of paper. Fig. (Z) shows the manner in which the folded paper has been cut. These three figures are followed by four answer figures from which you have to choose a figure which would most closely resemble the unfolded form of fig. (Z).*

8.

X   Y   Z

A   B   C   D

9. (Assistant Grade, 1993)

X   Y   Z

A   B   C   D

10.

X   Y   Z

A   B   C   D

11. (S.S.C. 1993)

X   Y   Z

A   B   C   D

12.

X   Y   Z

A   B   C   D

13.

X   Y   Z

A   B   C   D

14.

X   Y   Z

A   B   C   D

15.

X   Y   Z

A   B   C   D

16.

X   Y   Z

A   B   C   D

17.

X   Y   Z

A   B   C   D

18.

X   Y   Z

A   B   C   D

19.

X   Y   Z   (Auditor's Exam, 1991)

A   B   C   D

20.

X   Y   Z

A   B   C   D

21.

P   X   Y   Z   (U.D.C. 1991)

A   B   C   D

22.

X   Y   Z

A   B   C   D

23.

X   Y   Z

(S.S.C. 1992)

A   B   C   D

24.

X   Y   Z

A   B   C   D

25.

X   Y   Z

A   B   C   D

26.

X   Y   Z

(U.D.C. 1991)

A   B   C   D

27.

X   Y   Z

(I. Tax & Central Excise, 1990)

A   B   C   D

28.

X   Y   Z

A   B   C   D

29.

X   Y   Z

A   B   C   D

30.

X   Y   Z   (C.B.I. 1989)

A   B   C   D

31.

X   Y   Z   (I. Tax & Central Excise, 1993)

A   B   C   D

32.

X   Y   Z

A   B   C   D

38.

X   Y   Z

A   B   C   D

39.

X   Y   Z

A   B   C   D

40.

X   Y   Z

A   B   C   D

41.

X   Y   Z

A   B   C   D

42.

X   Z

A   B   C   D

43.

X   Y   Z

(U.D.C. 1995)

A   B   C   D

44.

X   Y   Z

A   B   C   D

45.

P   X   Y   Z

(Asstt. Grade, 1996)

A   B   C   D

46.

47.   (U.D.C. 1995)

48.

49.

54.

X   Y   Z   (U.D.C. 1995)
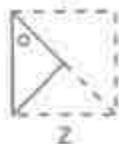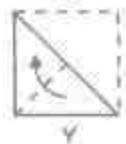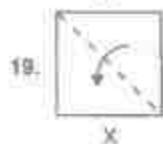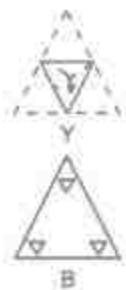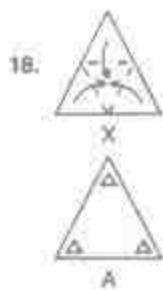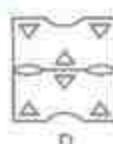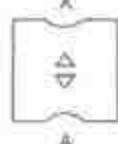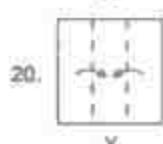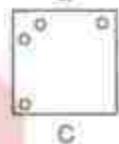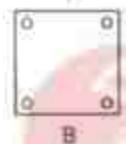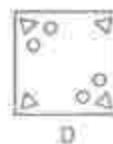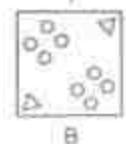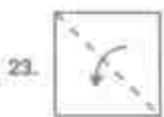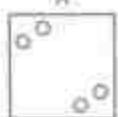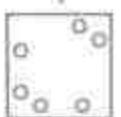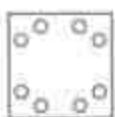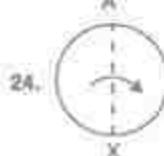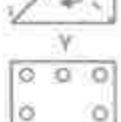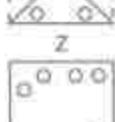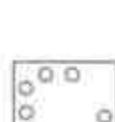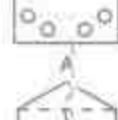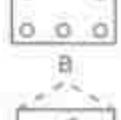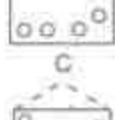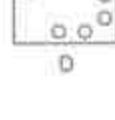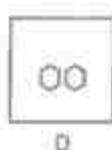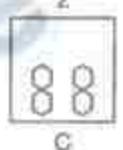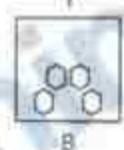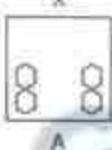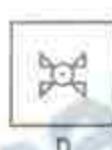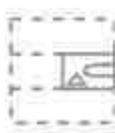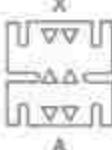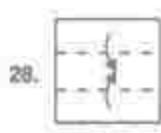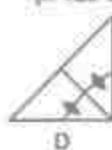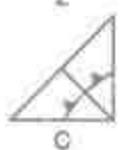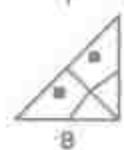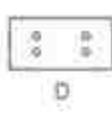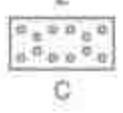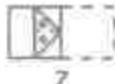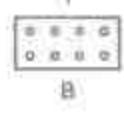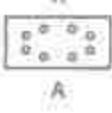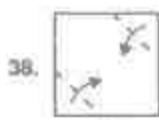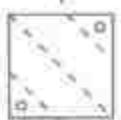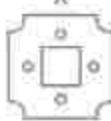
X   B   C   D

