

JAWAHAR NAVODAYA VIDYALAYA

**PRACTICE
SETS (1-5)**

Jawhar Navodaya Vidyalaya

Entrance Exam (Class VI)

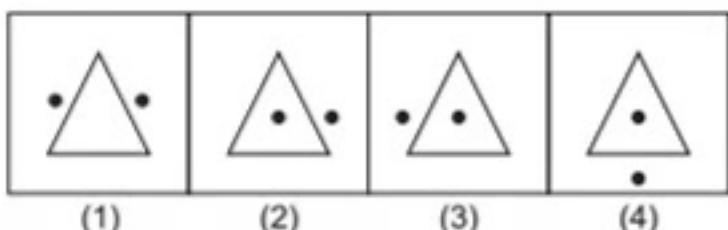
PRACTICE SET 1

Section I Mental Ability Test

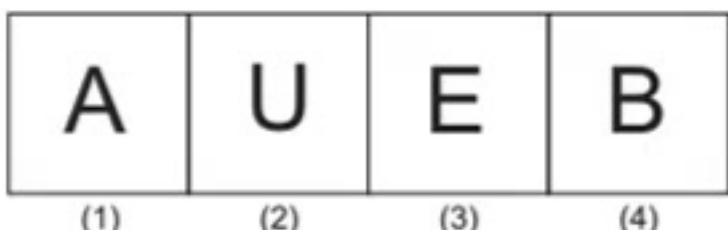
Part I

Directions (Q. Nos 1-4) In questions, four figures 1, 2, 3, and 4 have been given in each question of these four figures, three figures are similar in some way and one figure is different. Select the figure which is different.

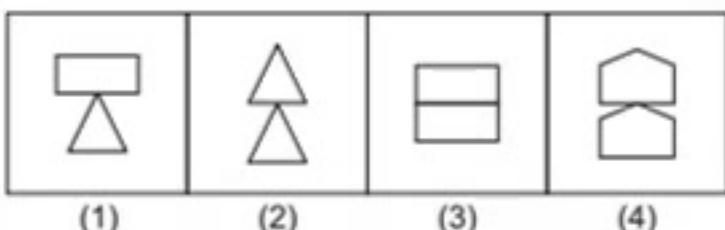
1.



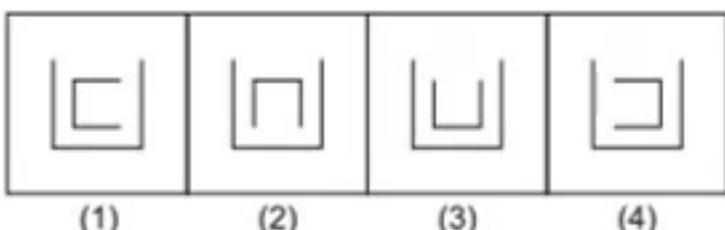
2.



3.



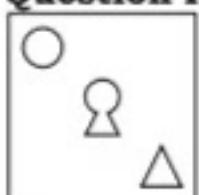
4.



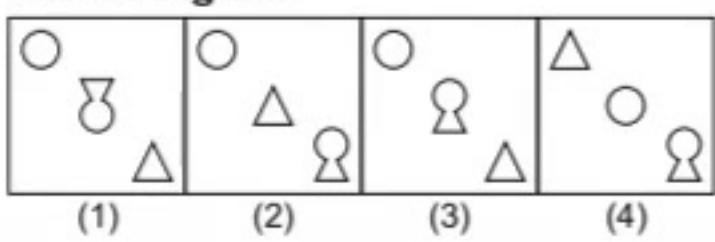
Part II

Directions (Q. Nos 5-8) In questions, a question figure is given and four answer figures marked 1, 2, 3 and 4 are also given. Select the answer figure which is exactly the same as the question figure.

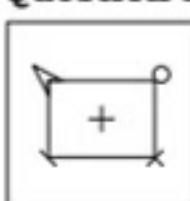
5. Question Figure



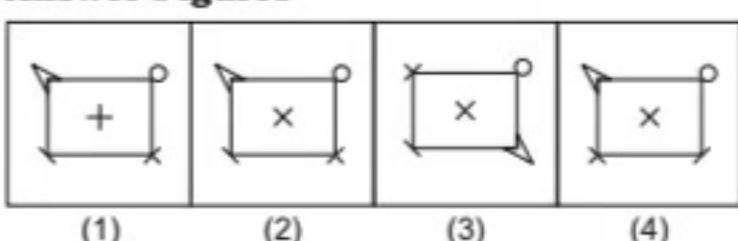
Answer Figures

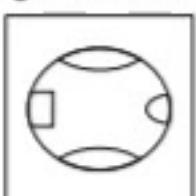
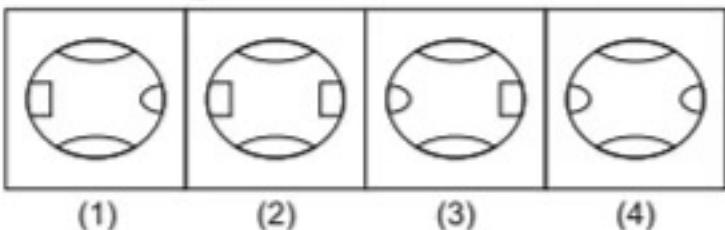


6. Question Figure



Answer Figures



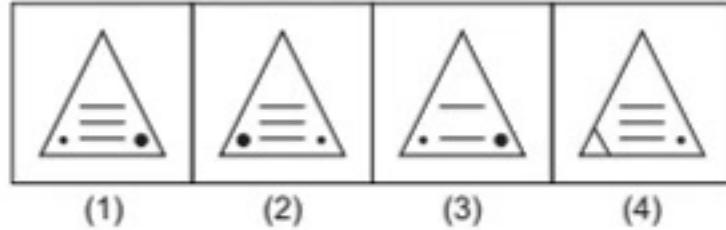
7. Question Figure**Answer Figures**

(1)

(2)

(3)

(4)

8. Question Figure**Answer Figures**

(1)

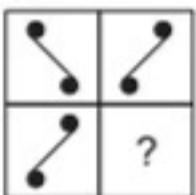
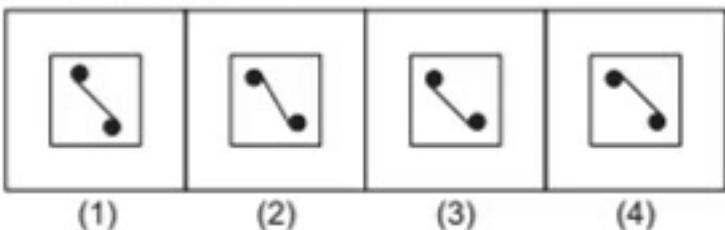
(2)

(3)

(4)

Part III

Directions (Q. Nos 9-12) In questions, there is a question figure, a part of which is missing. Observe the answer figures 1, 2, 3 and 4 and find out the answer figure which without changing the direction, fits in the missing part of the question figure in order to complete the pattern in the question figure.

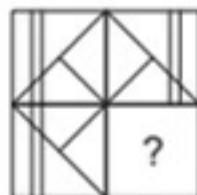
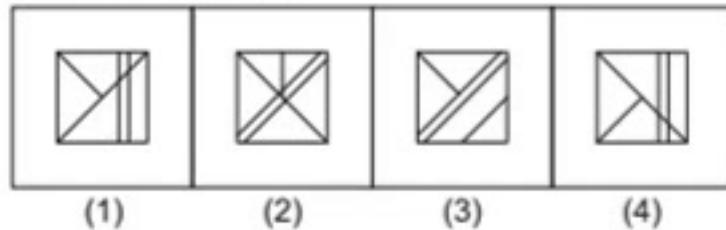
9. Question Figure**Answer Figures**

(1)

(2)

(3)

(4)

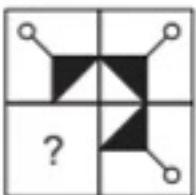
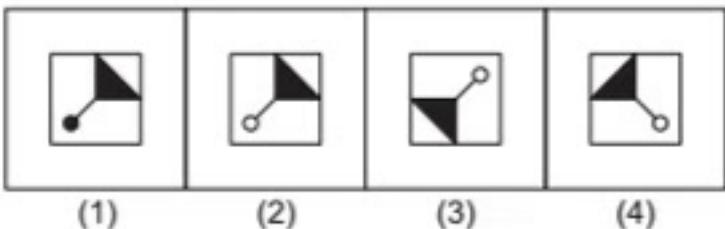
11. Question Figure**Answer Figures**

(1)

(2)

(3)

(4)

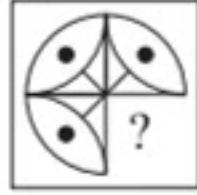
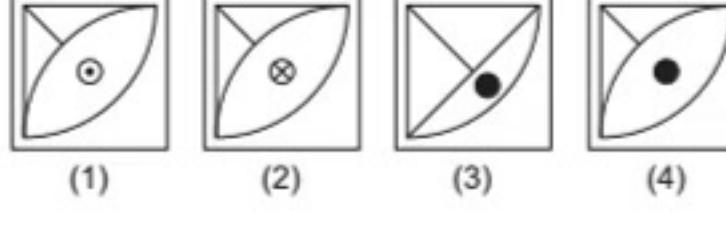
10. Question Figure**Answer Figures**

(1)

(2)

(3)

(4)

12. Question Figure**Answer Figures**

(1)

(2)

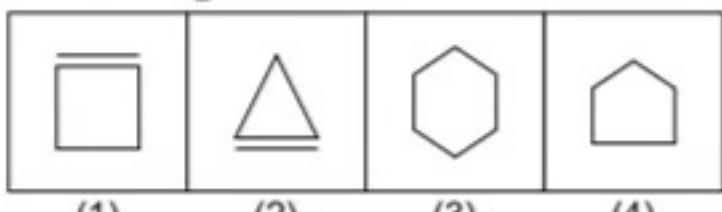
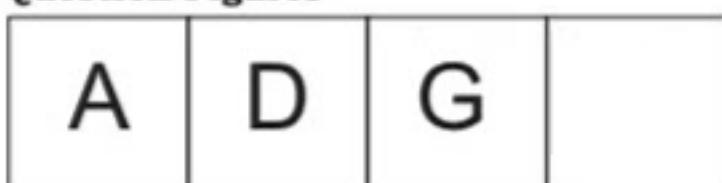
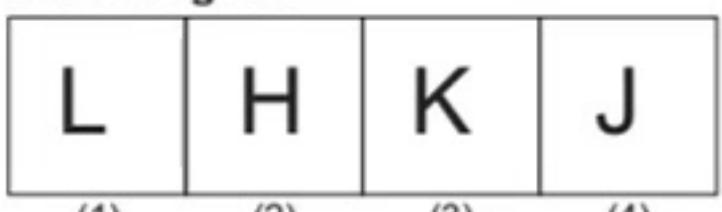
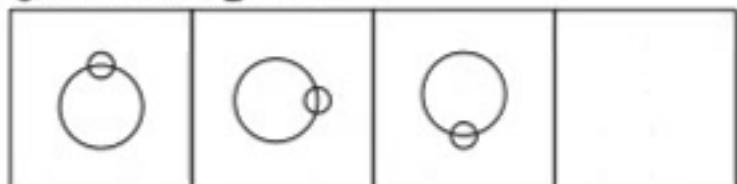
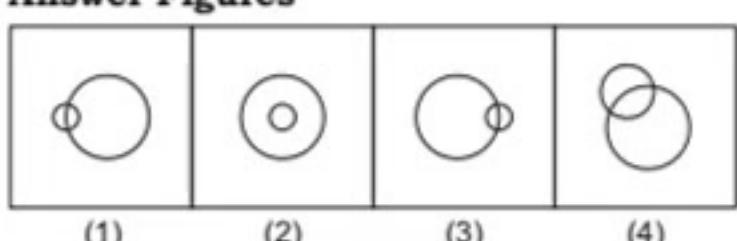
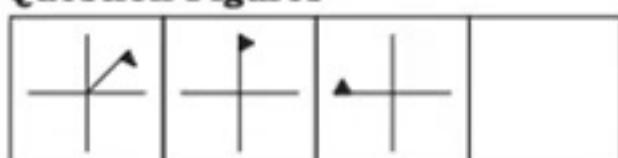
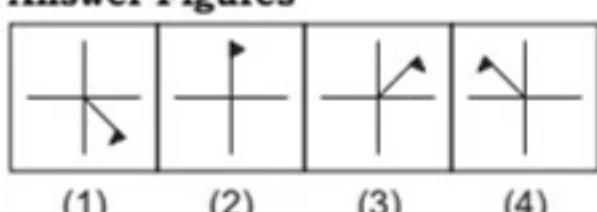
(3)

(4)

Part IV

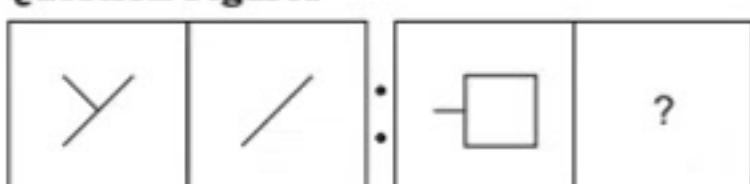
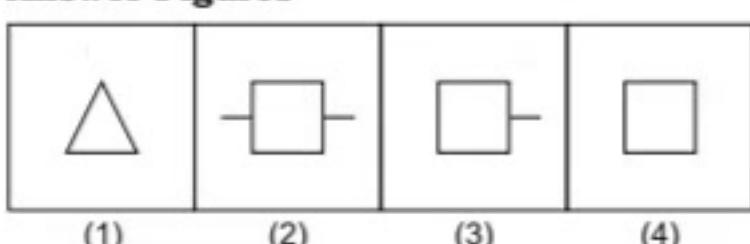
Directions (Q. Nos 13-16) In questions, there are three question figures and the space for the fourth figure is left blank. The question figures are in a series. Find out one figure among the answer figures, which occupies the blank space for the fourth figure and completes the series.

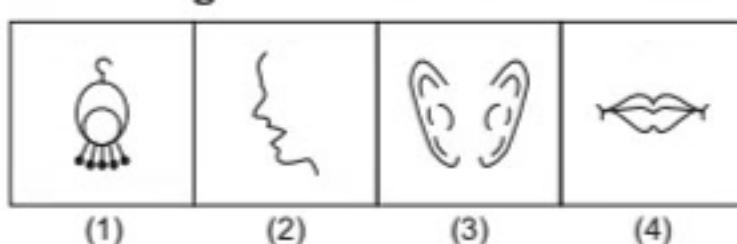
13. Question Figures

Answer Figures

14. Question Figures

Answer Figures

15. Question Figures

Answer Figures

16. Question Figures

Answer Figures


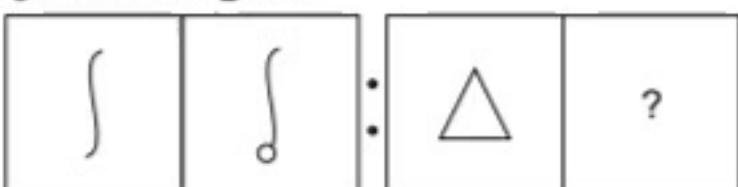
Part V

Directions (Q. Nos. 17-20) In questions, there are two sets of two question figures each. The second set has a mark of interrogation (?). There exists a relationship between the first two question figures. Similar relationship should exist between the third and fourth question figure. Select one of the answer figure which replaces the mark of interrogation.

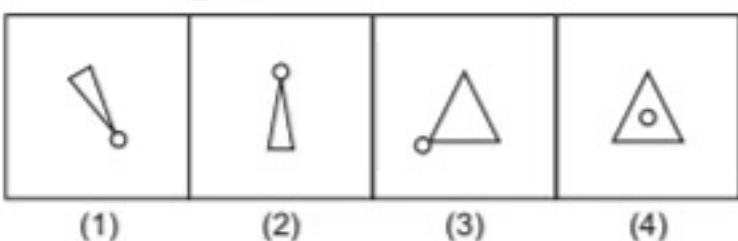
17. Question Figures

Answer Figures

18. Question Figures

Answer Figures


19. Question Figures

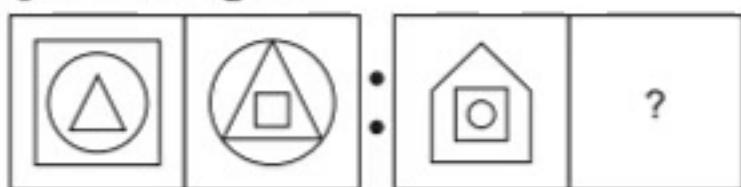


Answer Figures

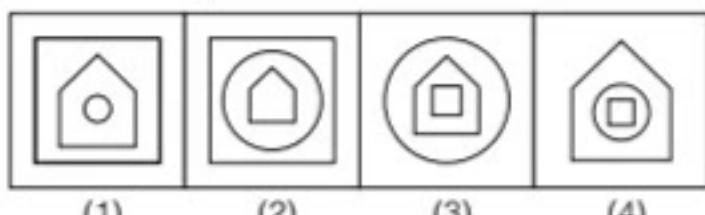


(1) (2) (3) (4)

20. Question Figures



Answer Figures

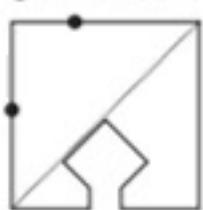


(1) (2) (3) (4)

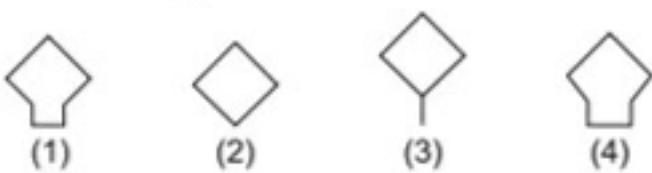
Part VI

Directions (Q. Nos. 21-24) In questions, one part of a geometrical figure is given as question figure and the other one is among the four answer figures 1, 2, 3 and 4 are also given. Find out the figure that completes the geometrical figure.

21. Question Figure

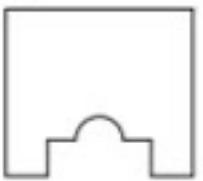


Answer Figures

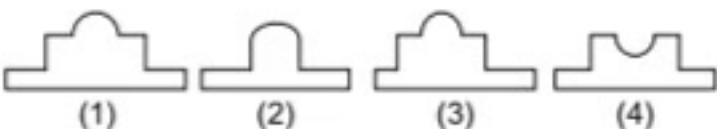


(1) (2) (3) (4)

22. Question Figure



Answer Figures

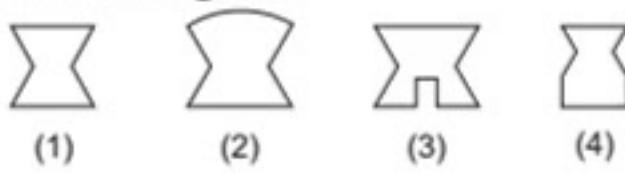


(1) (2) (3) (4)

23. Question Figure

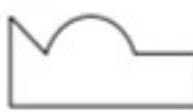


Answer Figures

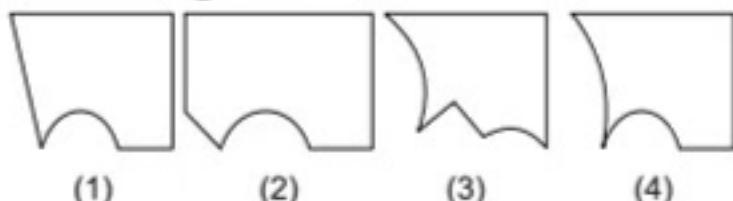


(1) (2) (3) (4)

24. Question Figure



Answer Figures

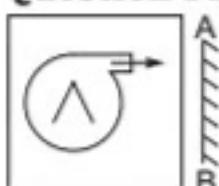


(1) (2) (3) (4)

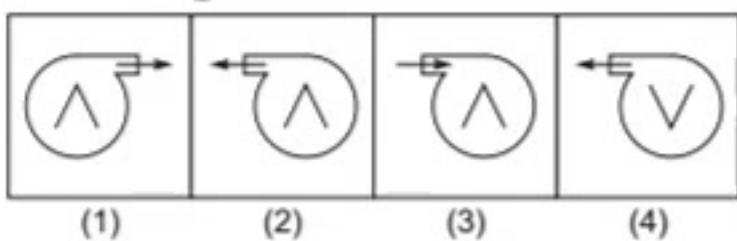
Part VII

Directions (Q. Nos. 25-28) In questions, there is a question figure and four answer figures marked 1, 2, 3 and 4 are also given. Select the answer figure which is exactly the mirror image of the question figure when the mirror is held at AB.

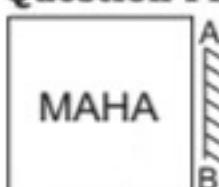
25. Question Figure



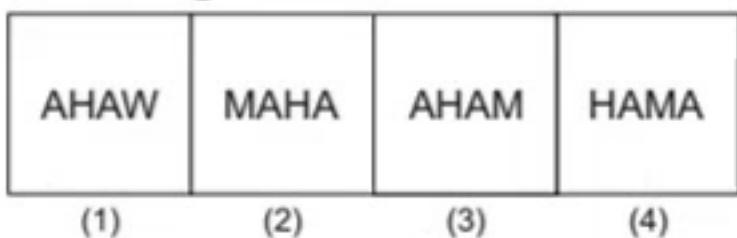
Answer Figures



26. Question Figure



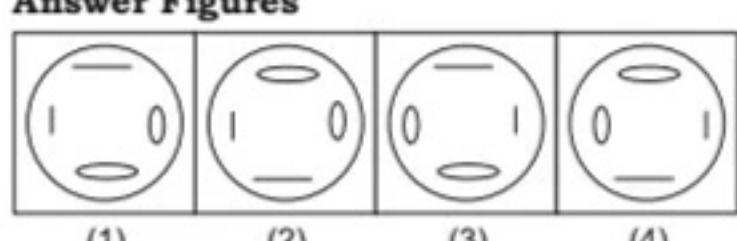
Answer Figures



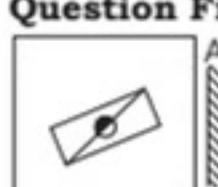
27. Question Figure



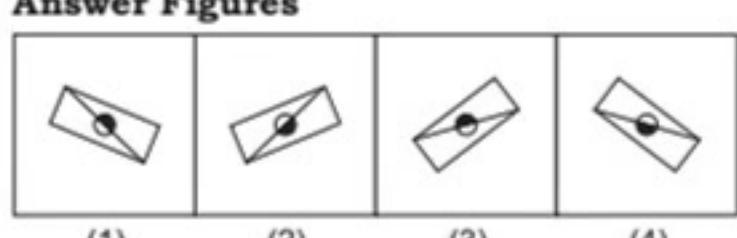
Answer Figures



28. Question Figure



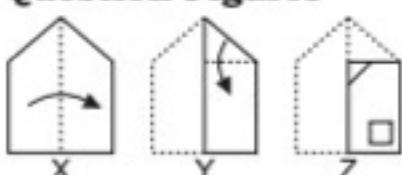
Answer Figures



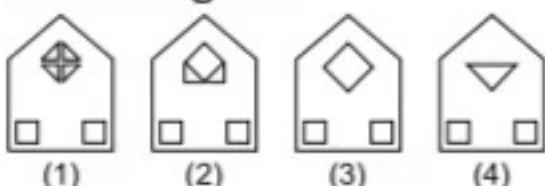
Part VIII

Directions (Q. Nos. 29-32) In questions, a piece of paper is folded and punched as shown in question figures and four answer figures marked 1, 2, 3 and 4 are also given. Select the answer figure which indicates how the paper will appear when opened (unfolded).

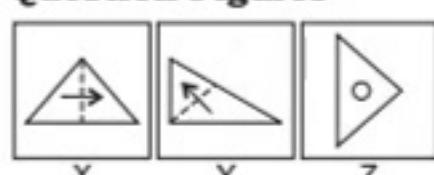
29. Question Figures



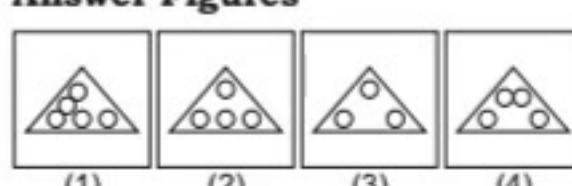
Answer Figures

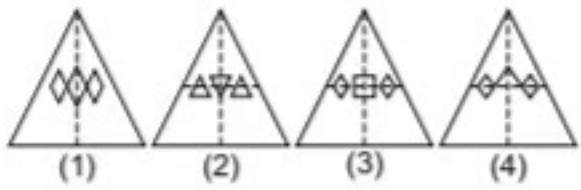
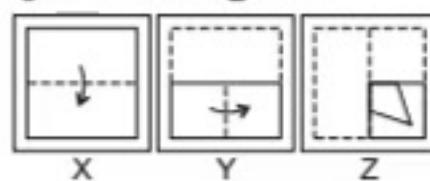


30. Question Figures

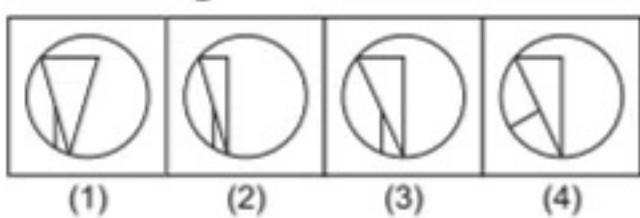
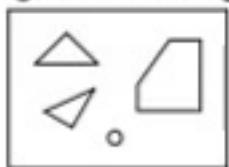
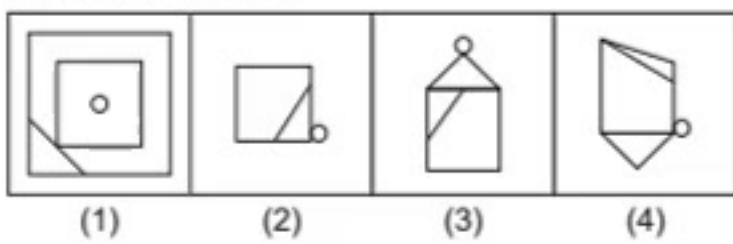
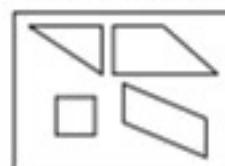
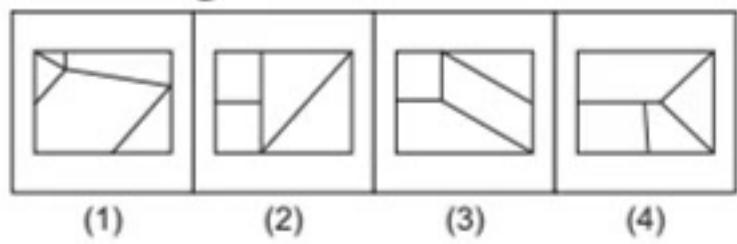
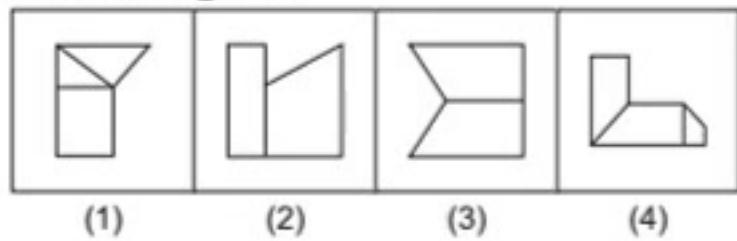


Answer Figures



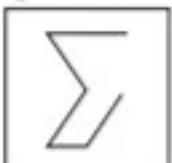
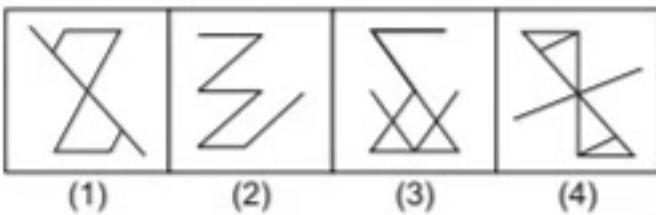
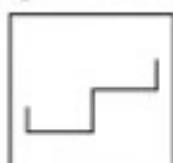
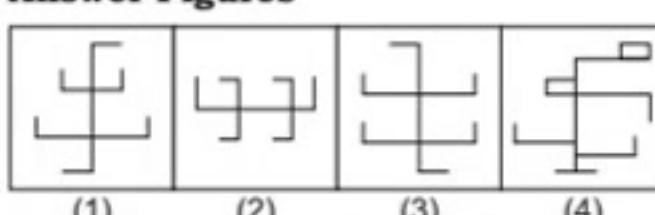
31. Question Figures**Answer Figures****32. Question Figures****Answer Figures****Part IX**

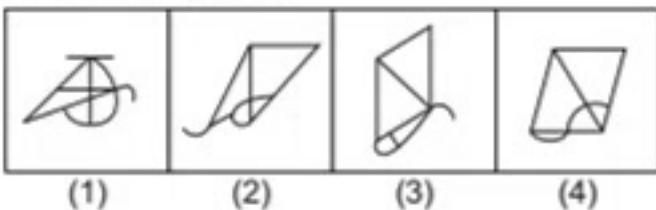
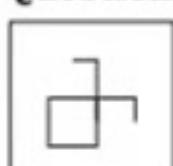
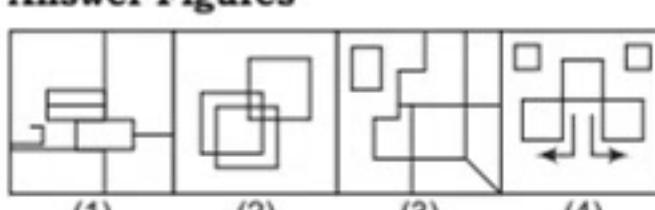
Directions (Q. Nos. 33-36) In questions, a question figure is given and four answer figures, marked 1, 2, 3 and 4 are also given. Select the answer figure which can be formed from the cut-off pieces given in the question figure.

33. Question Figure**Answer Figures****34. Question Figure****Answer Figures****35. Question Figure****Answer Figures****36. Question Figure****Answer Figures**

Part X

Directions (Q. Nos. 37-40) In questions, a question figure is given and four answer figures, marked 1, 2, 3 and 4 are also given. Select the answer figure in which the question figure is hidden/embedded.

37. Question Figure

Answer Figures

39. Question Figure

Answer Figures

38. Question Figure

Answer Figures

40. Question Figure

Answer Figures


SECTION II Arithmetic Test

Directions (Q. Nos. 41-60) For every question four probable answers bearing numbers (1), (2), (3) and (4) are given. Only one out of these is correct. You have to choose the correct.

41. The difference of place value and face value of 4 in number 46890 is
 (1) 4
 (2) 40000
 (3) 39996
 (4) 39969

42. Out of a total of 250 marks, a student got 30% marks and failed by 25 marks. The marks necessary for passing is
 (1) 50
 (2) 75
 (3) 100
 (4) 125

43. The correct arrangement of the fractional numbers $\frac{17}{25}$, $\frac{17}{13}$, $\frac{17}{19}$ and $\frac{17}{27}$ in ascending order is

- | | |
|--|--|
| $(1) \frac{17}{19}, \frac{17}{13}, \frac{17}{27}, \frac{17}{25}$ | $(2) \frac{17}{27}, \frac{17}{25}, \frac{17}{19}, \frac{17}{13}$ |
| $(3) \frac{17}{27}, \frac{17}{19}, \frac{17}{13}, \frac{17}{25}$ | $(4) \frac{17}{13}, \frac{17}{25}, \frac{17}{19}, \frac{17}{27}$ |

44. The simplification of $98 - [65 + \{32 - (12 + 5)\}]$ gives the result
 (1) 8
 (2) 18
 (3) 178
 (4) 212

- 45.** A person buys 60 oranges at the rate of ₹ 21 per dozen and sells them at the rate of ₹ 24 per dozen. He makes a
 (1) profit of ₹ 3
 (2) profit of ₹ 15
 (3) loss of ₹ 5
 (4) profit of ₹ 180
- 46.** The difference between the smallest number of six-digits and the largest number of four-digits is
 (1) 90001 (2) 91000
 (3) 90100 (4) 90010
- 47.** Which one of the following is the correct statement for the numbers 56 and 84?
 (1) Both the numbers are prime
 (2) Both the numbers are co-prime
 (3) Both the numbers are multiple of 14
 (4) Both the numbers are odd
- 48.** The perimeter of a square courtyard is 200 m, its area will be
 (1) 800 m (2) 2500 m
 (3) 800 sq m (4) 2500 sq m
- 49.** The HCF of two numbers is 38 and their LCM is 98154. If one of the number is 1558. The other number is
 (1) 1197 (2) 2394
 (3) 4932 (4) 2384
- 50.** A student went to sleep at 9 : 30 pm and got up at 4 : 15 am. For how much time did the student sleep?
 (1) 5 h 45 min
 (2) 6 h 15 min
 (3) 6 h 45 min
 (4) 7 h 45 min
- 51.** A train leaves New Delhi railway station at 10 : 50 am. It travels at a speed of 80 km/h. The train covers a distance of 120 km by
 (1) 11 : 50 am
 (2) 12 : 10 pm
 (3) 12 : 20 pm
 (4) 12 : 50 pm
- 52.** A motorist drives at a speed of 80 km/h. He drives for 4 h and 6 min to reach his house. The distance covered by him to reach his house is
 (1) 325 km (2) 328 km
 (3) 331 km (4) 334 km
- 53.** HCF of 128, 288 and 160 is
 (1) 16 (2) 24
 (3) 32 (4) 48
- 54.** If 1 cm = 10 mm, how much is 10 cu cm?
 (1) 100 cu mm (2) 1000 cu mm
 (3) 10000 cu mm (4) 100000 cu mm
- 55.** The decimal form of $\frac{185 \times 25 \times 16}{37 \times 500}$ is
 (1) 0.04 (2) 0.40
 (3) 4.0 (4) 40.00
- 56.** The area of square, whose perimeter is 48 m is
 (1) 48 m^2 (2) 144 m^2
 (3) 1152 m^2 (4) 2304 m^2
- 57.** The volumes of a cube and a cuboid are equal. If the dimensions of the cuboid are 18 cm, 12 cm and 8 cm the edge of the cube is
 (1) 8 cm (2) 10 cm
 (3) 12 cm (4) 16 cm
- 58.** What will be the rate of simple interest, at which ₹ 17500 will become ₹19250 in 2 yr?
 (1) $12\frac{1}{2}\%$ (2) 10%
 (3) $7\frac{1}{2}\%$ (4) 5%
- 59.** When 10101 is multiplied by 17, the product is
 (1) 17017017 (2) 1717017
 (3) 171717 (4) 170017
- 60.** A cellphone was bought for ₹ 1500 and then it was sold for ₹ 1650. What is the per cent profit?
 (1) 10 (2) 15
 (3) 20 (4) 16

SECTION III Language Test (English)

Directions (Q.Nos. 61-80) There are Four passages. Each passage is followed by five questions. For each question four probable answers (1), (2), (3) and (4) are given. Only one out of these is correct. Choose the correct answer.

Passage 1

Once upon a time there were six blind men. These blind men had never seen an elephant but they wanted to know what the elephant looked like. So they went near an elephant to find out.

The first blind man fell against the broad side of the elephant. He immediately said, "The elephant must be like a wall." The second blind man got hold of the elephant's tusk. He cried out, "I'm sure the elephant is like a spear." The third blind man happened to take the elephant's trunk in his hand.

He said confidently, "The elephant is surely like a snake". The fourth one stretched out his hand and felt the elephant's leg. "It's clear", he said, "The elephant is like a tree trunk". The fifth by chance touched the elephant ear. "I am confident elephant is like a fan". The sixth and the last of the blind man felt tail. "I tell you, he cried, "The elephant is like a rope."

And so these blind men argued and argued. Each one said he was right. But actually all were wrong.

- | | |
|--|---|
| 61. Six blind men went near an elephant to find out | (1) leg (2) ear (3) tusk (4) trunk |
| (1) what the elephant looked like
(2) what was the size of the trunk of the elephant
(3) what was the colour of the elephant
(4) what the elephant's tail looked like | 64. All the six blind men were wrong to say how the elephant looked like because |
| 62. To the first blind man the elephant looked like | (1) each one of them had touched only one part of the elephant
(2) each one of them said without confidence
(3) they argued on their views again and again
(4) they had decided to oppose each other |
| (1) a pear (2) a tree trunk
(3) a wall (4) a fan | 65. The fifth, by chance touched the elephant's ears. Here 'by chance' mean |
| 63. The third blind man said, "The elephant is like a snake." He said so because he had touched the elephant's | (1) purposely (2) accidentally
(3) on being asked (4) matter of choice |

Passage 2

It is strange that ducks mostly swim in water, though their feathers keep dry. They swim in water for long hours and sometimes plunge into water but the feathers still keep dry. What is the secret of it? There is a small oil limb produced in the root of a duck's tail. The duck expels oil by pressing this limb which spreads over their feathers. Generally, all the birds have this oil producing limb but it is well developed in an aquatic animal, there is no sweat producing limb in birds.

- | | |
|---|---|
| 66. The above passage, describes about a duck's | 69. "What is the secret of it?" Which action of a duck is represented by these words? |
| (1) sweat limb (2) oily feathers
(3) oil limbs (4) secret of remaining dry | (1) Swimming
(2) Plunging
(3) Remaining dry
(4) Remaining in water for a long time |
| 67. The peculiarity of ducks is that they | 70. The oil limb is |
| (1) can swim for long
(2) can swim very fast
(3) can plunge quickly
(4) can remain dry in spite of swimming in water | (1) not developed in all birds
(2) not found in all ducks
(3) not found in all birds
(4) well developed in only some ducks |
| 68. The word 'expels' mean | |
| (1) throw out (2) force (3) admit (4) absorb | |

Passage 3

A king had an orchard of fig trees. He loved the fruit so much that he determined to have the trees guarded. He appointed a blind man and a lame man as guards. The next day the king found that much of the fine fruit had gone and he asked the watchmen who had stolen it. "We do not know" they replied.

Though both the guards said they had not taken the fruits, the king soon discovered that the blind man had carried the lame man on his shoulder. While the blind man had used his legs, the lame man had used his eyes and hands, and in this way the figs had been stolen. Both the men were severely punished.

71. The king wanted to have the trees guarded because

- (1) someone had been stealing the figs
- (2) he felt sorry and wanted to find a job for the lame man and the blind man
- (3) the fruit was valuable
- (4) he was afraid some one would steal the fruit

72. Which one of the following is a synonym of the word 'lame' as used in the passage?

- (1) weak
- (2) convincing
- (3) persuasive
- (4) strong

73. The blind man and the lame man lied because

- (1) they had not been good watchmen
- (2) they thought the king would not discover the theft
- (3) they thought the king would never discover how they had stolen the fruit
- (4) they feared the king

74. The figs were stolen

- (1) for their value (2) by thieves
- (3) by the king's men
- (4) by those who had to guard them

75. The king discovered that

- (1) the blind man had used his legs
- (2) the lame man had used his eyes
- (3) the two guards had stolen the fruit
- (4) the guards told the truth

Passage 4

The Sahara is the biggest desert in the world. It stretches across the whole of North Africa. The Arabian desert is also a very large desert. In India too, there is a desert called Thar desert in Rajasthan. Life in a desert is tough. The days are very hot and nights are cold.

76. The biggest desert in the world is in

- (1) India (2) Africa (3) Arabia (4) America

77. In desert regions

- (1) there is no rainfall (2) it rains heavily
- (3) there is enough rain (4) there is a little rain

78. The climate in a desert is

- (1) pleasant (2) difficult
- (3) comfortable (4) cold

79. Date palms grow in

- (1) plains (2) hilly regions
- (3) deserts (4) snowy regions

80. Very few trees grow in deserts because

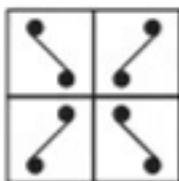
- (1) most trees need water to grow
- (2) there is sand all-around
- (3) nights are very cold
- (4) there is no one to take care of trees

Answers

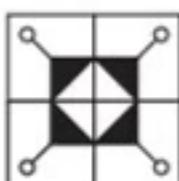
1 (1)	2 (4)	3 (1)	4 (3)	5 (3)	6 (1)	7 (1)	8 (2)	9 (1)	10 (2)
11 (1)	12 (4)	13 (4)	14 (4)	15 (1)	16 (1)	17 (4)	18 (1)	19 (3)	20 (2)
21 (1)	22 (1)	23 (2)	24 (2)	25 (2)	26 (3)	27 (3)	28 (1)	29 (3)	30 (4)
31 (1)	32 (2)	33 (2)	34 (3)	35 (3)	36 (1)	37 (3)	38 (4)	39 (3)	40 (2)
41 (3)	42 (3)	43 (2)	44 (2)	45 (2)	46 (1)	47 (3)	48 (4)	49 (2)	50 (3)
51 (3)	52 (2)	53 (3)	54 (3)	55 (3)	56 (2)	57 (3)	58 (4)	59 (3)	60 (1)
61 (1)	62 (3)	63 (4)	64 (1)	65 (2)	66 (4)	67 (4)	68 (1)	69 (3)	70 (1)
71 (4)	72 (1)	73 (3)	74 (4)	75 (3)	76 (1)	77 (4)	78 (4)	79 (1)	80 (1)

Hints and Solutions

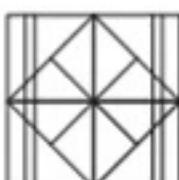
1. Except figure (1), there is certainly one point inside the triangle.
2. Except figure (4), each figures contains vowels from English language.
3. Except figure (1), each figures have same upper and lower design.
4. Except figure (3), design inside the each figure faces towards the side of outer design.
5. Answer figure (3) is same as the question figure.
6. Answer figure (1) is same as the given question figure.
7. Answer figure (1) is same as the given question figure.
8. Answer figure (2) is same as the given question figure.
9. Answer figure (1) will complete the given pattern.



10. Answer figure (2) will complete the given pattern.



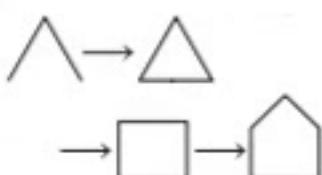
11. Answer figure (1) will complete the given pattern.



12. Answer figure (4) will complete the given pattern.



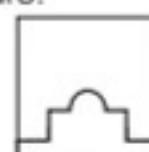
13. In every successive figure, one line is increasing. Hence, option (4) is the correct answer.



14. Each successive letter occurs after adding 3 position from the previous one. Hence, J comes after G.
$$A \xrightarrow{+3} D \xrightarrow{+3} G \xrightarrow{+3} \boxed{J}$$
15. Every successive figure is rotating clockwise with the angle of 90° . Hence, option (1) is the correct answer.
16. Every successive figure is rotating anticlockwise with the successive angle of 45° . Hence, option (1) is the correct answer.
17. As, from question figure (1) to (2) side line removes likewise. In question figure (3) side line removes to produce the answer figure (4).
18. As, spectacles worn on the eyes, in the same way ear rings worn in the ear. Hence, option (1) is the correct answer.
19. As, from question figure (1) to (2), a small circle placed under the designing figure. Same ways question figure (3) changes to (4) to produce answer figure (3).
20. As, from question figure (1) to (2), a outside figure is placed inside. Similarly, question figure (3) changes to (4) to produce answer figure (2).
21. Answer figure (1) will complete the given geometrical figure.



22. Answer figure (1) will complete the given geometrical figure.



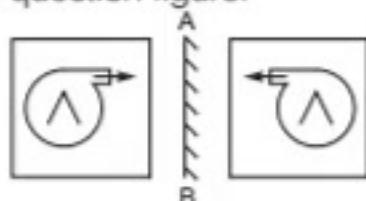
23. Answer figure (2) will complete the given geometrical figure.



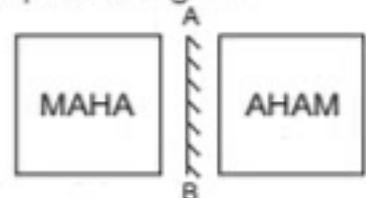
24. Answer figure (2) will complete the given geometrical figure.



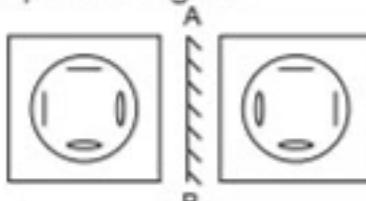
25. Answer figure (2) is the correct mirror image of the given question figure.



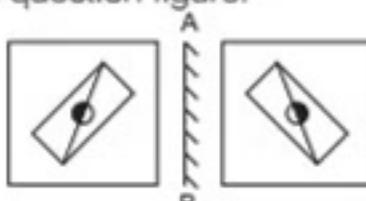
26. Answer figure (3) is the correct mirror image of the given question figure.



27. Answer figure (3) is the correct mirror image of the given question figure.



28. Answer figure (1) is the correct mirror image of the given question figure.



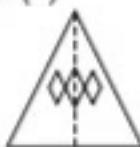
29. When the paper is unfolded, it is shown as in the answer figure (3).



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



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



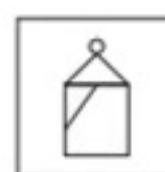
32. When the paper is unfolded, it is shown as in the answer figure (2).



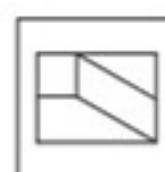
33. Answer figure (2) can be formed by using the cut pieces.



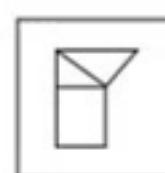
34. Answer figure (3) can be formed by using the cut pieces.



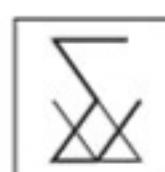
35. Answer figure (3) can be formed by using the cut pieces.



36. Answer figure (1) can be formed by using the cut pieces.



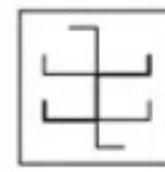
37. The question figure is embedded in the answer figure (3).



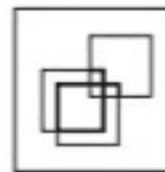
38. The question figure is embedded in the answer figure (4).



39. The question figure is embedded in the answer figure (3).



40. The question figure is embedded in the answer figure (2).



- 41.** ∵ The place value of 4 in number 46890
 $= 40000$
 Face value of 4 = 4
 \therefore Difference = $40000 - 4 = 39996$
- 42.** ∵ Total marks = 250 Student got = 30%
i.e. $250 \times \frac{30}{100} = 75$ marks
 Failed by = 25 marks
 \therefore Pass marks = $75 + 25 = 100$ marks
- 43.** $\frac{17}{27}, \frac{17}{25}, \frac{17}{19}, \frac{17}{13}$ are in ascending order
 (In like fractions with equal numerators, the fraction with greatest denominators is the smallest.)
- 44.** $98 - [65 + \{32 - (12 + 5)\}]$
 $= 98 - [65 + \{32 - 17\}] = 98 - [65 + 15]$
 $= 98 - 80 = 18$
- 45.** CP of 1 dozen oranges = ₹ 21
 CP of 60 oranges or 5 dozen oranges = 21×5
 $= ₹ 105$ (1 dozen = 12)
 SP of 1 dozen oranges = ₹ 24
 SP of 5 dozen oranges = $24 \times 5 = ₹ 120$
 \therefore Profit = SP - CP = $120 - 105 = ₹ 15$
- 46.** Smallest number of 6 digits = 100000
 Largest number of 4-digits = 9999
 Then, the required difference
 $= 100000 - 9999 = 90001$
- 47.** $56 = 14 \times 4$ and $84 = 14 \times 6$
 It is clear from the above factors both numbers are multiple of 14.
- 48.** The side of square = $\frac{\text{Perimeter}}{4}$
 \therefore The side of the given square = $\frac{200}{4} = 50$ m
 \therefore Area = Side × Side = $50 \times 50 = 2500$ sq m
- 49.** Other number
 $= \frac{\text{HCF} \times \text{LCM}}{\text{First number}} = \frac{38 \times 98154}{1558} = 2394$
- 50.** The student went to sleep at = 9 : 30 pm
 The student got up at = 4 : 15 am
 Time from 9 : 30 to 12 : 00 (midnight)
 $= 2 \text{ h } 30 \text{ min}$
 Time from 12 : 00 to 4 : 15 = 4 h 15 min
 Total time = 6 h 45 min
 \therefore The student slept for = 6 h 45 min
- 51.** ∵ Time = $\frac{\text{Distance}}{\text{Speed}} = \frac{120}{80} = \frac{3}{2} \text{ h} = 1 \text{ h } 30 \text{ min}$

- The train will cover the distance by
 $= 10 : 50 \text{ am} + 1 \text{ h } 30 \text{ min} = 12 : 20 \text{ pm}$
- 52.** ∵ Speed = 80 km/h
 Time = 4 h 6 min
 $= 4 \text{ h } \frac{6}{60} \text{ h} = 4 \frac{1}{10} \text{ h} = \frac{41}{10} \text{ h}$
 \therefore Distance = Speed × Time
 \therefore Distance = $80 \times \frac{41}{10} = 328$ km
- 53.** $128 = 2 \times 2 \times 2 \times 2 \times 2 \times 2$
 $288 = 2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 3$
 $160 = 2 \times 2 \times 2 \times 2 \times 2 \times 5$
 So, the required HCF = Common factor
 $= 2 \times 2 \times 2 \times 2 = 32$
- 54.** 1 cm = 10 mm
 $1 \text{ cu cm} = 10 \times 10 \times 10 \text{ cu mm}$
 $10 \text{ cu cm} = 10 \times 10 \times 10 \times 10$
 $= 10000 \text{ cu mm}$
- 55.** $\frac{185 \times 25 \times 16}{37 \times 500} = 4.0$
- 56.** ∵ Side of the square
 $= \frac{\text{Perimeter}}{4} = \frac{48}{4} = 12 \text{ m}$
 \therefore Area of the square
 $= \text{Side} \times \text{Side}$
 $= 12 \times 12 = 144 \text{ m}^2$
- 57.** Volume of cuboid = $l \times b \times h$
 $= 18 \times 12 \times 8 \text{ cu cm}$
 Volume of cube = Volume of cuboid
 $= 18 \times 12 \times 8$
 \therefore Edge of cube
 $= \sqrt[3]{18 \times 12 \times 8} = 12 \text{ cm}$
- 58.** ∵ Simple interest = $\frac{\text{Principle} \times \text{Rate} \times \text{Time}}{100}$
 Amount - Principle = $\frac{17500 \times \text{Rate} \times 2}{100}$
 $19250 - 17500 = 350 \times \text{Rate}$
 $\therefore \text{Rate} = \frac{1750}{350} = 5\%$
- 59.** $10101 \times 17 = 171717$
- 60.** The profit on cell phone
 $= \text{SP} - \text{CP}$
 $= 1650 - 1500 = ₹ 150$
 Then, required per cent profit = $\frac{\text{Profit} \times 100}{\text{CP}}$
 $= \frac{150 \times 100}{1500} = 10\%$

Jawhar Navodaya Vidyalaya

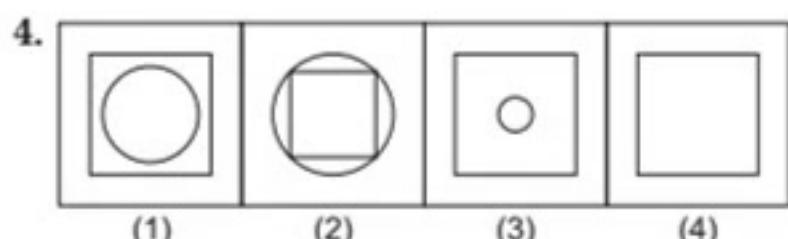
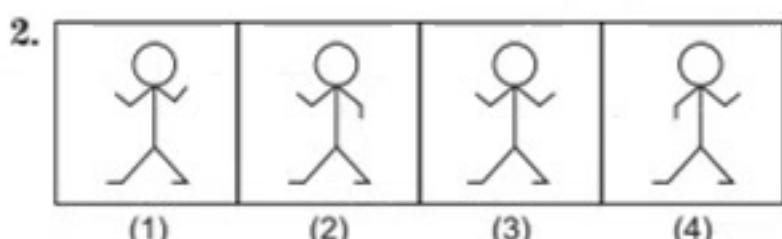
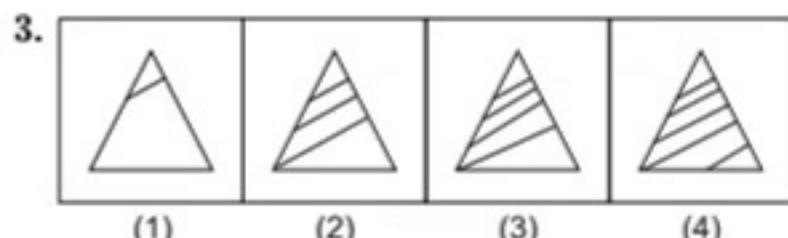
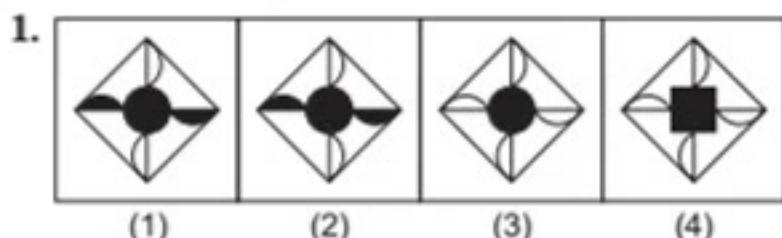
Entrance Exam (Class VI)

PRACTICE SET 2

Section I Mental Ability Test

Part I

Directions (Q.Nos. 1-4) In questions, four figures 1, 2, 3 and 4 have been given in each question of these four figures, three figures are similar in some way and one figure is different. Select the figure which is different.