55.

X   Y   Z

A   B   C   D

Directions : *In questions 56 to 58, a piece of paper is folded, cut and then unfolded. One of the four alternative, figures, marked A, B, C and D, exactly resembles the unfolded paper. Select this figure.*

56.

A   B   C   D

57.

(U.D.C. 1995)

58.

A   B   C   D
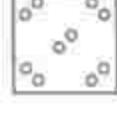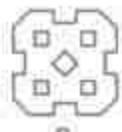
Directions : *Each of the questions from 59 to 64 shows a sheet of paper when folded and then cut. This figure is followed by four alternatives figures, one of which resembles the sheet when unfolded and has to be selected.*

59.

A   B   C   D

60.

A   B   C   D

61.

A   B   C   C

82.

A   B   C   D
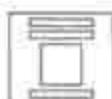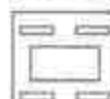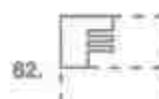
9. Rule : *The series becomes complex as it proceeds.*

(A)

(B)

(C)

(D)

11. Rule : *The series becomes simpler as it proceeds.*

(A)

(B)

(C)

(D)

(Central Excise, 1992)
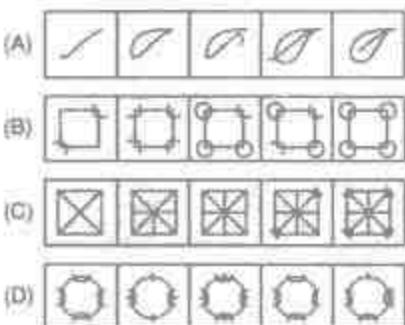
10. Rule : *Closed figures become more and more open and open figures more and more closed.*

(A)

(B)

(C)

(D)
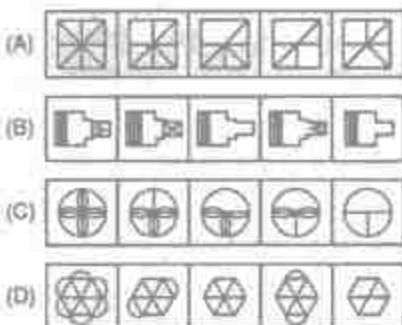
(I. Tax & Central Excise, 1993)

12. Which of the figures (A), (B), (C) & (D) will be the answer figure if the following rule is applied to figure (X)?

Rule : *The curves should become straight lines and the straight lines should become curves.*

(X)

(Asstt. Grade, 1995)
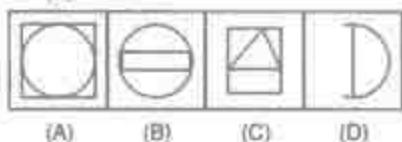
(A)   (B)   (C)   (D)

ANSWERS

1. (A)	2. (C)	3. (C)	4. (B)	5. (B)	6. (D)
7. (A)	8. (A)	9. (C)	10. (B)	11. (C)	12. (A)

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13. GROUPING OF IDENTICAL FIGURES

In this type of questions, you are given a set of usually 6, 7 or 9 figures, which are numbered. The candidate is required to analyse these figures and classify them into groups consisting of figures having more or less the same properties.