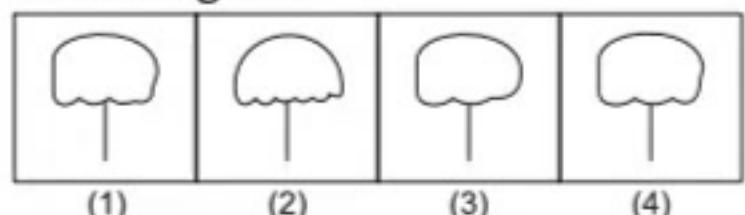
Part II

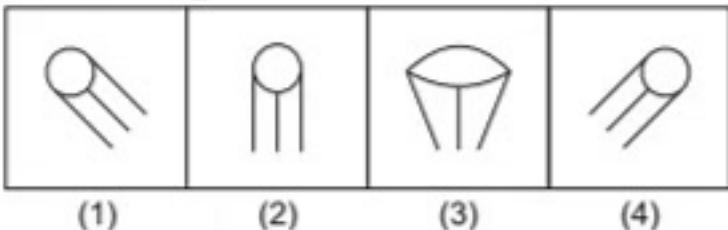
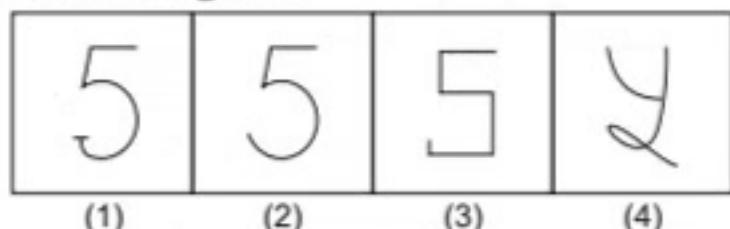
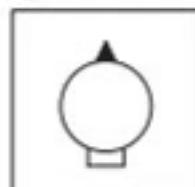
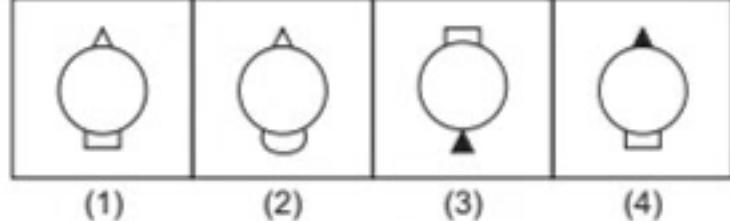
Directions (Q.Nos. 5-8) In questions, a question figure is given and four answer figures marked 1, 2, 3 and 4 are also given. Select the answer figure which is exactly the same as the question figure.

5. Question Figure

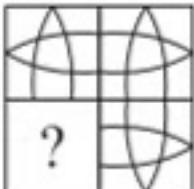
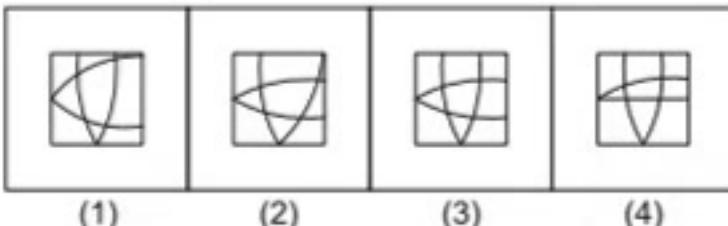
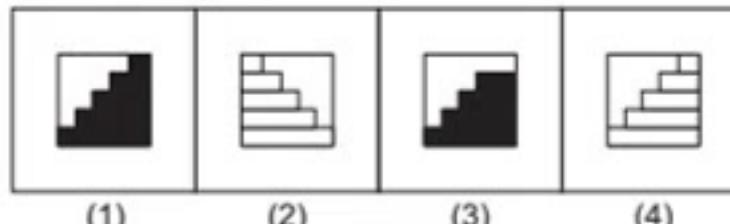
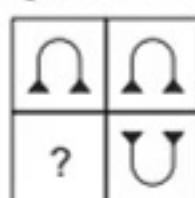
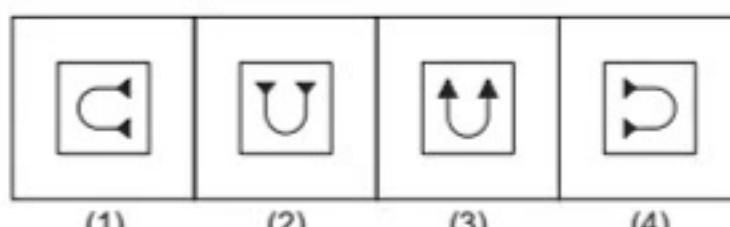


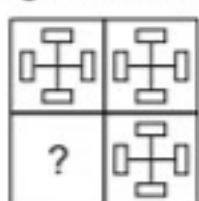
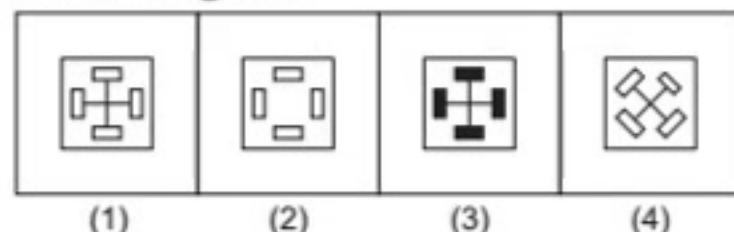
Answer Figures



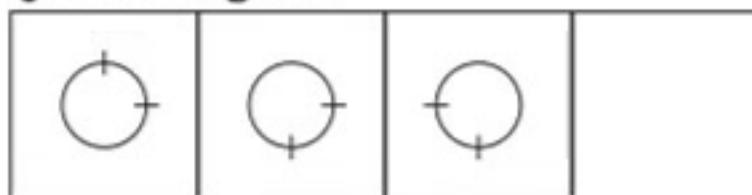
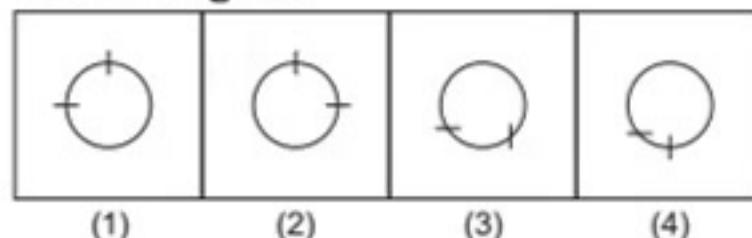
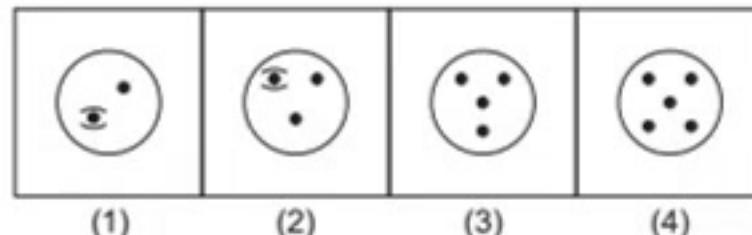
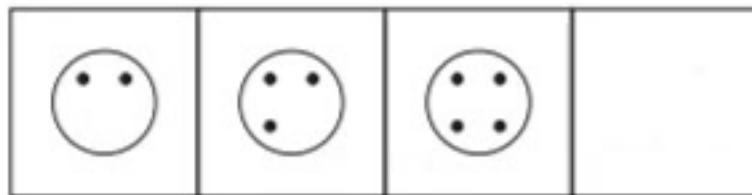
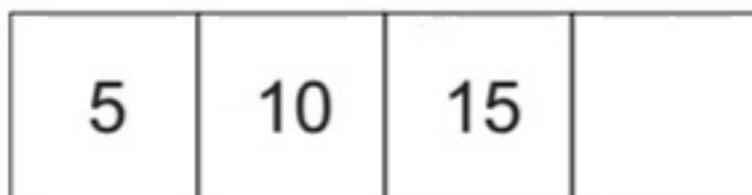
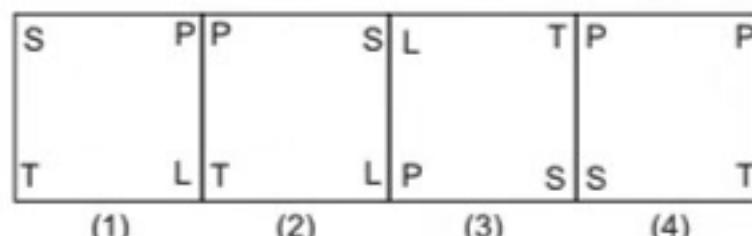
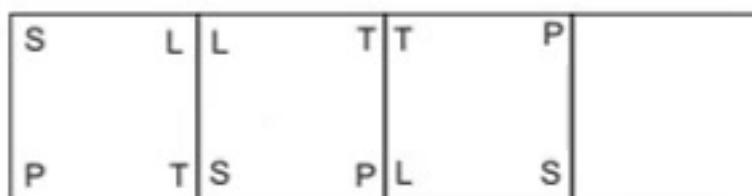
6. Question Figure**Answer Figures****7. Question Figure****Answer Figures****8. Question Figure****Answer Figures****Part III**

Directions (Q.Nos. 9-12) In questions, there is a question figure, a part of which is missing. Observe the answer figures 1, 2, 3 and 4 and find out the answer figure which without changing the direction, fits in the missing part of the question figure in order to complete the pattern in the question figure.

9. Question Figure**Answer Figures****10. Question Figure****Answer Figures****11. Question Figure****Answer Figures**

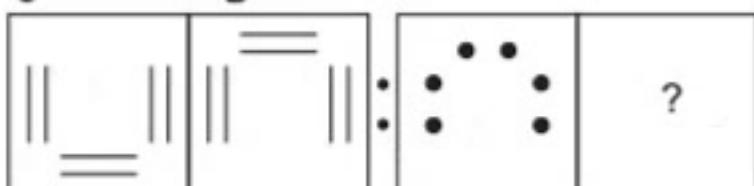
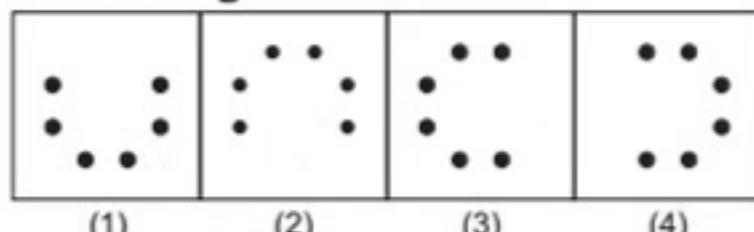
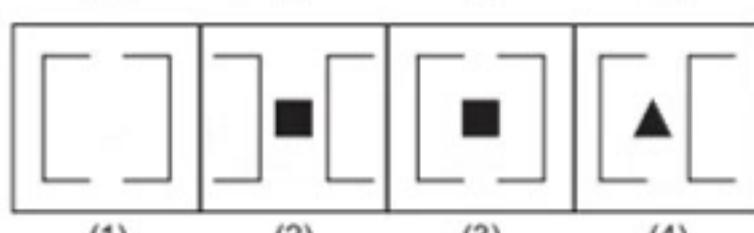
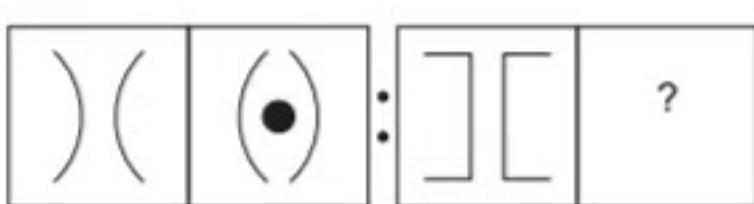
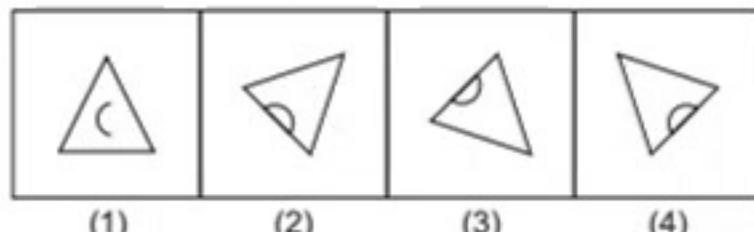
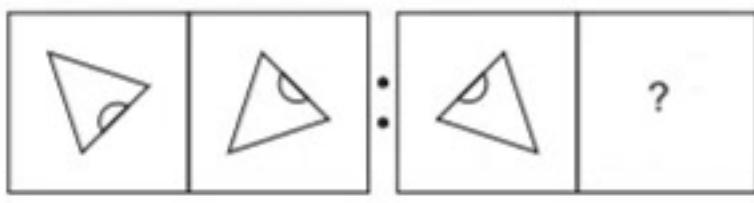
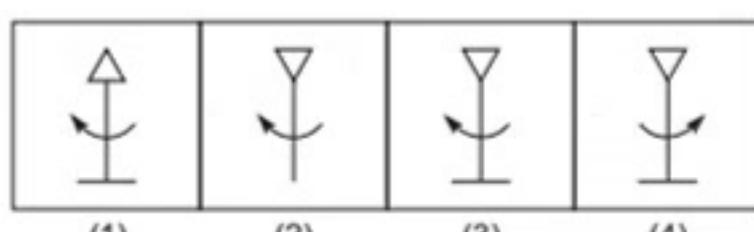
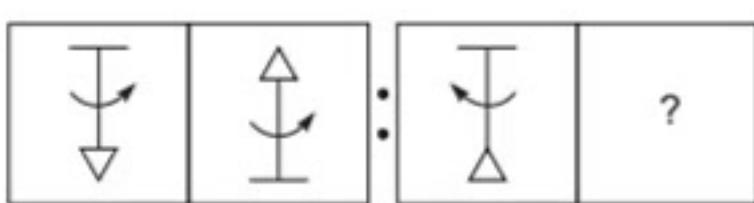
12. Question Figure**Answer Figures****Part IV**

Directions (Q.Nos. 13-16) In questions there are three question figures and the space for the fourth figure is left blank. The question figures are in a series. Find out one figure among the answer figures, which occupies the blank space for the fourth figure and completes the series.

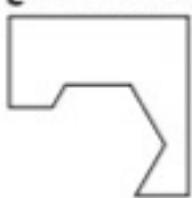
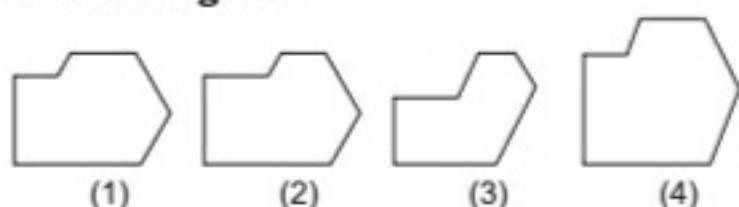
13. Question Figures**Answer Figures****14.****15.****16.**

Part V

Directions (Q.Nos. 17-20) In questions, there are two sets of two question figures each. The second set has a mark of interrogation (?). There exists a relationship between the first two question figures, similar relationship should exist between the third and fourth question figure. Select one of the answer figure which replaces the mark of interrogation.

17. Question Figures**Answer Figures****18.****19.****20.****Part VI**

Directions (Q.Nos. 21-24) In questions, one part of a geometrical figure is given as question figure and the other one is among the four answer figures 1, 2, 3 and 4 are also given. Find out the figure that completes the geometrical figure.

21. Question Figure**Answer Figures**

22. Question Figure



Answer Figures



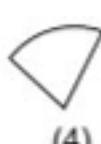
(1)



(2)

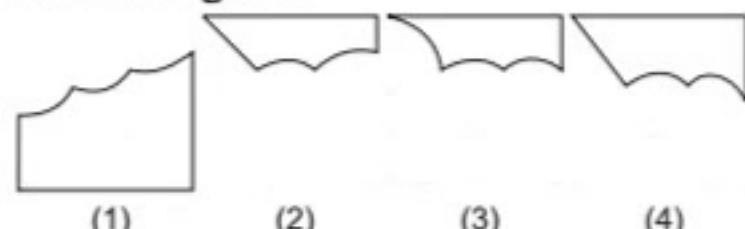


(3)



(4)

Answer Figures



(1)

(2)

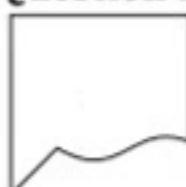
(3)

(4)

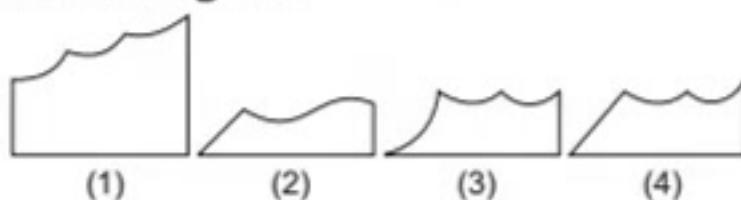
23. Question Figure



24. Question Figure



Answer Figures



(1)

(2)

(3)

(4)

Part VII

Directions (Q.Nos. 25-28) In questions, there is a question figure and four answer figures marked 1, 2, 3 and 4 are also given. Select the answer figure which is exactly the mirror image of the question figure when the mirror is held at AB.

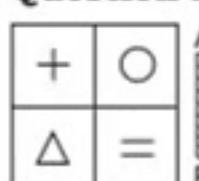
25. Question Figure



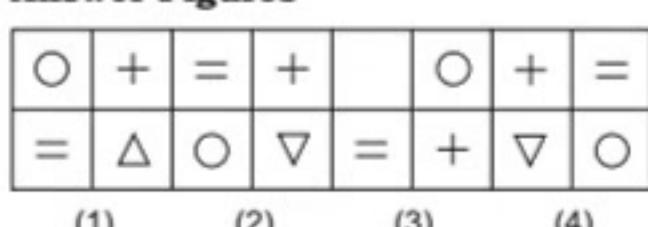
Answer Figures



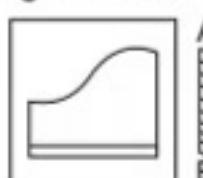
27. Question Figure



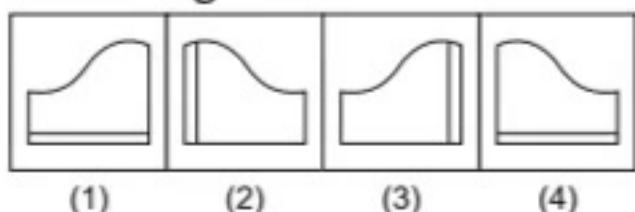
Answer Figures



26. Question Figure



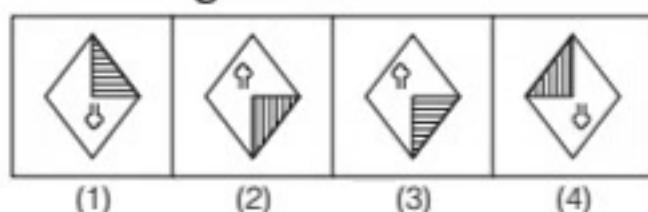
Answer Figures



28. Question Figure



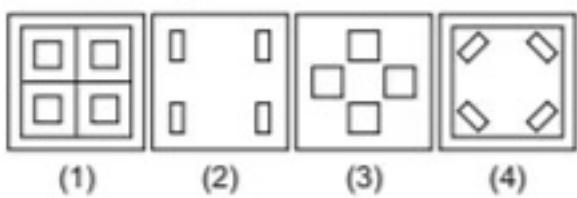
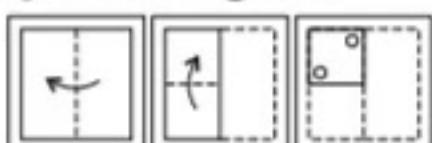
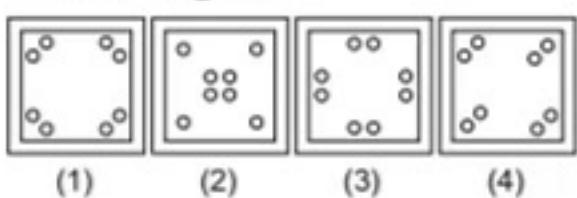
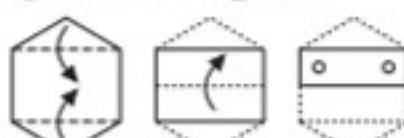
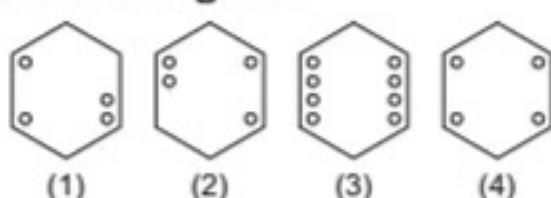
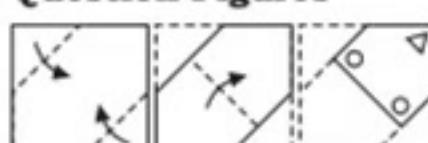
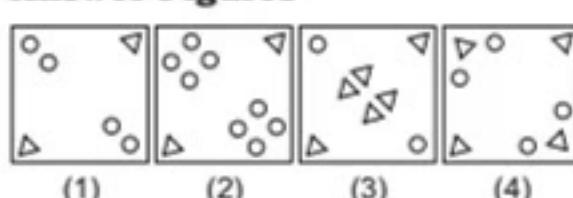
Answer Figures



Part VIII

Directions (Q.Nos. 29-32) In questions, a piece of paper is folded and punched as shown in question figures and four answer figures marked 1, 2, 3 and 4 are also given. Select the answer figure which indicates how the paper will appear when opened (unfolded).

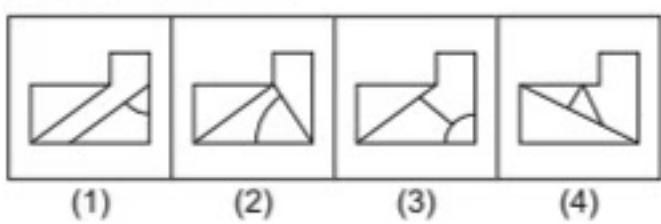
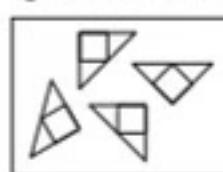
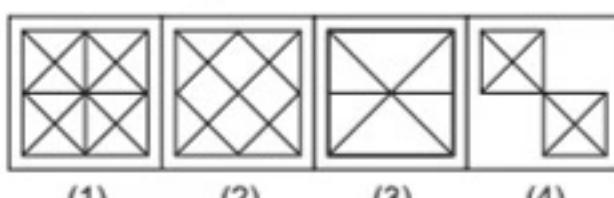
29. Question Figures

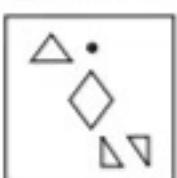
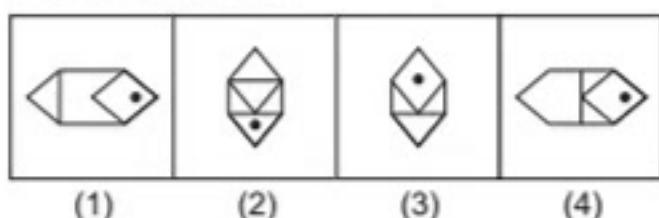
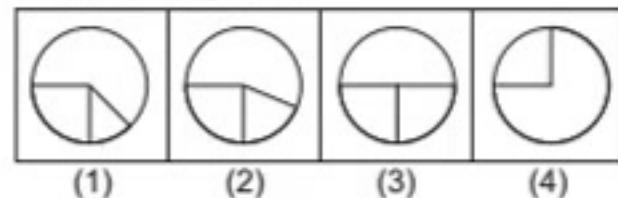
Answer Figures

30. Question Figures

Answer Figures

31. Question Figures

Answer Figures

32. Question Figures

Answer Figures


Part IX

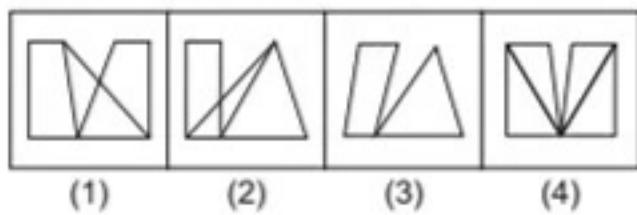
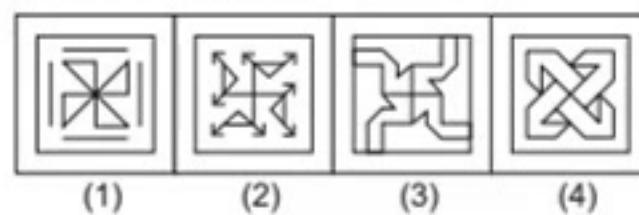
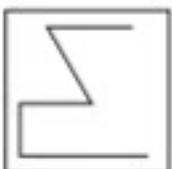
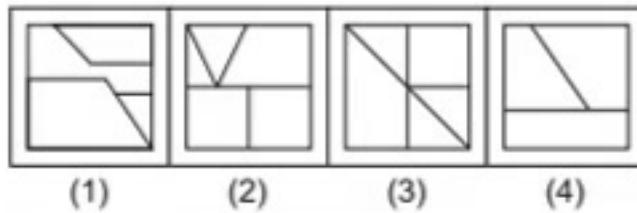
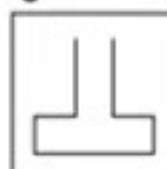
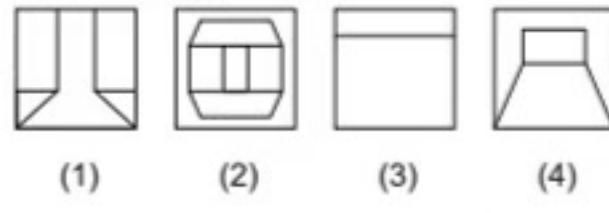
Directions (Q.Nos. 33-36) In questions, a question figure is given and four answer figures, marked 1, 2, 3 and 4 are also given. Select the answer figure which can be formed from the cut off pieces given in the question figure.

33. Question Figure

Answer Figures

34. Question Figure

Answer Figures


35. Question Figure**Answer Figures****36. Question Figure****Answer Figures****Part X**

Directions (Q.Nos. 37-40) In questions, a question figure is given and four answer figures, marked 1, 2, 3 and 4 are also given. Select the answer figure in which the question figure is hidden/embedded.

37. Question Figure**Answer Figures****39. Question Figure****Answer Figures****38. Question Figure****Answer Figures****40. Question Figure****Answer Figures**

Section II Arithmetic Test

Directions (Q.Nos. 41-60) For every question four probable answers bearing numbers (1), (2), (3) and (4) are given. Only one out of these is correct. You have to choose the correct answer.

- 41.** How many 4 digit numbers, in all are there?
(1) 9999 (2) 9990
(3) 9000 (4) 8999
- 42.** Which statement is true for 11 and 21?
(1) Both are divisible numbers
(2) Both are even numbers
(3) Both are co-prime numbers
(4) Both are multiple of 3
- 43.** How many days are there in 2 months, 5 weeks and 18 days?
(1) 113 (2) 115
(3) 116 (4) 114
- 44.** After allowing a discount of 18% a washing machine is available for ₹ 13489. What is the market price of the washing machine?
(1) ₹ 16540 (2) ₹ 15450
(3) ₹ 16450 (4) ₹ 15540
- 45.** Using digits 1, 0, 5 and 7 the greatest 4 digit number formed is
(1) 1075 (2) 1057
(3) 5017 (4) 7510
- 46.** A train crosses a pole in 15 sec and a platform 100 m long in 25 sec. Its length is
(1) 50 m (2) 100 m
(3) 150 m (4) 200 m
- 47.** The product of two numbers is $\frac{5}{4}$. If one number is $\frac{5}{6}$, what is the other number?
(1) 2 (2) $\frac{1}{2}$
(3) $\frac{3}{2}$ (4) $\frac{2}{3}$
- 48.** The fraction equivalent to 1.25 is
(1) $1\frac{1}{4}$ (2) $12\frac{1}{2}$
(3) $1\frac{1}{8}$ (4) $12\frac{1}{4}$
- 49.** The LCM of 12, 24 and 30 is
(1) 2 (2) 30
(3) 60 (4) 120
- 50.** If $178 \times 34 = 6052$, what is $60.52 \div 17.8$?
(1) 34 (2) 3.4
(3) 0.34 (4) 0.034
- 51.** 0.075 when expressed as per cent, is
(1) 75% (2) 7.5%
(3) 0.75% (4) 0.075%
- 52.** On simplifying $15 \times 4 - 10 \div 5$, we get
(1) 10 (2) 30
(3) 58 (4) 120
- 53.** A rectangular plot has sides 100 m \times 80 m. Find the length of wire to surround it three times.
(1) 180 m (2) 1080 m
(3) 360 m (4) 720 m
- 54.** A man buys a radio for ₹ 900 and sells it for ₹ 1200. Find his gain per cent.
(1) 20 (2) 25
(3) 30 (4) $33\frac{1}{3}$
- 55.** A fish tank length, breadth and height is 40 cm, 60 cm and 50 cm respectively. It contains 50 l of water. How much water is needed to fill it completely.
(1) 50 l (2) 60 l
(3) 70 l (4) 120 l
- 56.** Three bells start ringing together at 8 : 30 am. If they ring after 4 min, 5 min and 6 min respectively each time, the next time they will ring together at
(1) 8 : 45 am (2) 9 : 30 am
(3) 9 : 45 am (4) 10 : 15 am
- 57.** In how many years will ₹ 500 amount to ₹ 600 at the rate of 5% per annum at simple interest?
(1) 3 yr (2) 4 yr
(3) 5 yr (4) 6 yr
- 58.** A person crosses a 600 m long street in 5 min. What is his speed in km per hour?
(1) 3.6 (2) 7.2
(3) 8.4 (4) 10
- 59.** How many rectangular plots of dimensions 40 m by 60 m can be made from a rectangular field of dimensions 120 m by 160 m?
(1) 2 (2) 3 (3) 4 (4) 8
- 60.** A boy slept at 9 : 45 pm and woke up the next morning at 5 : 30 am. He slept for
(1) 4 h 15 min (2) 7 h 15 min
(3) 7 h 45 min (4) 8 h 15 min

SECTION III Language Test (English)

Directions (Q.Nos. 61-80) There are four passages. Each passage is followed by five questions. Read each passage carefully and answer the questions that follow. For each question four probable answer bearing letters (1), (2), (3) and (4) are given. Only one out of these is correct. You have to choose the correct answer.

Passage 1

People think all insects are our enemies. Children like to kill flies, bugs and mosquitoes. Many kinds of insects are our enemies. Some of them harm our trees, our clothes, our books, our houses and some of them poison our food. Some of them bite us and spread diseases. But many insects are our friends too. They eat insects that we want to get rid of. There are many insects that are neither our friends nor our enemies. They do nothing to help or harm us.

61. "Some of them bite us"

'Some' here refers to

- (1) people
- (2) children
- (3) enemies
- (4) insects

62. Some insects do good to us because

- (1) they live in our houses
- (2) they spoil some kinds of food
- (3) they save us from harmful insects
- (4) they eat harmful insects

63. Some insects do more harm than good because

- (1) they are annoying
- (2) they are covered with dirt
- (3) they spread diseases
- (4) they eat other insects

64. In this passage, the writer tells us about

- (1) the nature of children
- (2) many kinds of insects
- (3) usefulness of insects
- (4) the nature of insects

65. Which of the following is the correct antonym of the given word 'Enemies'

- (1) Rival
- (2) Adversary
- (3) Opponent
- (4) Friend

Passage 2

Fishing is my favourite sport. I often fish for hours without catching anything. But this does not worry me. Some fishermen are unlucky. Instead of catching fish, they catch old boots and rubbish. I am even less lucky. I never catch anything—not even old boots. After having spent the whole mornings on the river, I always go home with an empty bag. "You must give up fishing!" my friends say, "It's a waste of time." But they don't realise one important thing. I am not really interested in fishing. I am only interested in sitting in a boat and doing nothing at all.

66. Some fishermen are unlucky because

- (1) they never catch a fish
- (2) fishing is not their favourite sport
- (3) they fish for hours together
- (4) sometimes they catch old boots and rubbish instead of fish

- (3) he goes alone
- (4) he spends hours fishing

67. Fishing is the writer's favourite sport as he

- (1) always catches fish
- (2) finds it a funny sport
- (3) enjoys doing nothing while sitting in a boat
- (4) collects old boots

69. The bag that writer carries home is

- (1) empty
- (2) old
- (3) full of fish
- (4) full of old boots and rubbish

68. The writer is not a good fisherman because

- (1) he never catches anything
- (2) he only catches old boots and rubbish

70. Select the suitable antonym of 'Favourite' from the options given below.

- (1) Preferred
- (2) Favoured
- (3) Ideal
- (4) Dislike

Passage 3

It was a full-moon's night. Bright moonlight flooded the road. I was walking slowly. Suddenly I heard a whistling sound. At first, I thought it was another late evening stroller like me. The sound was loud and cheerful. Suddenly, a boy on a bicycle sped past me. I could not see his face. After a few minutes, he was back again. This time, he stopped a few feet away from me and gave me a smile. He looked like a slim boy of fourteen. He wore a school blazer, a cap and a scarf. His eyes were bright and cool like moon-light. "You don't have a bell on your bicycle", I said. He said nothing. I put out my hand but he did not take it. Then quite suddenly, he sped past again. The next day, I learnt that, that whistling boy was a ghost.

71. Who appeared quite rapidly?

- (1) The whistling boy
- (2) The author
- (3) The moon
- (4) The bicycle

72. Why could the narrator not see the face of the boy?

- (1) He was afraid of the boy
- (2) The boy sped past quickly
- (3) The boy did not like him
- (4) He was an ugly looking boy

73. What did the boy not wear?

- (1) A scarf
- (2) A cap
- (3) An overcoat
- (4) A blazer

74. The word 'Stroller' means

- (1) a wanderer
- (2) a fast runner
- (3) an athlete
- (4) a beggar

75. What was most unusual about the boy?

- (1) He was cycling fast
- (2) His eyes were bright but cool like moon-light
- (3) He wore a school uniform
- (4) He was whistling

Passage 4

The Sahara is the biggest desert in the world. It stretches across the whole of North Africa. The Arabian desert is also a very large desert. In India too, there is a desert called Thar desert in Rajasthan. Life in a desert is tough. The days are very hot and nights are cold.

76. The biggest desert in the world is in

- (1) India
- (2) Africa
- (3) Arabia
- (4) America

77. In desert regions

- (1) there is no rainfall
- (2) it rains heavily
- (3) there is enough rain
- (4) there is a little rain

78. The climate in a desert is

- (1) pleasant
- (2) difficult
- (3) comfortable
- (4) cold

79. Date palms grow in

- (1) plains
- (2) hilly regions
- (3) deserts
- (4) snowy regions

80. Which of the following is correct synonym of the given word 'biggest'.

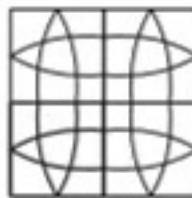
- (1) Huge
- (2) Small
- (3) Tiny
- (4) Miniature

Answer Sheet

1 (4)	2 (4)	3 (3)	4 (4)	5 (3)	6 (3)	7 (2)	8 (4)	9 (3)	10 (2)
11 (2)	12 (1)	13 (1)	14 (4)	15 (2)	16 (2)	17 (1)	18 (3)	19 (2)	20 (3)
21 (1)	22 (2)	23 (2)	24 (2)	25 (3)	26 (4)	27 (1)	28 (3)	29 (4)	30 (4)
31 (3)	32 (2)	33 (2)	34 (2)	35 (3)	36 (2)	37 (2)	38 (4)	39 (2)	40 (1)
41 (3)	42 (3)	43 (1)	44 (3)	45 (4)	46 (3)	47 (3)	48 (1)	49 (4)	50 (2)
51 (2)	52 (3)	53 (2)	54 (4)	55 (3)	56 (2)	57 (2)	58 (2)	59 (4)	60 (3)
61 (4)	62 (4)	63 (3)	64 (2)	65 (4)	66 (4)	67 (3)	68 (1)	69 (1)	70 (4)
71 (1)	72 (2)	73 (3)	74 (1)	75 (2)	76 (2)	77 (3)	78 (4)	79 (2)	80 (1)

Hints and Solutions

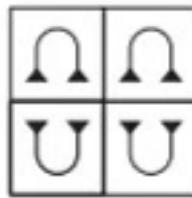
- Except figure (4) in all others shaded portion is circle. But in figure (4) shaded portion is square. Hence, option (4) is odd one out.
- Except figure (4) right side of the figure changes its direction and left side remains same. Hence, option (4) is odd one out.
- Except figure (3), all others have odd number of lines, whereas figure (3) has even number of lines. Hence, option (3) is odd one out.
- Except figure (4), all others have two figures, whereas figure (4) has single figure. Hence, option (4) is odd one out.
- Answer figure (3) is same as the question figure.
- Answer figure (3) is same as the question figure.
- Answer figure (2) is same as the question figure.
- Answer figure (4) is same as the question figure.
- Answer figure (3) will complete the given question figure.



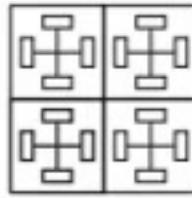
- Answer figure (2) will complete the given question figure.



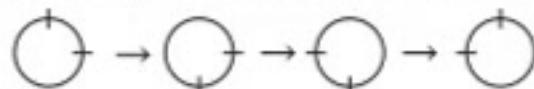
- Answer figure (2) will complete the given question figure.



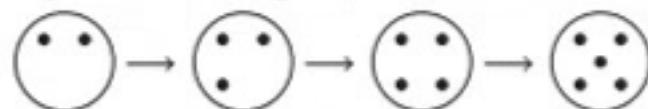
- Answer figure (1) will complete the given question figure.



- In every step, figure is rotating 90° clockwise.



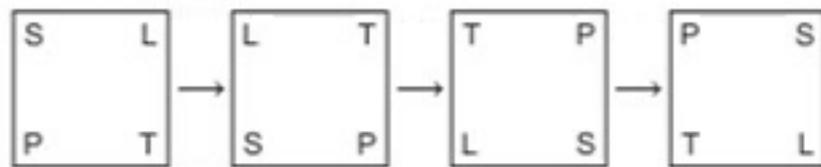
- In every successive figure, one point is increasing.



- In every successive figure, number is increasing by 5.

$$5 \xrightarrow{+5} 10 \xrightarrow{+5} 15 \xrightarrow{+5} 20$$

- In every step, figure is moving in anti-clockwise direction.



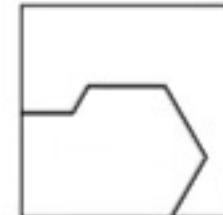
- As, question figure (2) is water image of first. In the same way, water image of question figure is answer figure (1).

- As, in question figure (1), both semi circle rotates in either side and contained one completely darken small circle within them. In the same way both figure rotates in either side and contained one completely darken small square in between them.

- As in question figures, first figure rotates 90° anti-clockwise to produce the second one. In the same way, the third figure rotates 90° anti-clockwise to produce the fourth one.

- As in question figure, triangle rotates 180° with keeping the arrow unchanged. In the same way, triangle rotates 180° with keeping the arrow unchanged.

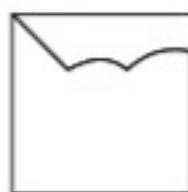
- Answer figure (1) will complete the given geometrical figure.



- Answer figure (2) will complete the given geometrical figure.



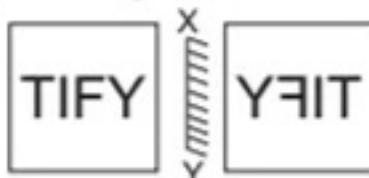
23. Answer figure (2) will complete the given geometrical figure.



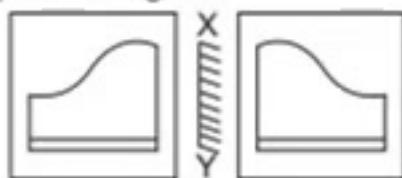
24. Answer figure (2) will complete the given geometrical figure.



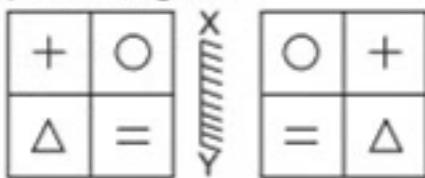
25. Answer figure (3) is the correct mirror image of the given question figure.



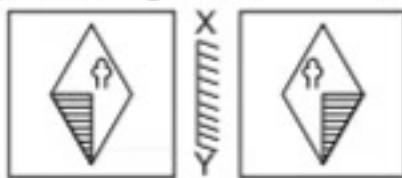
26. Answer figure (4) is the correct mirror image of the given question figure.



27. Answer figure (1) is the correct mirror image of the given question figure.



28. Answer figure (3) is the correct mirror image of the given question figure.



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

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

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

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

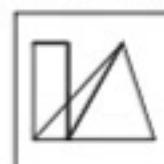
33. Answer figure (2) can be formed by using the cut pieces.

34. Answer figure (2) can be formed by using the cut pieces.

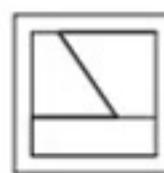
35. Answer figure (3) can be formed by using the cut pieces.

36. Answer figure (2) can be formed by using the cut pieces.

37. The question figure is embedded in the figure (2).



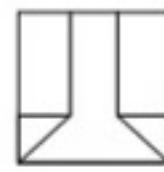
38. The question figure is embedded in the answer figure (4).



39. The question figure is embedded in the answer figure (2).



40. The question figure is embedded in the answer figure (1).



$$\begin{aligned} \text{41. Total number of 4 digits are } &= 9999 - 999 \\ &= 9000 \end{aligned}$$

42. Both 11 and 21 are co-prime numbers.

43. 2 months, 5 weeks and 18 days

$$\begin{aligned} &= (2 \times 30 + 5 \times 7 + 18) \\ &= 60 + 35 + 18 \\ &= 113 \text{ days} \end{aligned}$$

44. Selling price of washing machine = ₹ 13489
Discount allowed = 18%

Let marked price of washing machine be ₹ x.

$$\begin{aligned} \therefore x - \frac{18x}{100} &= 13489 \\ \frac{82x}{100} &= 13489 \\ \Rightarrow x &= \frac{13489 \times 100}{82} \\ &= 16450 \end{aligned}$$

Marked price of washing machine is ₹ 16450.

45. 7510

46. Let the length of train = x m

$$\therefore \text{Speed of train crossing a pole} = \frac{x}{15} \text{ m/s}$$

And speed of train crossing a platform

$$= \frac{x+100}{25} \text{ m/s}$$

According to the question,

$$\frac{x}{15} = \frac{x+100}{25}$$

$$\Rightarrow 5x = 3x + 300$$

$$\therefore x = 150 \text{ m}$$

47. \because Product of two numbers = $\frac{5}{4}$

$$\text{One number} = \frac{5}{6}$$

$$\text{Other number} = \frac{5}{4} \div \frac{5}{6} = \frac{5}{4} \times \frac{6}{5} = \frac{3}{2}$$

48. $\because 1.25 = \frac{125}{100} = \frac{5}{4} = 1\frac{1}{4}$

2	12, 24, 30
2	6, 12, 15
3	3, 6, 15
	1, 2, 5

$$\therefore \text{LCM} = 2 \times 2 \times 3 \times 2 \times 5 = 120$$

50. $\because 178 \times 34 = 6052$

$$\text{or } 34 = \frac{6052}{178}$$

$$\text{or } \frac{34}{10} = \frac{6052}{178 \times 10}$$

$$\text{or } 3.4 = 60.52 \div 17.8$$

51. $0.075 = 0.075 \times 100 = 7.5\%$

(to express number into per cent it is multiplied by 100.)

$$\begin{aligned} \text{52. } 15 \times 4 - 10 \div 5 &= 15 \times 4 - 2 \\ &= 60 - 2 = 58 \end{aligned}$$

53. Given,

length of rectangular plot = 100 m

Breadth of rectangular plot = 80 m

As we know that perimeter of plot

$$= 2(\text{length} + \text{breadth})$$

$$\text{Perimeter} = 2(100 + 80)$$

$$= 2 \times 180 = 360 \text{ m}$$

Length of wire to surround it three times

$$= 3 \times 360 = 1080 \text{ m}$$

54. $\because \text{CP of radio} = ₹ 900$

$\text{SP of radio} = ₹ 1200$

$$\therefore \text{Profit} = (1200 - 900) = ₹ 300$$

$$\text{Hence, the profit percentage} = \frac{\text{Profit} \times 100}{\text{CP}}$$

$$= \frac{300 \times 100}{900} = \frac{100}{3} \text{ or } 33\frac{1}{3}\%$$

55. Amount of water stored in the tank = Volume of the tank

$$\therefore \text{Volume of tank} = \text{length} \times \text{breadth} \times \text{height}$$

$$\therefore V = 40 \times 60 \times 50$$

$$V = 120000 \text{ cm}^3$$

$$\text{As } 1000 \text{ cm}^3 = 1 \text{ litre}$$

$$\therefore V = 120 \text{ l}$$

As tank already stored 50 l of water

$$\therefore \text{Amount of water to fill the tank completely} = 120 - 50 = 70 \text{ l}$$

56. The LCM of 4, 5 and 6 = 60

Hence, after 60 min i.e., after 1 h.