Example : *Group the following figures into three classes on the basis of identical properties.*

(a) 1, 5, 9; 2, 7, 8; 3, 4, 6
(b) 1, 5, 6; 4, 7, 8; 2, 3, 9
(c) 2, 4, 9; 6, 7, 8; 1, 3, 5
(d) 3, 7, 8; 4, 5, 9; 1, 2, 6

Solution : Clearly, 1, 3, 5 are composed of two dissimilar figures intersecting each other.
2, 4, 9 are composed of two similar figures intersecting each other.
6, 7, 8 contain one figure enclosed inside the other.
Thus, the given nine figures may be divided into three pairs : (1, 3, 5), (2, 4, 9), (6, 7, 8).
Hence, the answer is (c).

EXERCISE 13

Directions : *In each of the following questions, group the given figures into three classes using each figure only once.*

1.
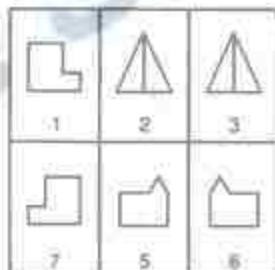
(a) 1, 4; 2, 3; 5, 6
(b) 1, 5; 2, 6; 4, 3
(c) 1, 6; 2, 3; 4, 5
(d) 1, 2, 3, 6; 4, 4

2.

(a) 1, 3, 9; 2, 5, 8; 4, 6, 7
(b) 4, 8, 9; 1, 2, 5; 3, 6, 7
(c) 2, 5, 9; 1, 3, 8; 2, 6, 7
(d) 1, 8, 9; 4, 6, 7; 2, 3, 5

3.
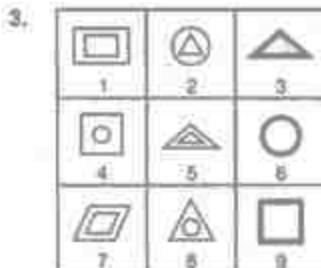
(a) 1, 5, 7; 2, 4, 6; 3, 9, 8
(b) 1, 5, 7; 2, 4, 8; 3, 6, 9
(c) 1, 5, 7; 4, 9, 8; 2, 3, 6
(d) 1, 5, 7; 3, 8, 9; 2, 4, 6

(Assistant Grade, 1994)

6.
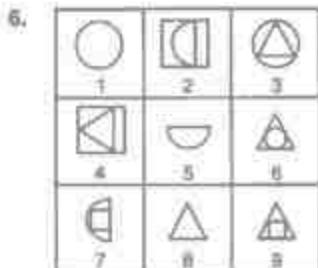
(a) 1, 5, 8; 3, 4, 7; 2, 6, 9
(b) 1, 3, 6; 4, 5, 9; 2, 7, 8
(c) 1, 3, 6; 2, 5, 7; 4, 8, 9
(d) 6, 7, 8; 1, 3, 7; 2, 4, 9

(I. Tax & Central Excise, 1995)

4.
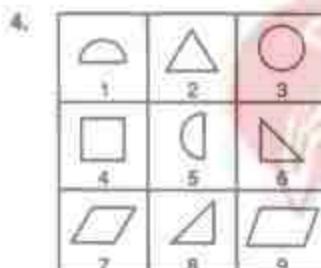
(a) 1, 3, 5; 2, 6, 9; 4, 7, 8
(b) 2, 3, 4; 5, 6, 8; 9, 1, 7
(c) 1, 3, 5; 2, 6, 8; 4, 7, 9
(d) 3, 2, 4; 6, 5, 8; 7, 9, 1

(Central Excise, 1994)

7.
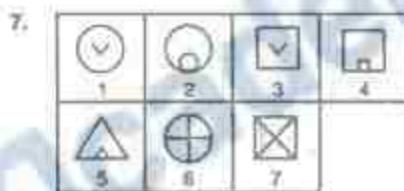
(a) 1, 2, 6; 3, 4, 7; 5
(b) 1, 3; 2, 6; 4, 5, 7
(c) 1, 2, 6, 7; 3; 4, 5
(d) 1, 3; 2, 4, 5; 6, 7

(Asstt. Grade, 1994)

5.