They will ring together i.e., at 9 : 30 am

57. Given, $P = ₹ 500$; $A = ₹ 600$; $r = 5\%$

$$\text{SI} = \text{Amount} - \text{Principal} = 600 - 500 = ₹ 100$$

$$\text{Time, } t = \frac{\text{SI} \times 100}{P \times r} = \frac{100 \times 100}{500 \times 5} = 4 \text{ yr}$$

$$\text{58. Speed} = \frac{\text{Distance}}{\text{Time}} = \left(\frac{600}{5 \times 60} \right) \text{ m/sec}$$

$$= 2 \text{ m/sec}$$

Now, converting m/sec to km/h

$$= \left(2 \times \frac{18}{5} \right) \text{ km/h}$$

$$= 7.2 \text{ km/h}$$

59. The area of rectangular field = 120×160

$$= 19200 \text{ sq m}$$

The area of one rectangular plot = 40×60

$$= 2400 \text{ sq m}$$

$$\therefore \text{Number of rectangular plots} = \frac{19200}{2400} = 8$$

60. The boy slept at = 9 : 45 pm

The boy woke up at = 5 : 30 am (next morning)

Time taken in sleeping from 9 : 45 to 12 : 00 (midnight)

$$= 2 \text{ h } 15 \text{ min}$$

Time taken in sleeping from 12 : 00 to 5 : 30

$$= 5 \text{ h } 30 \text{ min}$$

Total time he slept for

$$= 2 \text{ h } 15 \text{ min} + 5 \text{ h } 30 \text{ min}$$

$$= 7 \text{ h } 45 \text{ min}$$

Jawhar Navodaya Vidyalaya

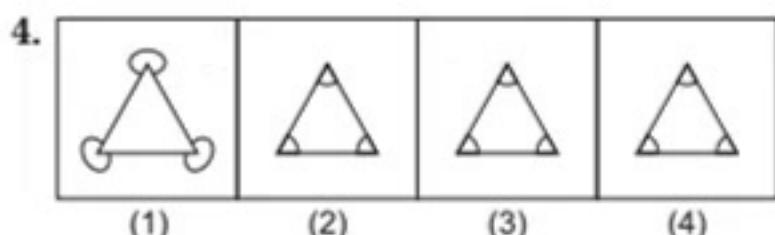
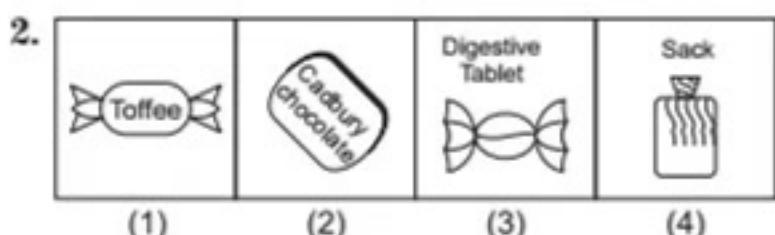
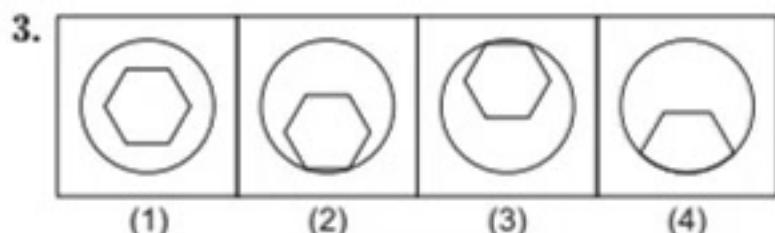
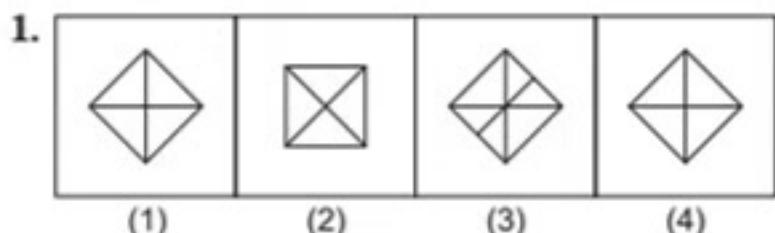
Entrance Exam (Class VI)

PRACTICE SET 3

Section I Mental Ability Test

Part I

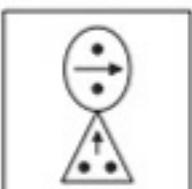
Directions (Q.Nos. 1-4) In questions, four figures 1, 2, 3 and 4 have been given in each question of these four figures, three figures are similar in some way and one figure is different. Select the figure which is different.



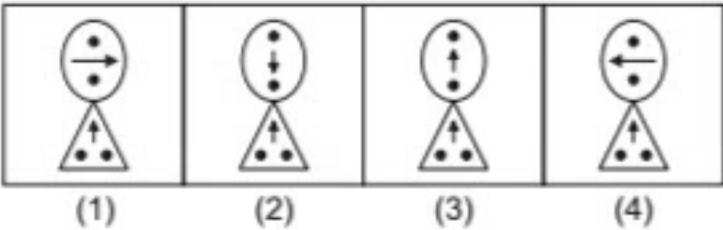
Part II

Directions (Q. Nos. 5-8) In questions, a question figure is given and four answer figures marked 1, 2, 3 and 4 are also given. Select the answer figure which is exactly the same as the question figure.

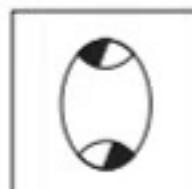
5. Question Figure



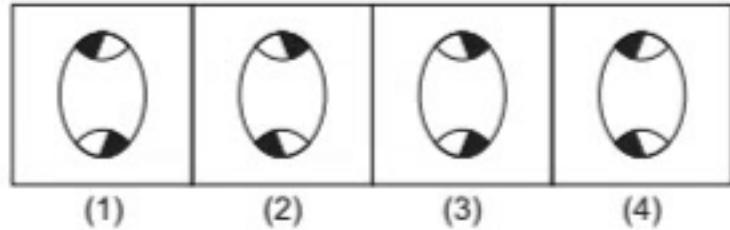
Answer Figures

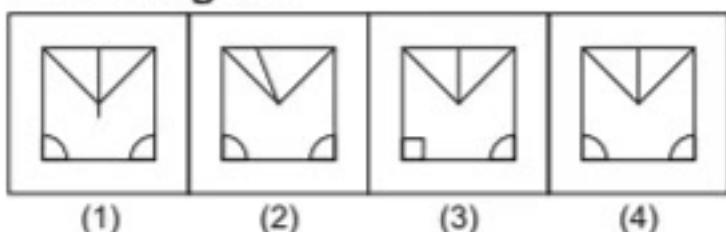
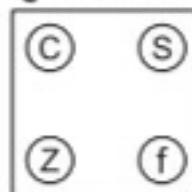
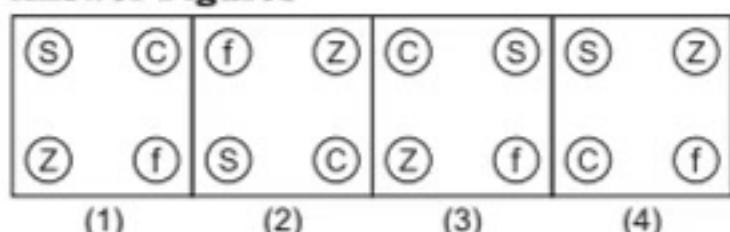


6. Question Figure

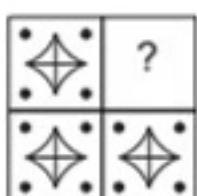
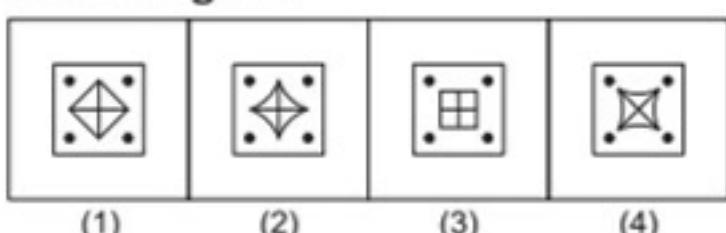
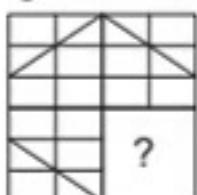
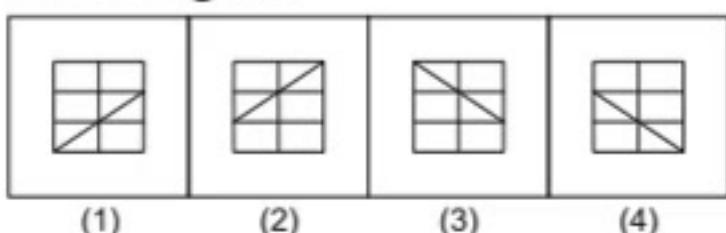
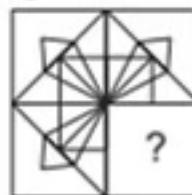
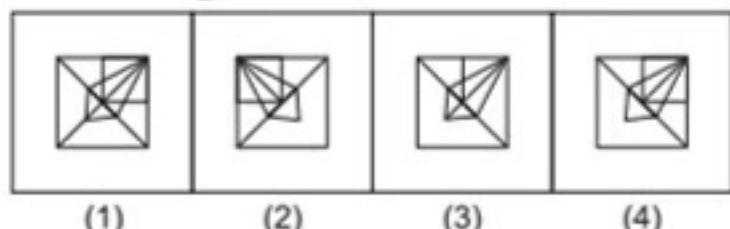
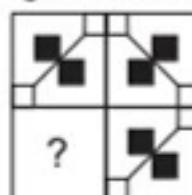
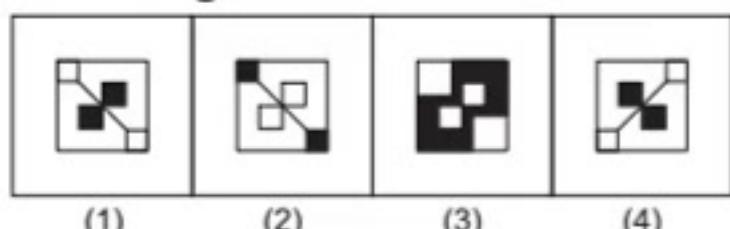


Answer Figures



7. Question Figure**Answer Figures****8. Question Figure****Answer Figures****Part III**

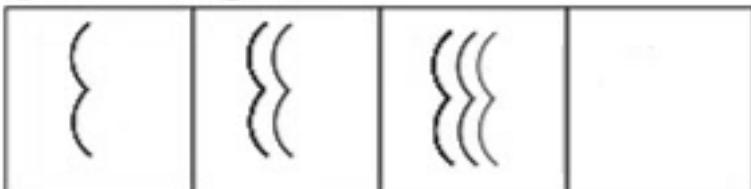
Directions (Q. Nos. 9-12) In questions, there is a question figure given, a part of which is missing. Observe the answer figures 1, 2, 3 and 4 and find out the answer figure which without changing the direction, fits in the missing part of the question figure in order to complete the pattern in the question figure.

9. Question Figure**Answer Figures****10. Question Figure****Answer Figures****11. Question Figure****Answer Figures****12. Question Figure****Answer Figures**

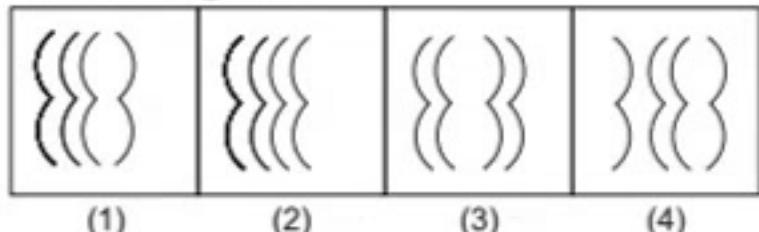
Part IV

Directions (Q. Nos. 13-16) There are three question figures and the space for the fourth figure is left blank. The question figures are in series. Find out one figure among the answer figures, which occupies the blank space for the fourth figure and completes the series.

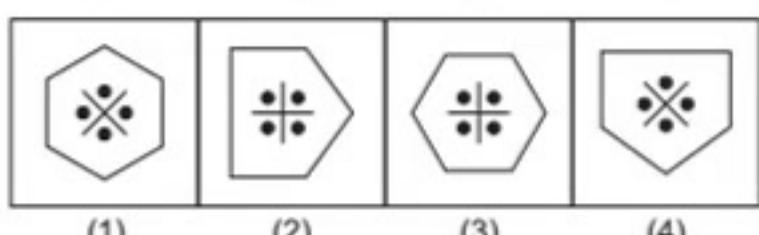
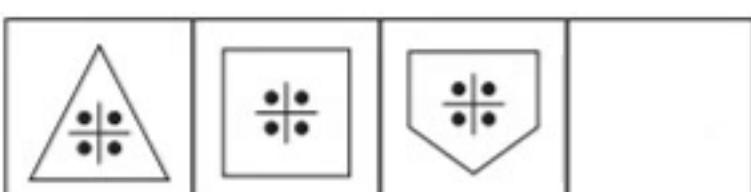
13. Question Figures



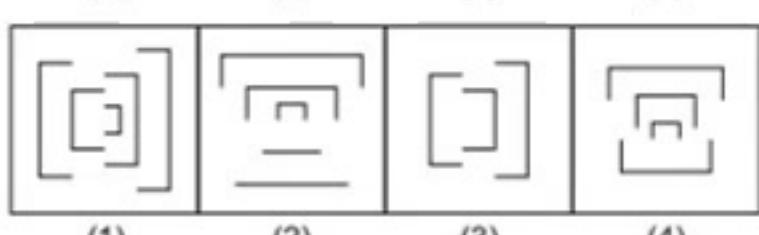
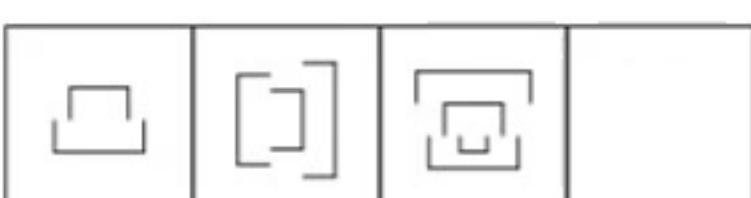
Answer Figures



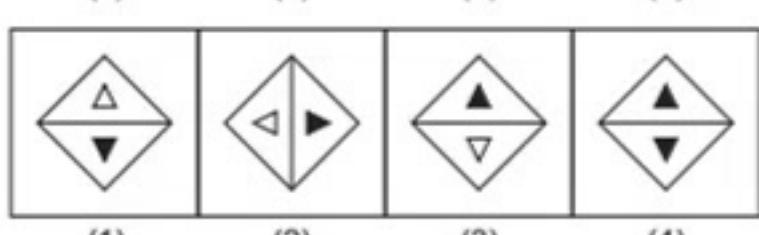
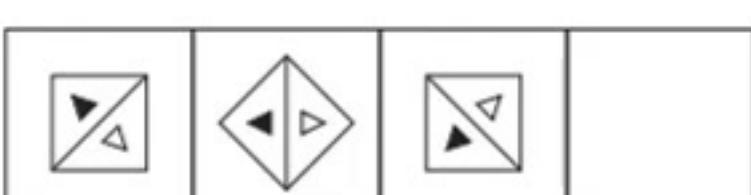
14.



15.



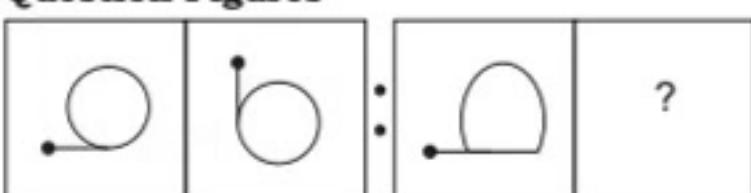
16.



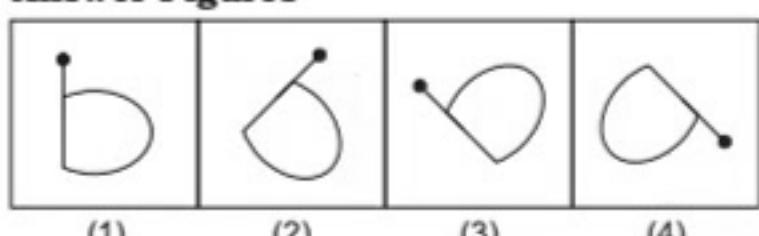
Part V

Directions (Q.Nos. 17-20) In questions, there are two sets of two question figures each. The second set has a mark of interrogation (?). There exists a relationship between the first two question figure, similar relationship should exist between the third and fourth question figure. Select one of the answer figure which replaces the mark of interrogation.

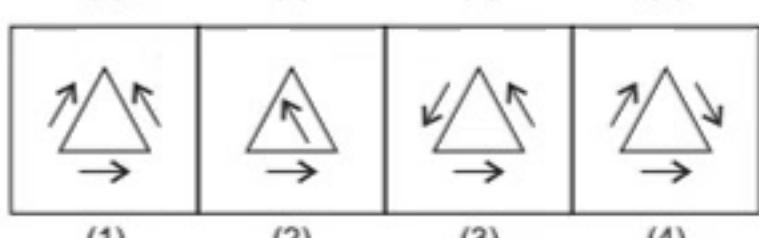
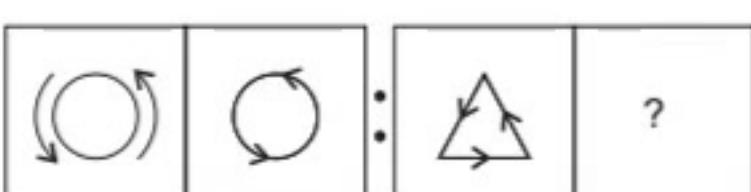
17. Question Figures

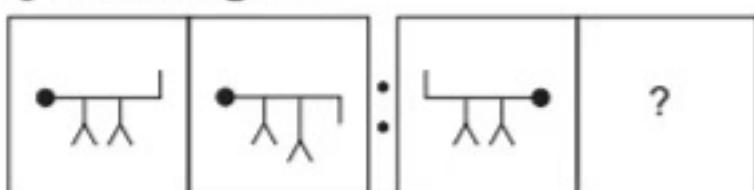
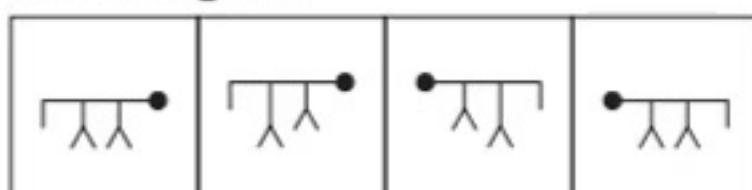
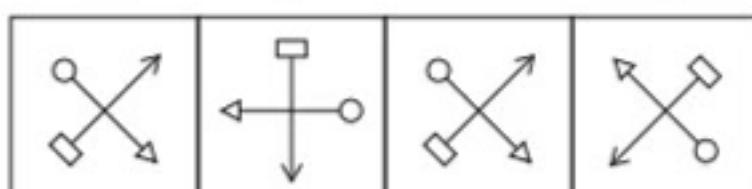
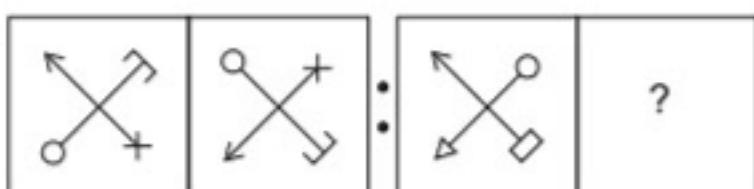


Answer Figures

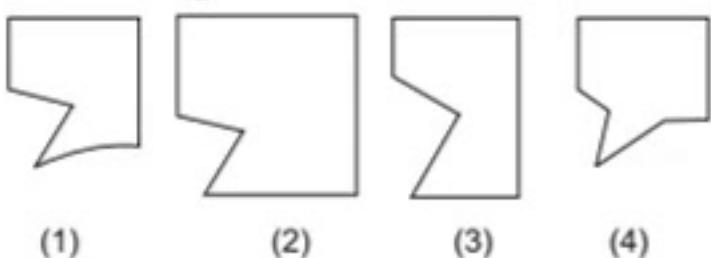


18.



19. Question Figures**Answer Figures****20.****Part VI**

Directions (Q. Nos. 21-24) In questions, one part of a geometrical figure is given as question figure and the other one is among the four answer figures 1, 2, 3 and 4 are also given. Find out the figure that completes the geometrical figure.

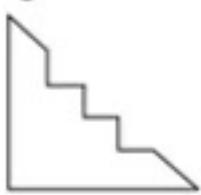
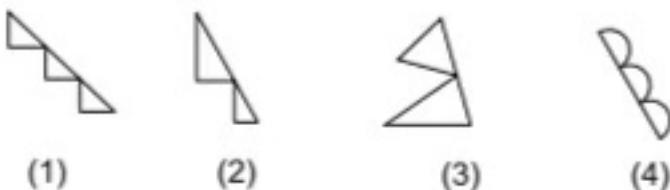
21. Question Figure**Answer Figures**

(1)

(2)

(3)

(4)

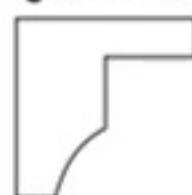
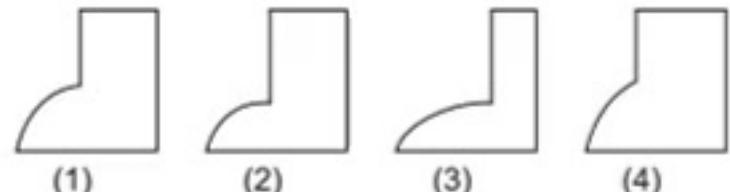
22. Question Figure**Answer Figures**

(1)

(2)

(3)

(4)

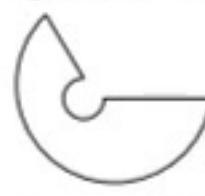
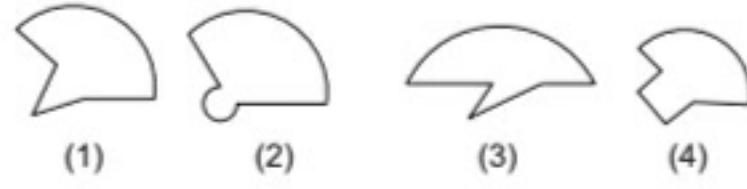
23. Question Figure**Answer Figures**

(1)

(2)

(3)

(4)

24. Question Figure**Answer Figures**

(1)

(2)

(3)

(4)

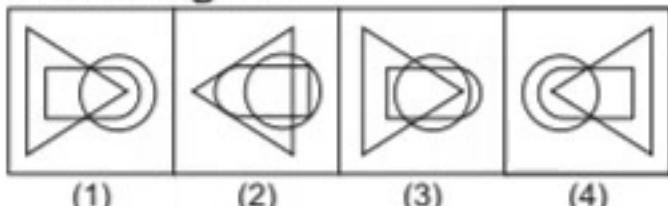
Part VII

Directions (Q.Nos. 25-28) In questions, there is a question figure and four answer figures marked 1, 2, 3 and 4 are also given. Select the answer figure which is exactly the mirror image of the question figure when the mirror is held at AB.

25. Question Figure



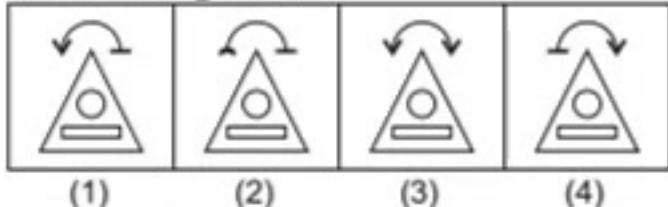
Answer Figures



26. Question Figure



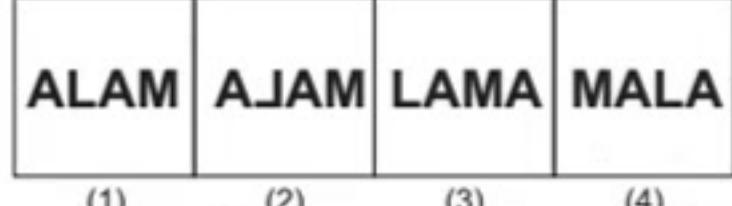
Answer Figures



27. Question Figure



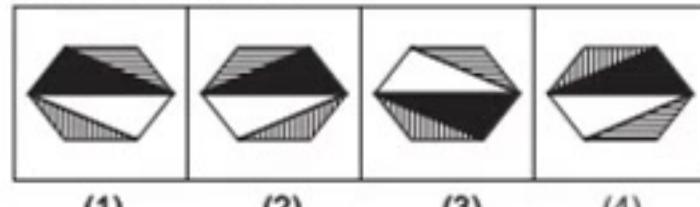
Answer Figures



28. Question Figure



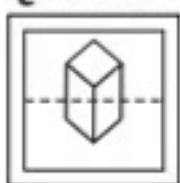
Answer Figures



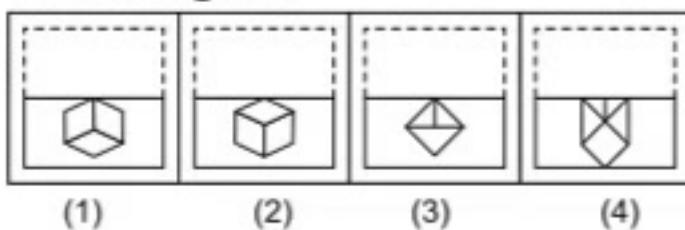
Part VIII

Directions (Q.Nos. 29-32) In questions, a piece of paper is folded and punched as shown in question figures and four answer figures marked 1, 2, 3 and 4 are also given. Select the answer figure which indicates how the paper will appear when opened (unfolded).

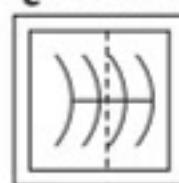
29. Question Figure



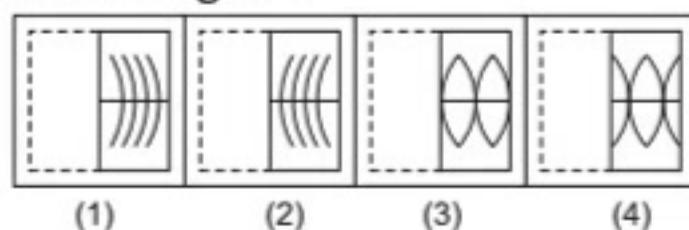
Answer Figures

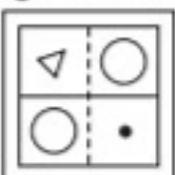
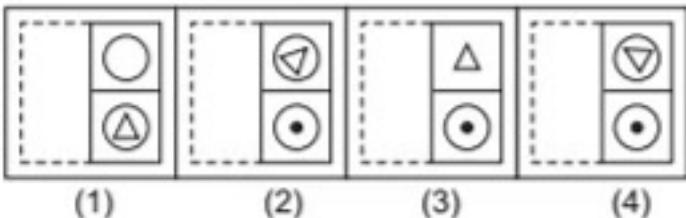
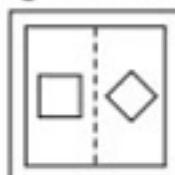
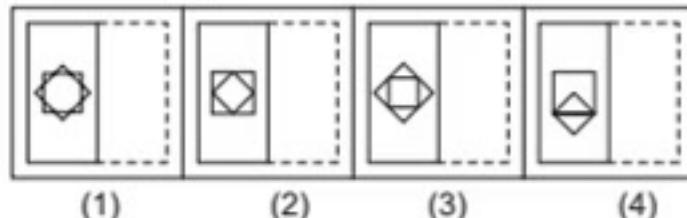


30. Question Figure

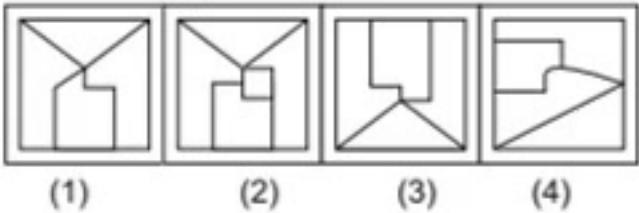
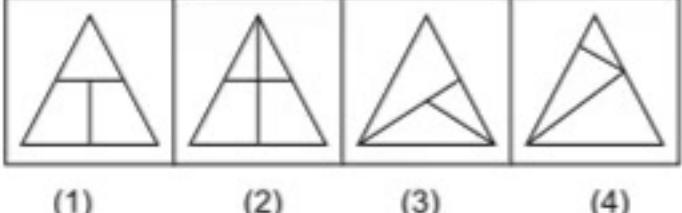
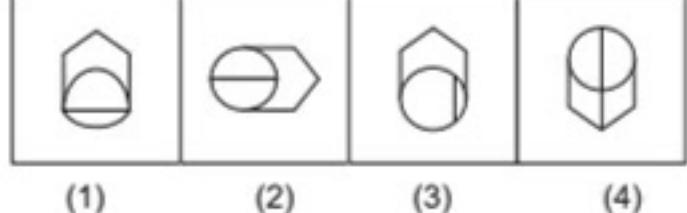
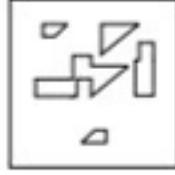
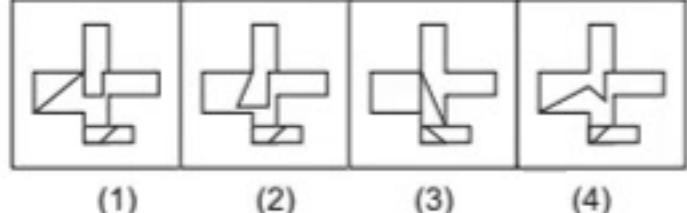


Answer Figures



31. Question Figure**Answer Figures****32. Question Figure****Answer Figures****Part IX**

Directions (Q.Nos. 33-36) In questions, a question figure is given and four answer figures marked 1, 2, 3 and 4 are also given. Select the answer figure which can be formed from the cut off pieces given the question figure.

33. Question Figure**Answer Figures****34. Question Figure****Answer Figures****35. Question Figure****Answer Figures****36. Question Figure****Answer Figures**

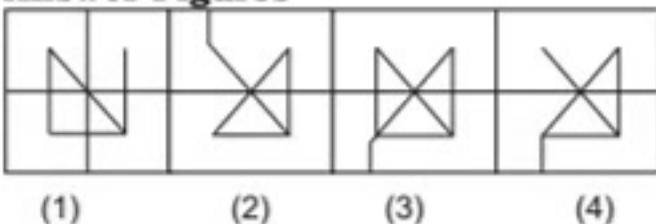
Part X

Directions (Q.Nos. 37-40) In questions, a question figure is given and four answer figures, marked 1, 2, 3 and 4 are also given. Select the answer figure in which the question figure is hidden/embedded.

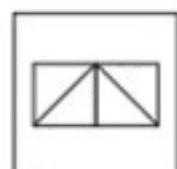
37. Question Figure



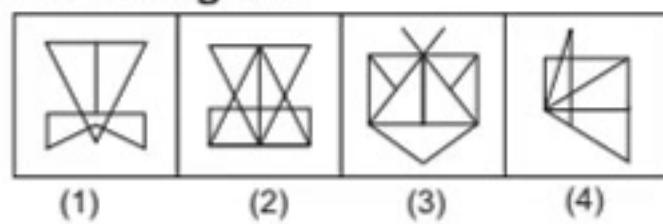
Answer Figures



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

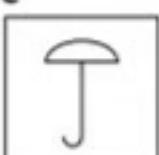


Answer Figures

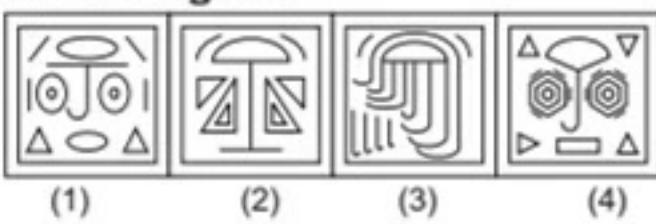


(1) (2) (3) (4)

38. Question Figure



Answer Figures

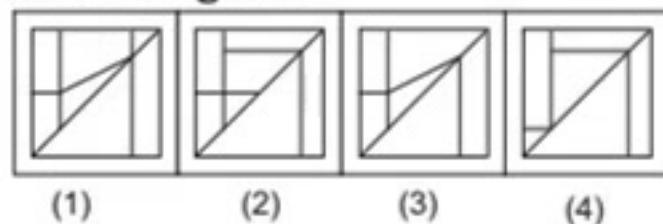


(1) (2) (3) (4)

40. Question Figure



Answer Figures



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

39. question Figure

SECTION II Arithmetic Test

Directions (Q.Nos. 41-60) For every question four probable answers bearing numbers 1, 2, 3 and 4 are given. Only one out of these is correct. You have to choose the correct answer.

41. The smallest 4 digit even number formed

- by the digits 0, 1, 2 and 3 is
 (1) 1023 (2) 1032
 (3) 3201 (4) 3210

42. The sum of two numbers is 11009. If one number is 9999, the other number is

- (1) 1010 (2) 1110
 (3) 2110 (4) 21008

43. The place value of 5 in 214.56

- (1) 5×1 (2) 5×10
 (3) 5×0.1 (4) 5×0.01

44. The simplification of $6 \div 6 + 6 \times 6 - 6$ gives

- (1) 1 (2) 7 (3) 31 (4) 36

45. The sum of the fractions $\frac{4}{3}$, $\frac{5}{9}$ and $\frac{6}{18}$ is

- (1) $\frac{2}{5}$ (2) $\frac{11}{18}$
 (3) $\frac{19}{9}$ (4) $\frac{20}{9}$

46. The LCM of 8, 12, 20 and 36 is

- (1) 120 (2) 180
 (3) 360 (4) 720

47. The HCF of two co-prime numbers is

- (1) 1 (2) 0
 (3) sum of the numbers (4) difference of the numbers

- 48.** Convert 4 m 2604 cm into centimetres.
 (1) 3040 cm (2) 3400 cm
 (3) 3004 cm (4) 6604 cm
- 49.** 10 m is what per cent of 10 km?
 (1) 0.1% (2) 1.0% (3) 10.0% (4) 40.0%
- 50.** Which of the following numbers are in ascending order?
 (1) $\frac{1}{3}, \frac{1}{2}, 0.25$ (2) $0.25, \frac{1}{2}, \frac{1}{3}$
 (3) $0.25, \frac{1}{3}, \frac{1}{2}$ (4) $\frac{1}{2}, \frac{1}{3}, 0.25$
- 51.** A bus left Delhi for Amritsar at 5 : 30 pm and reached Amritsar at 7 : 36 am next day. How much time did it take to reach Amritsar?
 (1) 2 h 6 min (2) 14 h 6 min
 (3) 13 h 6 min (4) 12 h 6 min
- 52.** The area of a square, whose perimeter is 48 m, will be
 (1) 48 sq m (2) 144 sq m
 (3) 1152 sq m (4) 2304 sq m
- 53.** After bought a ceiling fan on ₹ 750, one sells it with a profit of 18% then find the selling price.
 (1) ₹ 850 (2) ₹ 885
 (3) ₹ 860 (4) ₹ 855
- 54.** The simplification of $1 + \frac{1}{10} + \frac{1}{100} + \frac{1}{1000}$ in decimal form gives
 (1) 1.0001 (2) 1.111 (3) 1.001 (4) 0.111
- 55.** Factors of 30 are
 (1) 2, 3, 5
 (2) 1, 2, 3, 5, 10
 (3) 1, 2, 3, 10, 10
 (4) 1, 2, 3, 5, 6, 10, 15, 30
- 56.** What is the volume of a box whose each edge measures 3 m in length?
 (1) 54 cu m (2) 27 cu m
 (3) 18 cu m (4) 9 cu m
- 57.** The simple interest on ₹ 300 at the rate of 6% per annum in $2\frac{1}{2}$ yr will be
 (1) ₹ 18 (2) ₹ 36 (3) ₹ 40 (4) ₹ 45
- 58.** The area of circle is 38.5 sq cm. What will be its circumference?
 (1) 2.2 cm (2) 22 cm (3) 220 cm (4) 185 cm
- 59.** How much time will be taken to cover a distance of 100 km as a speed of 10 km/h?
 (1) 10 h (2) 15 h (3) 5 h (4) 20 h
- 60.** Dia bought rice bag ₹ 500 per bag. Due to spoilage she had to sold them for ₹ 450 per bag. Find the gain or loss per cent.
 (1) 10% loss (2) 10% gain
 (3) $33\frac{1}{3}\%$ loss (4) $33\frac{1}{3}\%$ gain

SECTION III Language Test (English)

Directions (Q.Nos. 61-80) There are four passages. Each passage is followed by five questions. Read each passage carefully and answer the questions that follow. For each question four probable answers bearing letters 1, 2, 3 and 4 are given. Only one out of these is correct. You have to choose the correct answer.

Passage 1

There are so many ways in which we can avoid waste. We can see that taps are turned off properly so that water is not wasted. We must save energy and energy means everything from electricity to petrol to cooking gas and firewood. Energy is useful in running all our factories, our transport, even the water pumps in the fields. Careful use of our energy resources can save us millions of rupees.

We must not waste food. There are many people less fortunate than us who do not get enough. We must also save paper and take care of our books. Wasteful use of paper means more felling of trees.

- 61.** Which of the following is not true?
 (1) We must save water
 (2) We must save electricity
 (3) We must save factories
 (4) We must save paper
- 62.** Which of the following does not provide us energy?
 (1) Electricity
 (2) Transport
 (3) Firewood
 (4) Petrol

- 63.** Many poor people do not get enough
 (1) food
 (2) trees
 (3) books
 (4) paper

- 64.** By saving energy we can save
 (1) money (2) people (3) taps (4) books
65. The word 'Fortunate' means
 (1) Lucky (2) Strong
 (3) God (4) Unlucky

Passage 2

One day Tansen sang one of the songs taught by his master and deliberately introduced a false note. It had almost an electric effect on the saint; his aesthetic nature received a rude shock. He turned to Tansen and rebuked him, saying, "What has happened to you, Tansen, that you, a pupil of mine, should commit such a gross blunder?"

He then started singing the piece correctly, the mood came upon him and enveloped him, and he forgot himself in the music which filled the earth and heaven and Akbar and Tansen themselves in the sheer melody and charm of the music. It was a unique experience. When the music stopped, Akbar turned to Tansen and said, "You say you learnt music from this saint and yet you seem to have missed the living charm of it all. Yours seems to be chaff beside this soul stirring music".

- 66.** 'It had almost an electric effect on the saint'. Here 'saint' refers to
 (1) Akbar
 (2) Tansen
 (3) Tansen's Guru
 (4) some other courtier

- 67.** Which word did Akbar use to describe Tansen's music?
 (1) Charming
 (2) Thrilling
 (3) Soul stirring
 (4) Chaff

- 68.** Tansen's Guru rebuked Tansen because
 (1) he sang a classical song
 (2) he sang a song with a false note
 (3) he tried to show his superiority over his master
 (4) he sang a song not suitable to the occasion

- 69.** What did Akbar miss in Tansen's music?
 (1) Chaff (2) Right tunes
 (3) Living charm (4) Inspiration

- 70.** Which one of the following is the antonym of the word 'Blunder'?
 (1) Fault (2) Misstep
 (3) Fluff (4) Accurate

Passage 3

Edward was glad because he had escaped from Hugo and his deceitful game. But he was very tired and hungry. He reached a farm house on the way. He saw an open door of a store of straw of paddy and wheat. He was shivering with cold and the store was hot. Therefore, he went into the room. He saw a blanket in the corner of the store. He took the blanket and covered himself and lay on the straw.

At the same moment, something touched him but he could not see that thing due to darkness. He wanted to sleep soon because he was tired but again his hand touched a smooth and warm thing. He caught hold of it. Was it a rope? But it had a lock of hair. He sat up holding it. He realised soon that it was not a rope but the tail of a calf.

- 71.** Edward
 (1) like to live with Hugo and his deceitful game
 (2) did not wish to live with Hugo and his deceitful game
 (3) wanted to live with Hugo but wanted to escape from his deceitful game
 (4) did not want to live with Hugo but wanted to live with thieves

- 72.** Edward went into the store because
 (1) he was hungry and tired
 (2) he wanted to sleep
 (3) he was feeling cold
 (4) he was in need of straw

- 73.** In the store
 (1) there was no animal
 (2) there was no door
 (3) there was no blanket
 (4) there was no rope

- 74.** Edward was holding
 (1) a rope (2) a tail
 (3) a snake (4) any other thing

- 75.** Which of the following is synonym of the word 'Glad'?
 (1) Happy (2) Beautiful
 (3) Sad (4) Joy

Passage 4

There was a poor man. He was thought to bring bad luck. Akbar heard of this man's reputation and wanted to see him. He was brought to Akbar. The emperor took a look at him and asked him to be brought back in the evening. That day Akbar was very busy and even forgot to eat. By the evening, he was very tired. He was informed that his son Prince Salim had fallen ill. It was that man's fault, Akbar decided. He called his courtiers and told them that he wanted to hang that man. All of them agreed immediately. But Birbal said, "Your face was the first face that man saw today and he has to die because of it." Akbar realised his mistake and rewarded Birbal for his wisdom.

76. Why had Akbar not eaten his food?

- (1) He was ill
- (2) He had seen that man
- (3) He was very busy
- (4) He was not hungry

77. Who was not well on that day?

- | | |
|------------------|------------------|
| (1) King Akbar | (2) His courtier |
| (3) The poor man | (4) Prince Salim |

78. Why did the king decide to hang the poor man?

- (1) The poor man refused to meet him

(2) The poor man was really very unlucky

- (3) Birbal advised him to do so
- (4) The king had a very good day

79. Birbal was rewarded because

- (1) he was in king's favour
- (2) he brought the poor man to the king
- (3) he made the king realise his mistake
- (4) he taught the poor man a lesson

80. The opposite word for 'forget' is

- (1) forgive
- (2) active
- (3) remember
- (4) meet

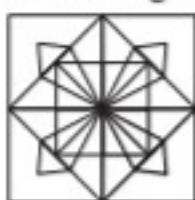
Answers

1 (3)	2 (4)	3 (4)	4 (1)	5 (1)	6 (1)	7 (4)	8 (3)	9 (2)	10 (1)
11 (2)	12 (1)	13 (2)	14 (3)	15 (1)	16 (1)	17 (1)	18 (3)	19 (2)	20 (4)
21 (1)	22 (1)	23 (4)	24 (2)	25 (4)	26 (1)	27 (2)	28 (4)	29 (4)	30 (3)
31 (4)	32 (1)	33 (3)	34 (3)	35 (2)	36 (1)	37 (1)	38 (3)	39 (3)	40 (4)
41 (2)	42 (1)	43 (3)	44 (3)	45 (4)	46 (3)	47 (1)	48 (3)	49 (1)	50 (3)
51 (2)	52 (2)	53 (2)	54 (2)	55 (4)	56 (2)	57 (4)	58 (2)	59 (1)	60 (1)
61 (3)	62 (2)	63 (1)	64 (1)	65 (1)	66 (3)	67 (4)	68 (2)	69 (3)	70 (3)
71 (2)	72 (3)	73 (4)	74 (2)	75 (1)	76 (3)	77 (4)	78 (2)	79 (3)	80 (3)

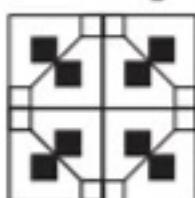
Hints and Solutions

1. Except figure (3), all the other are divided into four parts. Hence, figure (3) is odd one out.
 2. Except figure (4), all the other are related to suck or edible stuff. Hence, figure (4) is odd one out.
 3. Except figure (4), there is a hexagon inside the circles in all the figures. Hence, figure (4) is odd one out.
 4. Except figure (1), all the figures are similar. Hence, figure (1) is odd one out.
 5. Answer figures (1) is same as the given question figure.
 6. Answer figure (1) is same as the given question figure.
 7. Answer figure (4) is same as the given question figure.
 8. Answer figure (3) is same as the given question figure.
 9. Answer figure (2) will complete the given pattern.
-
10. Answer figure (1) will complete the given figure.
-

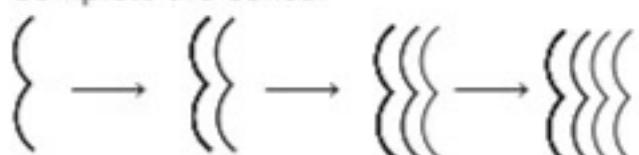
11. Answer figure (2) will complete the given figure.



12. Answer figure (1) will complete the given figure.



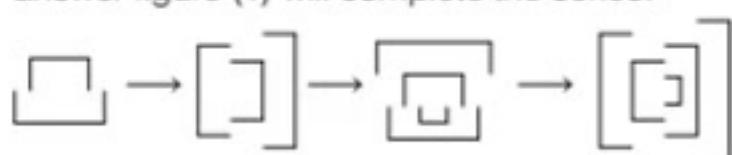
13. In every successive figure, one design is increasing. Hence, answer figure (2) will complete the series.



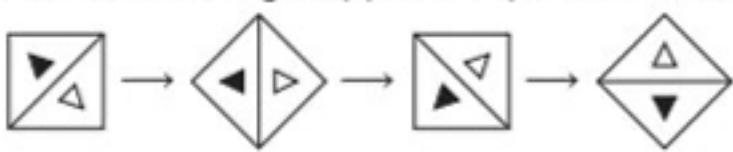
14. In every successive figure, a new arm is increasing in outer figure. Hence, answer figure (3) will complete the series.



15. In every step, figure is rotating 90° anti-clockwise and a figure is increasing in inner space. Hence, answer figure (1) will complete the series.



16. In every step, figure is rotating 45° anti-clockwise. Hence, answer figure (1) will complete the series.



17. As in question figure, first figure rotates 90° clockwise. In the same way, third figure rotates 90° clockwise. Hence, answer figure (1) is the correct choice.

18. As in question figure, arrow from first figure resolve in second one. In the same way, third figure resolve in fourth one. Hence, answer figure (3) is the correct choice.

19. As in question figure, line from upper side of first figure getting lowered in the next one and hence

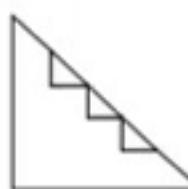
increase the length of design. In the same way, line from upper side of third figure getting lowered in the next one and increase the length of design. Hence, answer figure (2) is the correct choice.

20. As in question figure, second figure is water image of first one. In the same way, fourth one is water image of third one. Hence, answer figure (4) is the correct choice.

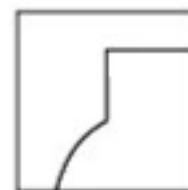
21. Answer figure (1) will complete the given geometrical figure.



22. Answer figure (1) will complete the given geometrical figure.



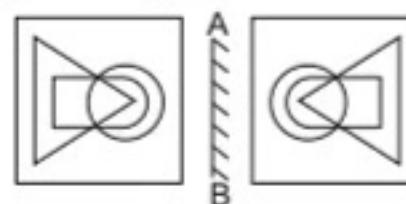
23. Answer figure (4) will complete the given geometrical figure.



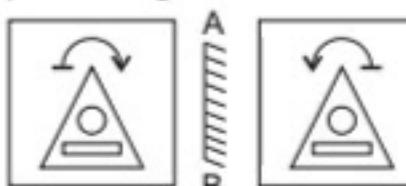
24. Answer figure (2) will complete the given geometrical figure.



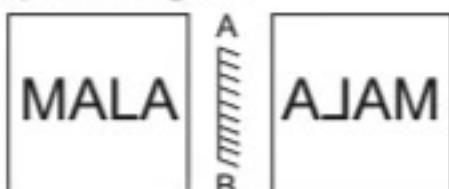
25. Answer figure (4) is the correct mirror image of the given question figure.



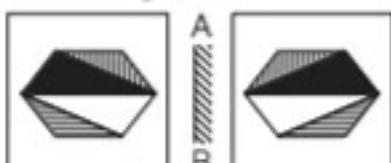
26. Answer figure (1) is the correct mirror image of the given question figure.



27. Answer figure (2) is the correct mirror image of the given question figure.



28. Answer figure (4) is the correct mirror image of the given question figure.



29. When the paper is folded, it is shown as in the answer figure (4).

30. When the paper is folded, it is shown as in the answer figure (3).

31. When the paper is folded, it is shown as in the answer figure (4).

32. When the paper is folded, it is shown as in the answer figure (1).

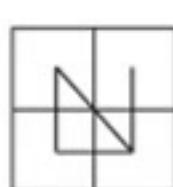
33. Answer figure (3) can be formed by using the cut pieces.

34. Answer figure (3) can be formed by using the cut pieces.

35. Answer figure (2) can be formed by using the cut pieces.

36. Answer figure (1) can be formed by using the cut pieces.

37. The question figure is embedded in the answer figure (1).



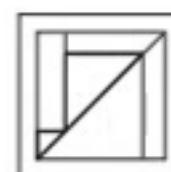
38. The question figure is embedded in the answer figure (3).



39. The question figure is embedded in the answer figure (3).



40. The question figure is embedded in the answer figure (4).



41. Smallest four digit even number = 1032

42. The sum of two numbers = 11009

One number = 9999

∴ Other number = 11009 - 9999 = 1010

43. 214.56

$$\overline{5} \times 0.1$$

Hence, place value of 5 in 214.56

$$= 5 \times 0.1$$

44. $6 \div 6 + 6 \times 6 - 6 = 1 + 6 \times 6 - 6$
 $= 1 + 36 - 6 = 37 - 6 = 31$

45. $\frac{4}{3} + \frac{5}{9} + \frac{6}{18} = \frac{6 \times 4 + 2 \times 5 + 1 \times 6}{18}$
 $= \frac{24 + 10 + 6}{18} = \frac{40}{18} = \frac{20}{9}$

2	8, 12, 20, 36
2	4, 6, 10, 18
3	2, 3, 5, 9
	2, 1, 5, 3

LCM = $2 \times 2 \times 3 \times 2 \times 5 \times 3 = 360$

46. 47. ∴ Required number = 1

48. ∵ 1 m = 100 cm

4 m = 400 cm

Now, 400 cm + 2604 cm = 3004 cm

49. ∵ 10 km = 10×1000 m = 10000 m

Let $x\%$ of 10 km = 10 m

$$\therefore \frac{x}{100} \times 10000 \text{ m} = 10 \text{ m}$$

$$x = \frac{10 \times 100}{10000}$$

$$= \frac{1}{10} = 0.1\%$$

50. ∵ $\frac{1}{3} = 0.33; \frac{1}{2} = 0.50$

∴ In ascending order the numbers will be written as

$$0.25 < 0.33 < 0.50$$

or $0.25, \frac{1}{3}, \frac{1}{2}$

51. ∵ Bus left Delhi at = 5 : 30 pm
 Reached Amritsar at = 7 : 36 am
 Time from 5 : 30 pm to 12 : 00 pm (mid-night)
 $= 12 : 00 - 5 : 30$
 $= 6 \text{ h } 30 \text{ min}$
 Time from 12 : 00 to 7 : 36 am = 7 h 36 min
 \therefore Total time = 6 h 30 min + 7 h 36 min
 $= 14 \text{ h } 6 \text{ min}$

52. ∵ The side of a square = $\frac{\text{Perimeter}}{4}$
 \therefore The side of given square = $\frac{48}{4} = 12 \text{ m}$
 \therefore Area = Side × Side
 $= 12 \times 12$
 $= 144 \text{ sq m}$

53. Let the cost price = 100% = ₹ 750
 Then, profit percentage = $(100 + 18)$
 $= 118\%$
 The selling price = $\frac{118 \times 750}{100} = ₹ 885$

54. $1 + \frac{1}{10} + \frac{1}{100} + \frac{1}{1000}$
 $= 1 + 0.1 + 0.01 + 0.001 = 1.111$

55. $30 = 1 \times 30 = 2 \times 15 = 3 \times 10 = 5 \times 6$
 \therefore Factors of 30 are 1, 2, 3, 5, 6, 10, 15, 30.