(a) 1, 3, 9; 2, 5, 6; 4, 7, 8
(b) 1, 3, 9; 2, 7, 8; 4, 5, 6
(c) 1, 2, 4; 3, 5, 7; 6, 8, 9
(d) 1, 3, 6; 2, 4, 8; 5, 7, 9

(U.D.C. 1995)

8.
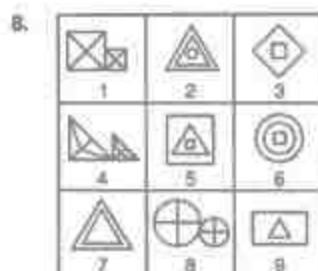
(a) 1, 3, 7; 2, 4, 6; 5, 8, 9
(b) 1, 4, 6; 2, 5, 7; 3, 8, 9
(c) 1, 4, 8; 2, 5, 6; 3, 7, 9
(d) 1, 4, 8; 2, 7, 9; 3, 5, 6

(U.D.C. 1995)

9.
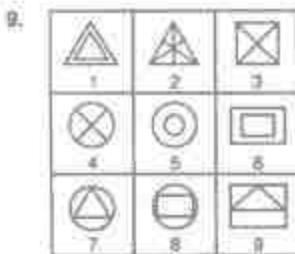
(a) 1, 2, 3; 4, 5, 8; 6, 7, 9
(b) 1, 5, 6; 2, 3, 4; 7, 8, 9
(c) 1, 3, 5; 2, 4, 8; 6, 7, 9
(d) 1, 4, 7; 2, 5, 8; 3, 6, 9

(Assistant Grade, 1993)

12.
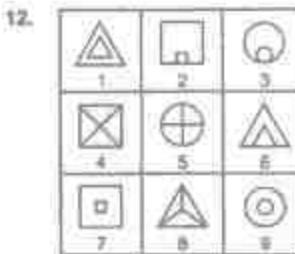
(a) 1, 7, 9; 2, 3, 6; 4, 5, 8
(b) 1, 2, 9; 3, 4, 6; 5, 7, 8
(c) 1, 6, 6; 2, 4, 7; 3, 5, 9
(d) 1, 7, 8; 2, 9, 3; 6, 4, 5

(I. Tax & Central Excise, 1994)

10.
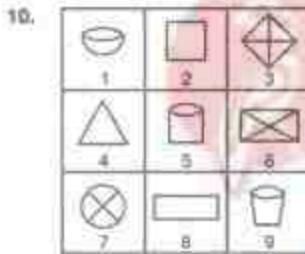

(a) 1, 5, 9; 3, 6, 7; 2, 4, 8
(b) 2, 3, 6; 4, 8, 9; 1, 5, 7
(c) 3, 6, 8; 2, 4, 9; 1, 5, 7
(d) 2, 5, 8; 1, 7, 9; 3, 4, 6

(I. Tax & Central Excise, 1993)

13.

(a) 1, 3, 8; 4, 5, 8; 2, 7, 9
(b) 2, 3, 9; 4, 5, 8; 1, 6, 7
(c) 1, 6, 8; 3, 7, 9; 2, 4, 5
(d) 3, 8, 9; 1, 2, 7; 4, 5, 6

(Asstt. Grade, 1994)

11.
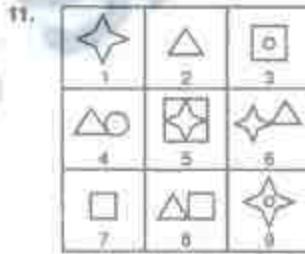
(a) 3, 4, 9; 5, 7, 8; 1, 2, 6
(b) 1, 5, 6; 2, 4, 8; 3, 7, 9
(c) 4, 6, 8; 3, 5, 7; 1, 2, 9
(d) 1, 2; 7; 3, 5, 9; 4, 6, 8

(Assistant Grade, 1994)

14.
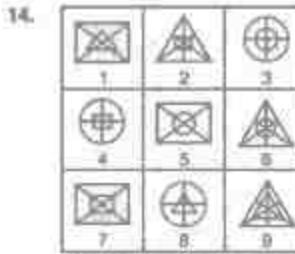
(a) 2, 4, 7; 1, 8, 9; 3, 5, 6
(b) 2, 6, 9; 1, 5, 7; 3, 4, 8
(c) 2, 5, 7; 1, 5, 8; 3, 4, 9
(d) 2, 8, 7; 1, 5, 9; 3, 4, 6

(U.D.C. 1995)

15.

(a) 1, 2, 3; 4, 5, 6; 7, 8, 9
(b) 1, 3, 5; 2, 4, 6; 7, 8, 9
(c) 1, 5, 9; 3, 6, 2; 4, 7, 8
(d) 1, 9, 7; 2, 8, 5; 3, 4, 6

(Central Excise, 1995)

16.

(a) 1, 2, 5; 3, 7, 8; 4, 6, 9
(b) 1, 7, 2; 3, 9, 6; 4, 5, 6
(c) 2, 3, 8; 4, 6, 9; 1, 5, 7
(d) 5, 6, 9; 3, 4, 1; 2, 7, 8

(Assistant Grade, 1994)