56. Volume of box = (side)³
 $= 3 \times 3 \times 3 = 27 \text{ cu m}$

57. Simple Interest = $\frac{\text{Principal} \times \text{Rate} \times \text{Time}}{100}$
 $= \frac{300 \times 6 \times 5}{100 \times 2} = ₹ 45$

58. ∵ Area of circle = πr^2
 $38.5 = \frac{22}{7} \times r^2$
 $\Rightarrow r^2 = \frac{269.5}{22} = 12.25$
 $\therefore r = \sqrt{12.25} = 3.5 \text{ cm}$
 Hence, circumference of circle
 $= 2\pi r = 2 \times \frac{22}{7} \times 3.5$
 $= 22 \text{ cm}$

59. Time taken to cover 10 km = 1 h
 Time taken to cover 1 km = $\frac{1}{10} \text{ h}$
 \therefore Time taken to cover 100 km = $\frac{1}{10} \times 100 = 10 \text{ h}$

60. Here, CP = ₹ 500 per bag
 SP = ₹ 450 per bag
 As, SP < CP, therefore Dia suffer a loss.
 $\text{Loss} = \text{CP} - \text{SP} = 500 - 450 = ₹ 50 \text{ per bag}$
 $\therefore \text{Loss \%} = \frac{\text{Loss}}{\text{CP}} \times 100$
 $= \frac{50}{500} \times 100 = 10\%$

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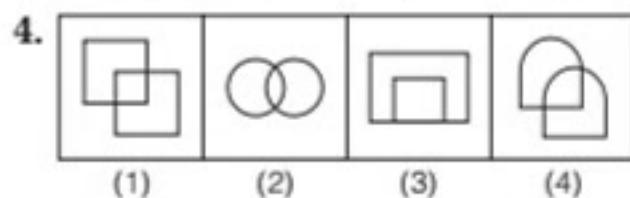
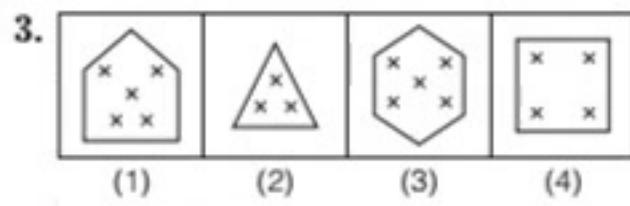
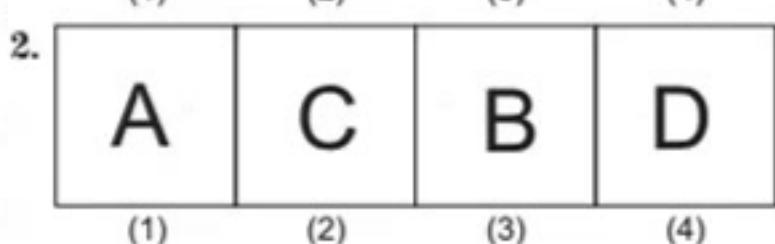
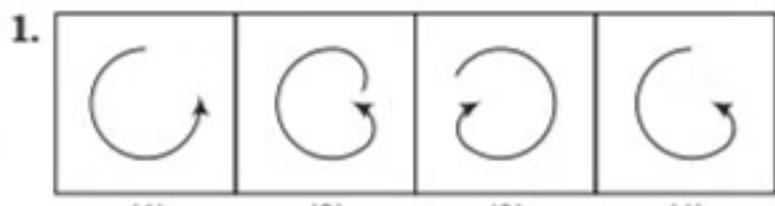
Entrance Exam (Class VI)

PRACTICE SET 4

Section I Mental Ability Test

Part I

Directions (Q.Nos. 1-4) In questions, four figures 1, 2, 3 and 4 have been given in each question of these four figures, three figures are similar in some way and one figure is different. Select the figure which is different.



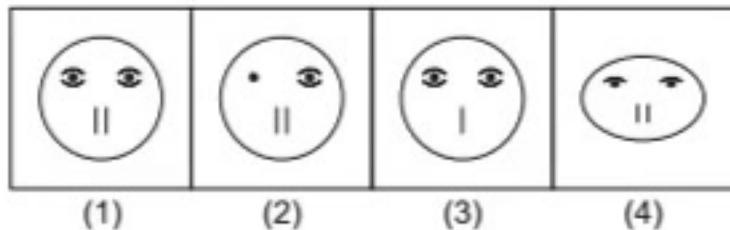
Part II

Directions (Q.Nos. 5-8) In questions, a question figure is given and four answer figures marked 1, 2, 3 and 4 are also given. Select the answer figure which is exactly the same as the question figure.

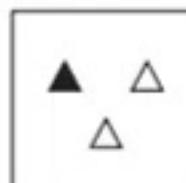
5. Question Figure



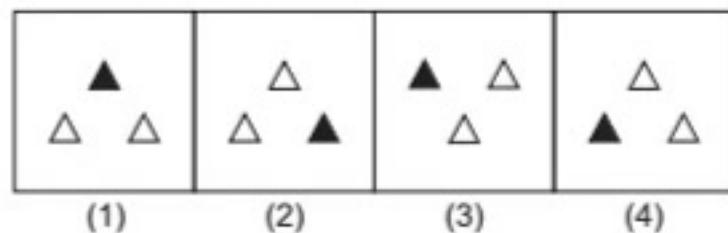
Answer Figures

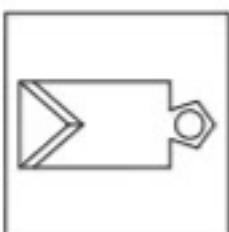
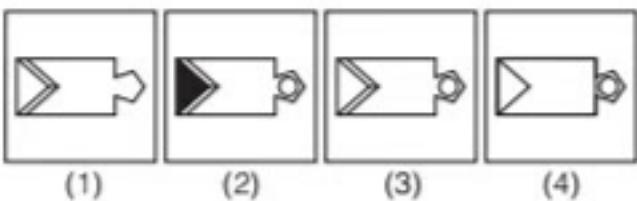


6. Question Figure

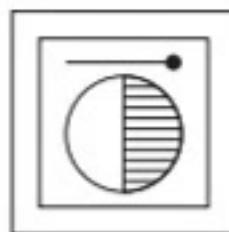
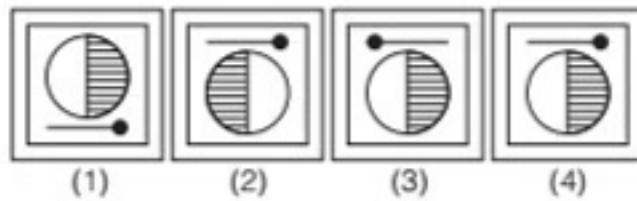


Answer Figures



7. Question figure**Answer figures**

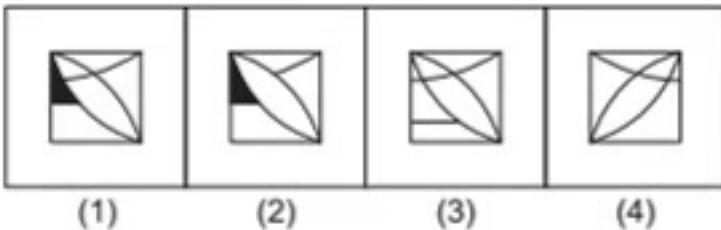
(1) (2) (3) (4)

8. Question Figure**Answer figures**

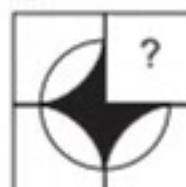
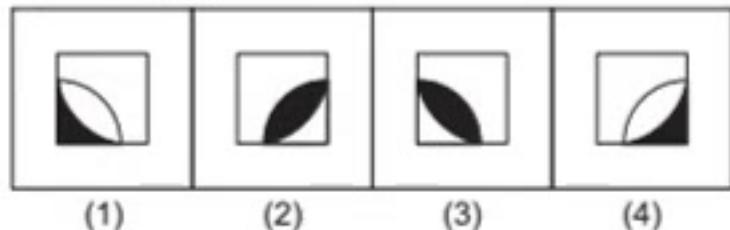
(1) (2) (3) (4)

Part III

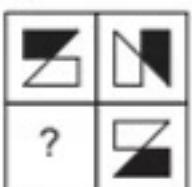
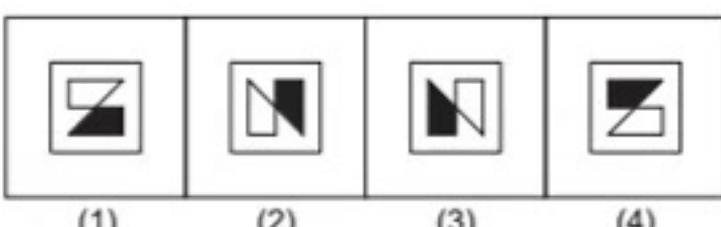
Directions (Q.Nos. 9-12) In questions, there is a question figure, a part of which is missing. Observe the answer figures 1, 2, 3 and 4 and find out the answer figure which without changing the direction, fits in the missing part of the question figure in order to complete the pattern in the question figure.

9. Question Figure**Answer Figures**

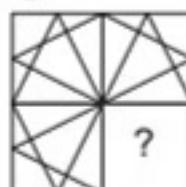
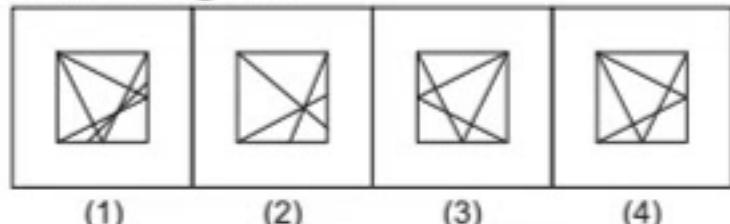
(1) (2) (3) (4)

11. Question Figure**Answer Figures**

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

10. Question Figure**Answer Figures**

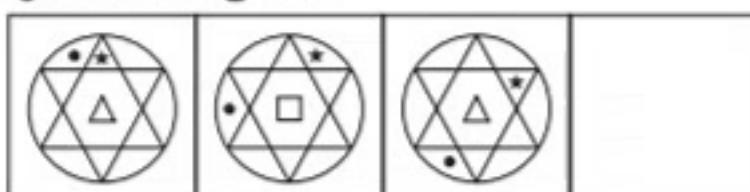
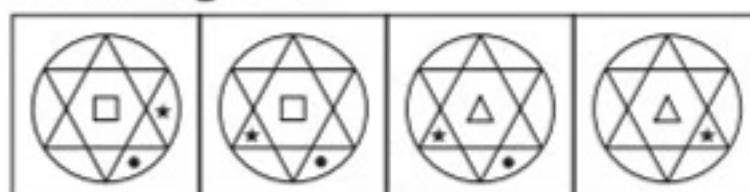
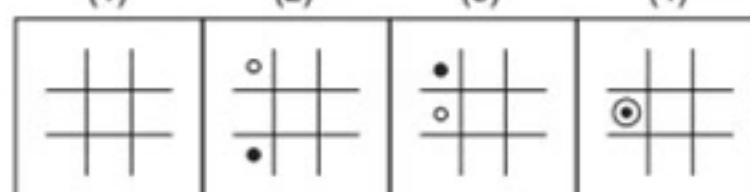
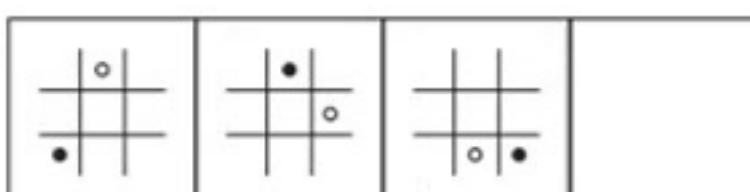
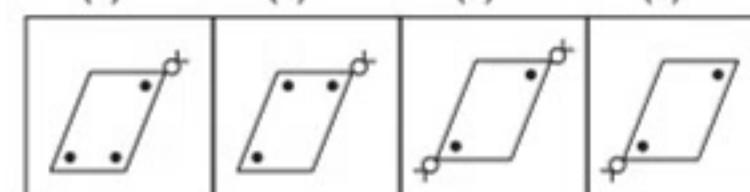
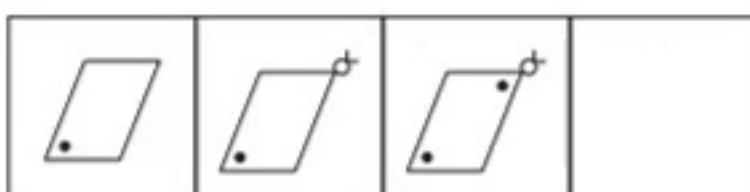
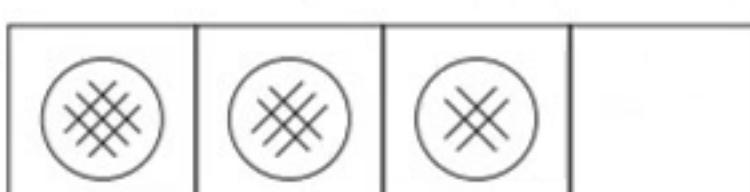
(1) (2) (3) (4)

12. Question Figure**Answer Figures**

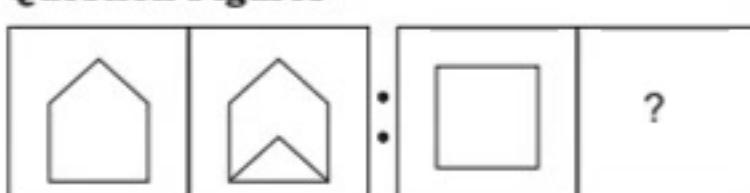
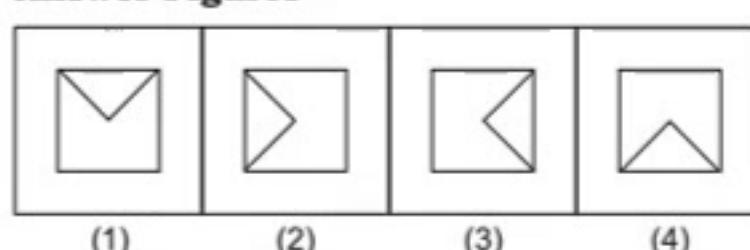
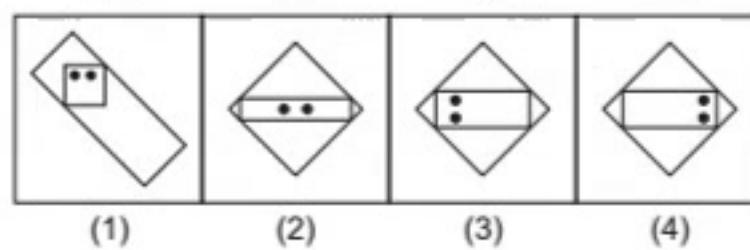
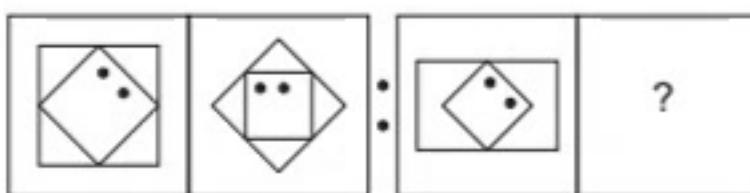
(1) (2) (3) (4)

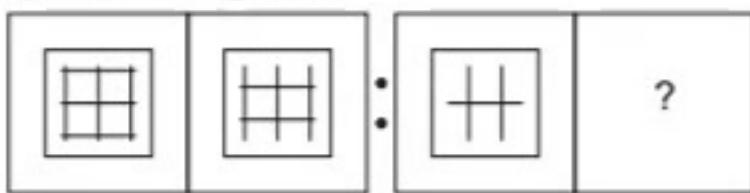
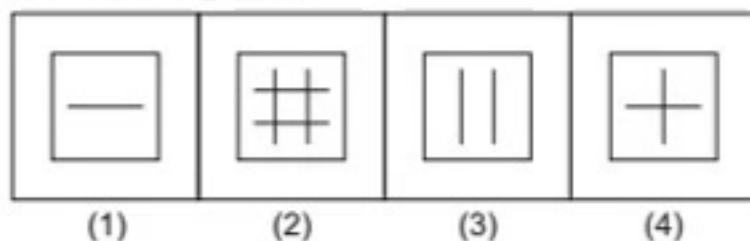
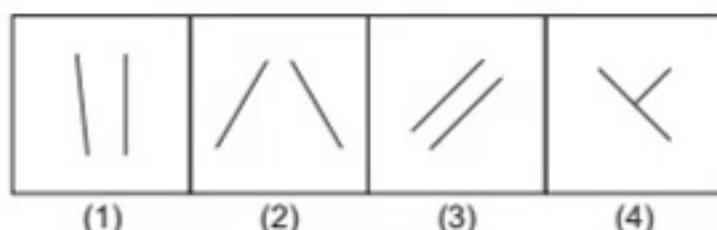
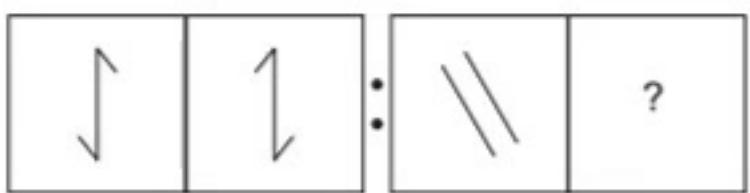
Part IV

Directions (Q.Nos. 13-16) There are three question figures and the space for the fourth figure is left blank. The question figures are in a series. Find out one figure among the answer figures given, which occupies the blank space for the fourth figure and completes the series.

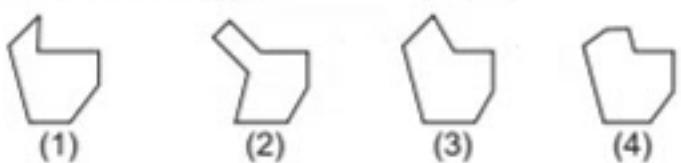
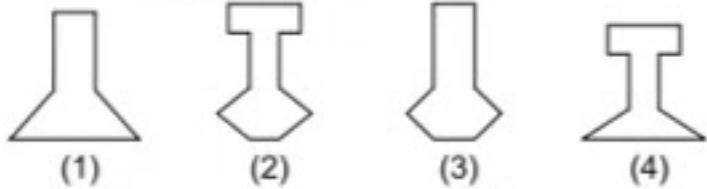
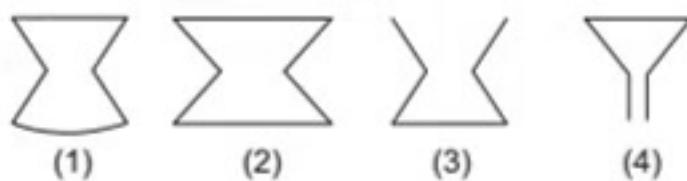
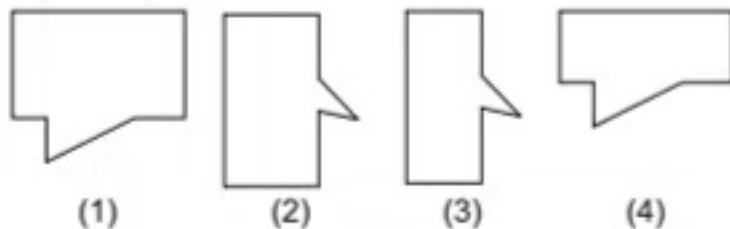
13. Question Figures**Answer Figures****14.****15.****16.****Part V**

Directions (Q.Nos. 17-20) In questions, there are two sets of two question figures each. The second set has a mark of interrogative (?). There exists a relationship between the first two question figures, similar relationship should exist between the third and fourth question figure. Select one of the answer figure which replace the mark of interrogative.

17. Question Figures**Answer Figures****18.**

19. Question Figures**Answer Figures****20.****Part VI**

Directions (Q.Nos. 21-24) In questions, one part of geometrical figure is given as question figure and the other one is among the four answer figures 1, 2, 3 and 4 are also given. Find out the figure that completes the geometrical figure.

21. Question Figure**Answer Figures****22. Question Figure****Answer Figures****23. Question Figure****Answer Figures****24. Question Figure****Answer Figures**

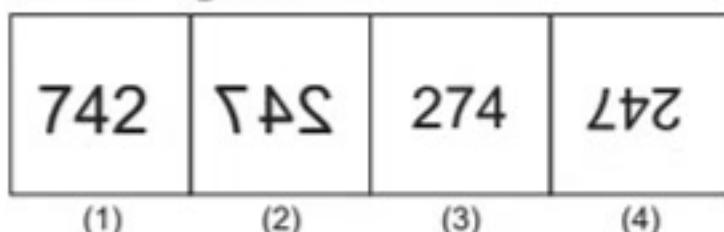
Part VII

Directions (Q.Nos. 25-28) In question, there is a question figure and four answer figures marked 1, 2, 3 and 4 are also given. Select the answer figure which is exactly the mirror image of the question figure when the mirror is held at AB.

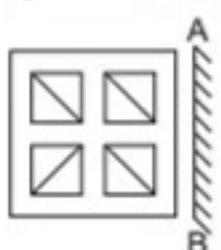
25. Question Figure



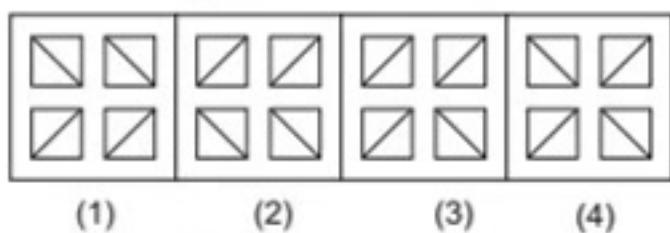
Answer Figures



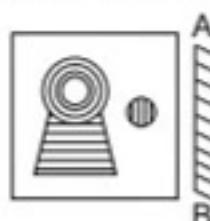
26. Question Figure



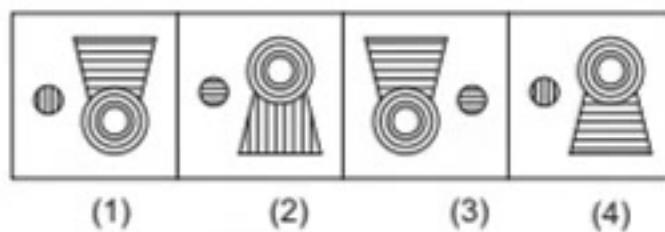
Answer Figures



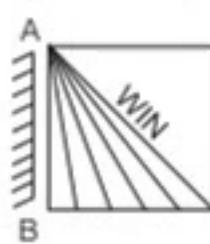
27. Question Figure



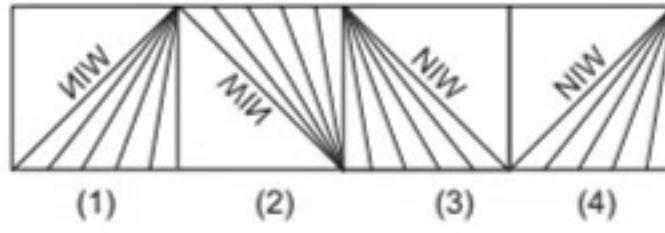
Answer Figures



28. Question Figure



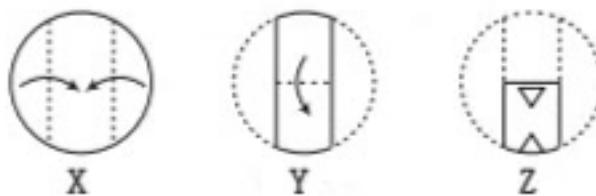
Answer Figures



Part VII

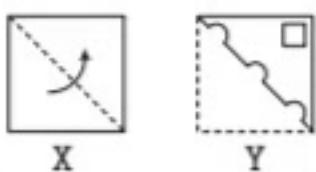
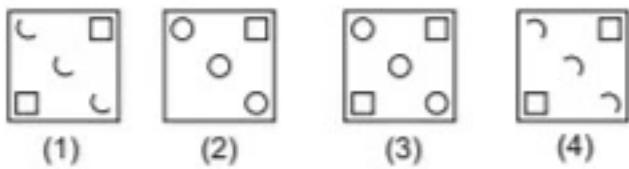
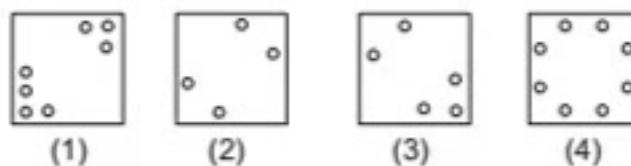
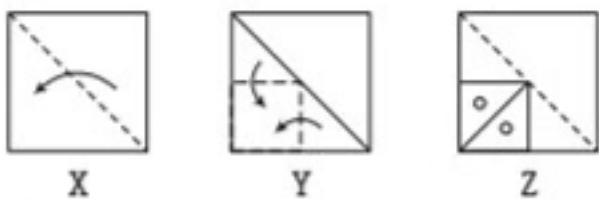
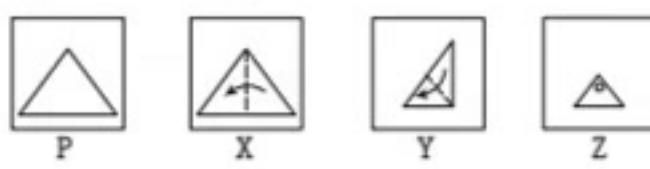
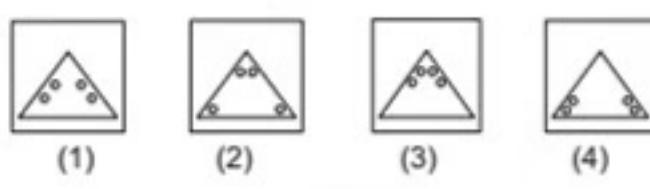
Directions (Q.Nos. 29-32) In questions, a piece of paper is folded and punched as shown in question figures and four answer figures marked 1, 2, 3 and 4 are also given. Select the answer figure which indicates how the paper will appear when opened (unfolded).

29. Question Figures

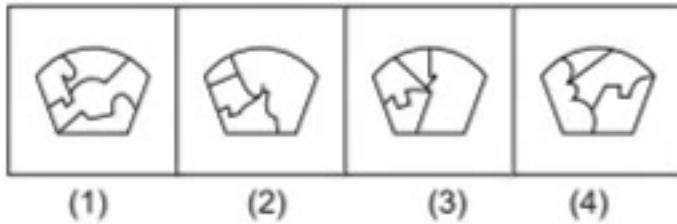
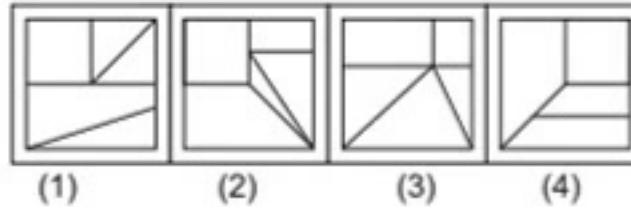
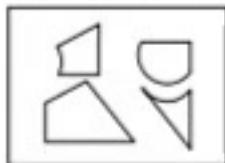
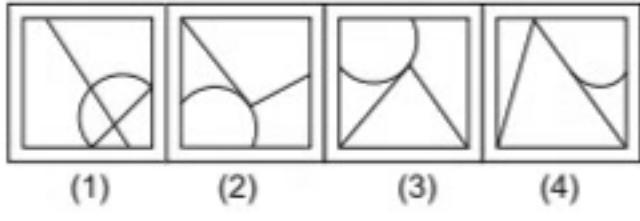
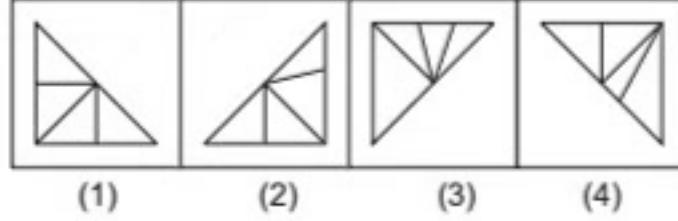


Answer Figures



30. Question Figures**Answer Figures****Answer Figures****31. Question Figures****32. Question Figures****Answer Figures****Part IX**

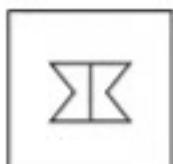
Directions (Q.Nos. 33-36) In questions, a question figure is given and four answer figures, marked 1, 2, 3 and 4 are also given. Select the answer figure which can be formed from the cut off pieces given in the question figure.

33. Question Figure**Answer Figures****35. Question Figure****Answer Figures****34. Question Figure****Answer Figures****36. Question Figure****Answer Figures**

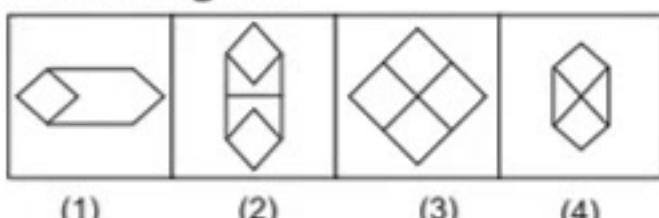
Part X

Directions (Q.Nos. 37-40) In questions, a question figure is given and four answer figures, marked 1, 2, 3 and 4 are also given. Select the answer figure in which the question figure is hidden/embedded.

37. Question Figure



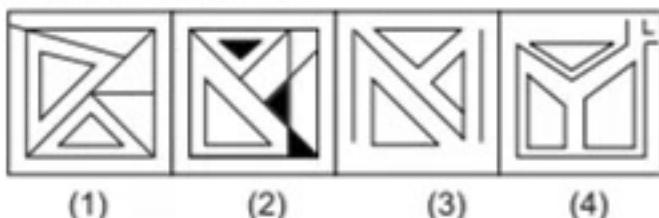
Answer Figures



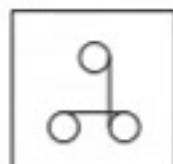
38. Question Figure



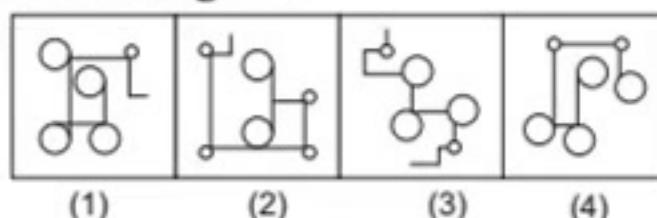
Answer Figures



39. Question Figure



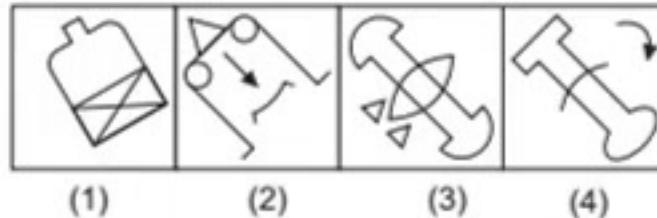
Answer Figures



40. Question Figure



Answer Figures



Section II Arithmetic Test

Directions (Q.Nos. 41-60) For every question, four probable answers bearing numbers 1, 2, 3 and 4 are given. Only one out of these is correct. You have to choose the correct answer.

41. What is the smallest 5 digit number which can be formed with the digits 4, 0 and 9?

- | | |
|-----------|-----------|
| (1) 40940 | (2) 40009 |
| (3) 99940 | (4) 90004 |

42. What is the LCM of 16, 80 and 48?

- | | |
|---------|---------|
| (1) 8 | (2) 16 |
| (3) 240 | (4) 480 |

43. How many seconds are there in 24 h?

- | | |
|----------|-----------|
| (1) 30 | (2) 60 |
| (3) 3600 | (4) 86400 |

44. In per cent, what is 10.01 written as?

- | | |
|------------|-------------|
| (1) 10.01% | (2) 10% |
| (3) 1001% | (4) 100100% |

45. In what time ₹ 3500 will become ₹ 4130 when annual rate of interest is 6%.

- | | |
|----------|----------|
| (1) 4 yr | (2) 3 yr |
| (3) 6 yr | (4) 5 yr |

46. A man buys a TV at ₹ 18200. He spends ₹ 1800 on repairing of TV. If he wants ₹ 3000 as profit. What is the selling price of TV?

- | | |
|-------------|-------------|
| (1) ₹ 20430 | (2) ₹ 21200 |
| (3) ₹ 23000 | (4) ₹ 25200 |

47. On dividing 93.45 by 0.015, what is the approximate answer?

- | | |
|---------|----------|
| (1) 0.6 | (2) 60 |
| (3) 600 | (4) 6000 |

48. What is the result of simplification of the expression?

$$2.5 \div 0.5 \times 0.1 - 0.05$$

- (1) 0.45 (2) 49.95 (3) 0.25 (4) 100

49. A soapcake measures 7 cm in length, 5 cm in breadth and 2.5 cm in height. How many soapcakes can be placed in a cardboard box whose length, breadth and height are, respectively, 56 cm, 40 cm and 25 cm?

- (1) 64 (2) 640 (3) 6400 (4) 6440

50. If 1 cm = 10 mm, how much is 10 cu cm?

- (1) 100 cu mm (2) 1000 cu mm
(3) 10000 cu mm (4) 100000 cu mm

51. The product of two fractions is 6. If one fraction is $\frac{5}{3}$. Find the other.

- (1) $\frac{3}{5}$ (2) $\frac{4}{5}$ (3) $\frac{18}{5}$ (4) $\frac{12}{5}$

52. Four pieces of 75 cm were cut from a piece of 14 m 25 cm of fabric. Find the length of remaining fabric.

- (1) 13 m 50 cm (2) 11 m 25 cm
(3) 10 m 50 cm (4) 10 m 25 cm

53. Pictograms shows the number the number of plants sold through a nursery from Monday to Friday.

Days	Sold Plants
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

= 20 plants

Find the number of plants sold from Monday to Friday.

- (1) 19 (2) 190
(3) 250 (4) 380

54. A moped costs ₹ 7250. A scooter costs ₹ 3750 more. What is the total cost of moped and a scooter?

- (1) ₹ 18250 (2) ₹ 11000
(3) ₹ 14750 (4) ₹ 3500

55. What is the prime factorisation of 37800?

- (1) $2 \times 2 \times 3 \times 3 \times 5 \times 5 \times 7 \times 7$
(2) $2 \times 2 \times 2 \times 3 \times 3 \times 3 \times 5 \times 5 \times 7$
(3) $8 \times 27 \times 25 \times 7$
(4) $2 \times 4 \times 25 \times 27 \times 7$

56. The difference between the LCM and HCF of the numbers 30, 36 and 90 is

- (1) 366 (2) 354
(3) 186 (4) 174

57. In a race of 1 km A defeats B by 36 m or 18 s. How much time (in s) did A take to complete the full distance?

- (1) 500
(2) 582
(3) 460
(4) 482

58. The number of 15 cm sq tiles required to lay a floor of size 3.6 m \times 4.6 m is

- (1) 720
(2) 360
(3) 10800
(4) 5400

59. Find the average of the following set of scores 567, 434, 323, 290, 401.

- (1) 398
(2) 412
(3) 407
(4) 403

60. A, B and C will divide an amount of ₹ 9861 amongst themselves in the ratio of 3 : 11 : 5, respectively. What is the B's share in the amount?

- (1) ₹ 4671
(2) ₹ 5709
(3) ₹ 6228
(4) ₹ 7266

SECTION III Language Test (English)

Directions (Q Nos. 61–80) There are four passages in this section. Each passage is followed by five questions. Read each passage carefully and answer the questions that follow. For each question four probable answers bearing numbers 1, 2, 3 and 4 are given. Only one out of these is correct. You have to choose the correct answer.

Passage 1

I felt lonely in a classroom full of boys and girls and a teacher. The teacher walked up to me smiling. She put her hand tenderly on my shoulder and asked—"What is your name?" "Abhayankar..."—I whispered. "Say aloud, so I can hear it," she said. I tried but I could not. My lips were dry, perhaps sealed. I could not open my mouth. Then the teacher asked me to write my name on the blackboard. I went up to the blackboard, lifted the white chalk and as I was about to write, my mind went blank. I knew my name, I knew how to write it, but standing in front of so many boys and girls and the teacher made me uncomfortable.

61. Which of the following words does not describe the narrator?
- (1) Nervous
 - (2) Uncomfortable
 - (3) Confident
 - (4) Timid
62. The most appropriate heading for this passage would be
- (1) how to write ones name
 - (2) first day in the class
 - (3) a rude teacher
 - (4) a shy boy
63. Select the most suitable synonym of 'Uncomfortable'.
- (1) Inconvenient
 - (2) Comfortable
 - (3) Convenient
 - (4) Satisfying
64. The boy could not write his name, because he was
- (1) lonely
 - (2) afraid
 - (3) sick
 - (4) nervous
65. The teacher was ... towards the boy.
- (1) sympathetic
 - (2) rude
 - (3) unhelpful
 - (4) indifferent

Passage 2

It was a cold and dark night. Passing through the street, I heard a woman scream—"Help! Help". I stopped and looked around. There was no light in most of the houses. Everyone seemed to be sleeping. It could be my imagination—I thought and continued walking homewards. Suddenly I heard the same voice again, "Please, do not kill me! Take my money ... my ornaments, but leave me ...!" So, it was not my imagination. Some woman was in distress in the house nearby. I must save her. I rushed to the door of the house and with all my strength, pushed it open. I could still hear some sobs coming from the bedroom. So I ran into his bedroom, searched but could find no woman there. The radio was on. I heard the announcer, saying, "You had just heard a radio play 'Stranger murder'. Now, please standby for the news that follows".

66. He thought everyone was asleep, because
- (1) it was a cold night
 - (2) there was no light in the houses
 - (3) no one responded to the screams
 - (4) there was darkness everywhere
67. Why did the narrator enter the bedroom?
- (1) To look for the murderer of some woman
 - (2) To save the woman from being killed
 - (3) To pick up a fight with the murderer
 - (4) To listen to the radio play
68. "You had just heard a radio play ..." here 'you' refers to
- (1) the narrator
 - (2) the tall man
 - (3) the woman
 - (4) the listener
69. What compelled the narrator to enter the house?
- (1) His sense of bravery
 - (2) Fellow feeling
 - (3) His desire to help someone in distress
 - (4) His need of some mysterious story
70. Which of the following is the correct synonym of the given word 'Distress'?
- (1) Pleasure
 - (2) Relief
 - (3) Happiness
 - (4) Anguish

Passage 3

India is very hot, especially in summer. It is easy to grow cotton and produce silk here. Cotton and silk can be made into thin clothes. People who live in hot countries often wear white clothes because white does not absorb heat as quickly as other colours do. Saris are also comfortable to wear because they do not cling to the body. We can often tell about the jobs of the people by looking at their clothes. Cooks usually wear white aprons so that they can see when their clothes are dirty. Policemen, firemen and soldiers have special uniforms. Students too wear uniforms to show which school they belong to.

- 71.** If 'cold' is an opposite word for 'hot' what will be opposite for 'summer'?

- (1) Rains (2) Spring
 (3) Winter (4) Snowfall

- 72.** Which of the following need not wear a uniform?

- (1) A school student (2) A policeman
 (3) An army man (4) A minister

- 73.** Cooks wear white aprons, because

- (1) they want to look smart
 (2) it helps them cook fast
 (3) white is a cool colour

- (4) they can see when it is dirty

- 74.** Saris are comfortable to wear, because

- (1) they are made of one piece
 (2) they do not cling to the body
 (3) they are not very costly
 (4) they help one look beautiful

- 75.** Indians wear cotton clothes in summer, because cotton

- (1) keeps their body cool
 (2) is cheaper than wool and silk
 (3) is easy to wash
 (4) is available in attractive colours

Passage 4

The boys and the girls divided the work among themselves. Anil and Zeenat fetched two big baskets from their homes. The children picked up the pieces of paper, empty bottles and plastic bags that lay about. They put them into the baskets and emptied them into the garbage bin nearby. They knew a garbage truck come daily to clean out the bin. By the end of the morning, the park looked much cleaner and tidier. From that day onwards, the children made sure that their park looked clean and litter-free. Anil's father helped them to make flower beds. The children took turns to water the seeds. When the flowers bloomed, everyone in the neighbourhood was happy.

- 76.** 'Picked up' means

- (1) collected
 (2) sought
 (3) carried
 (4) cleaned

- 77.** People in the neighbourhood were happy, because

- (1) they could walk in the park
 (2) the park has been made litter-free
 (3) the flowers in the park had bloomed
 (4) the children helped themselves

- 78.** The children did not pick up

- (1) pieces of paper (2) plastic bags
 (3) empty bottles (4) the garbage bin

- 79.** The opposite word for 'sad' used in the passage above is

- (1) neat (2) happy
 (3) tidy (4) wise

- 80.** They fetched the baskets to

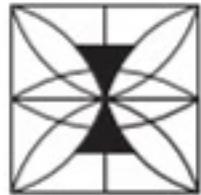
- (1) collect the flowers (2) collect the litter
 (3) carry manure (4) carry seeds

Answers

1 (3)	2 (2)	3 (3)	4 (3)	5 (1)	6 (3)	7 (3)	8 (4)	9 (1)	10 (3)
11 (1)	12 (4)	13 (1)	14 (4)	15 (3)	16 (4)	17 (4)	18 (2)	19 (3)	20 (3)
21 (3)	22 (2)	23 (1)	24 (1)	25 (2)	26 (3)	27 (4)	28 (1)	29 (4)	30 (3)
31 (4)	32 (1)	33 (3)	34 (2)	35 (2)	36 (1)	37 (2)	38 (1)	39 (1)	40 (1)
41 (2)	42 (3)	43 (4)	44 (3)	45 (2)	46 (3)	47 (4)	48 (1)	49 (2)	50 (3)
51 (3)	52 (2)	53 (4)	54 (1)	55 (2)	56 (4)	57 (4)	58 (1)	59 (4)	60 (2)
61 (3)	62 (2)	63 (1)	64 (4)	65 (1)	66 (2)	67 (2)	68 (4)	69 (3)	70 (4)
71 (3)	72 (4)	73 (4)	74 (2)	75 (1)	76 (1)	77 (3)	78 (4)	79 (2)	80 (2)

Hints and Solutions

- Except figure (3) in all the other figures, sign of arrow is in anti-clockwise direction. Hence, figure (3) is odd one out.
- Except figure (2), all other words are consonants. Whereas, word in the figure (2) is vowel. Hence, figure (2) is odd one out.
- Except figure (3), in all other figures number of inside symbols are same as the number of lines in the outside figure. Hence, figure 3 is odd one out.
- Except figure (3), in all others, two same figures are overlapping each other. Hence, figure (3) is odd one out.
- Answer figure (1) is similar as the given question figure.
- Answer figure (3) is similar as the given question figure.
- Answer figure (3) is similar as the given question figure.
- Answer figure (4) is similar as the given question figure.
- Answer figure (1) will complete the given question figure.



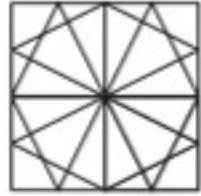
- Answer figure (3) will complete the given question figure.



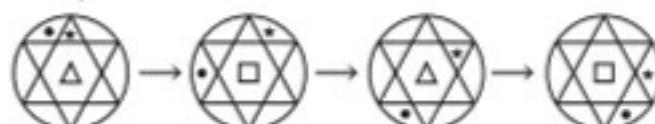
- Answer figure (1) will complete the given question figure.



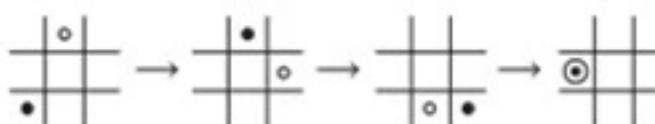
- Answer figure (4) will complete the given question figure.



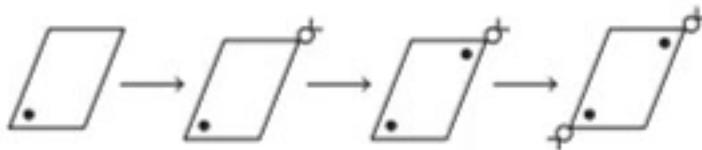
- In every successive figure, darken smaller circle moving ahead in anti-clockwise direction upto two vacant space and darken star like design moving ahead upto one vacant space and inside the middle of the figure, triangle and square taken place on alter basis. Hence, answer figure (1) will complete the series.



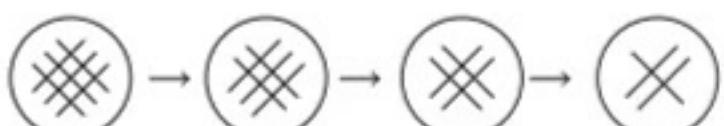
- In every successive figure, blank circle moving ahead in clockwise direction upto one vacant space and darken smaller circle moving ahead in clockwise direction upto two vacant space. Hence, answer figure (4) will complete the series.



- In every successive figure, a design is increasing as well as dot. Hence, answer figure (3) will complete the series.



- In every successive figure, a diagonal line is missing. Hence, answer figure (4) will complete the series.



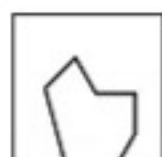
- As in question figure, second figure has extra triangle on the base as compare to first one. In the same way, fourth figure has extra triangle on the base as compare to third one.

- As in question figure, interchange occurs from innermost to its outer one with dots horizontal. In the same way, interchange occurs again with getting dots horizontal.

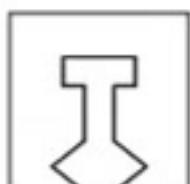
- As in question figure, horizontal line getting lesser as compare to figure one. In the same way, horizontal line getting lesser as compare to figure three.

- As in question figure, mirror image of first figure produces the second one. In the same way, mirror image of third one produces the fourth one.

21. Answer figure (3) will complete the given geometrical figure.



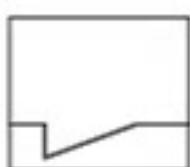
22. Answer figure (2) will complete the given geometrical figure.



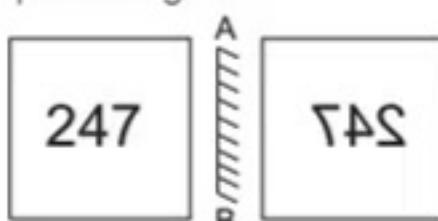
23. Answer figure (1) will complete the given geometrical figure.



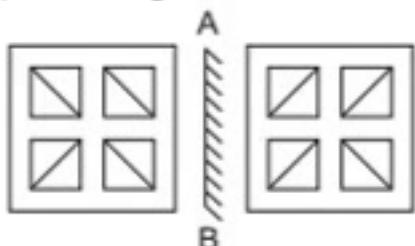
24. Answer figure (1) will complete the given geometrical figure.



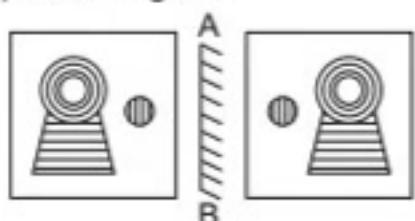
25. Answer figure (2) is the correct mirror image of the given question figure.



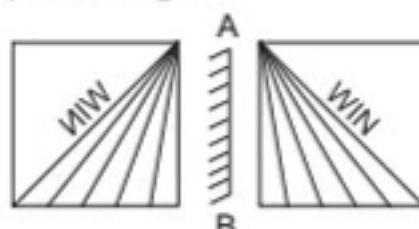
26. Answer figure (3) is the correct mirror image of the given question figure.



27. Answer figure (4) is the correct mirror image of the given question figure.



28. Answer figure (1) is the correct mirror image of the given question figure.



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

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

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

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

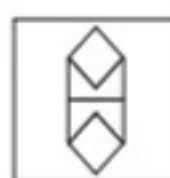
33. Answer figure (3) can be formed by using the cut pieces.

34. Answer figure (2) can be formed by using the cut pieces.

35. Answer figure (2) can be formed by using the cut pieces.

36. Answer figure (1) can be formed by using the cut pieces.

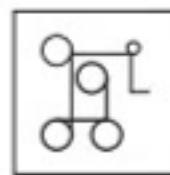
37. The question figure is embedded in the answer figure (2).



38. The question figure is embedded in the answer figure (1).



39. The question figure is embedded in the answer figure (1).



40. The question figure is embedded in the answer figure (1).



42. LCM of 16, 80 and 48

2	16, 80, 48
2	8, 40, 24
2	4, 20, 12
2	2, 10, 6
	1, 5, 3

$$\text{LCM} = 2 \times 2 \times 2 \times 2 \times 5 \times 3 = 16 \times 15 = 240$$

44. $10.01 = \frac{1001}{100} = 1001\%$

45. Simple interest = $4130 - 3500 = 630$

We know that, $SI = \frac{P \times R \times T}{100}$

Where, P = Principal, R = Rate, T = Time

$$630 = \frac{3500 \times 6 \times T}{100} \Rightarrow T = \frac{630}{35 \times 6} = \frac{630}{210} = 3 \text{ yr}$$

46. Total cost price of TV = ₹ (18200 + 1800)

$$= ₹ 20000$$

Profit = ₹ 3000

[given]

We know that,

Selling price = Cost price + Profit
= 20000 + 3000 = ₹ 23000

47. $93.45 + 0.015 = \frac{93450}{15} = 6230$

$$= 6000 \text{ (approx.)}$$

48. Expression = $2.5 + 0.5 \times 0.1 - 0.05$

$$= \frac{2.5}{0.5} \times 0.1 - 0.05 = 5 \times 0.1 - 0.05$$

$$= 0.5 - 0.05 = 0.45$$

49. Volume of a soapcake = $7 \times 5 \times 2.5 \text{ cu cm}$

Volume of the cardboard box

$$= 56 \times 40 \times 25 \text{ cu cm}$$

Number of cakes that can be put inside the

$$\text{cardboard box} = \frac{56 \times 40 \times 25}{7 \times 5 \times 2.5} = 640$$

50. $1 \text{ cm} = 10 \text{ mm}$

$$1 \text{ cu cm} = 10 \times 10 \times 10 \text{ cu mm}$$

$$10 \text{ cu cm} = 10 \times 10 \times 10 \times 10 = 10000 \text{ cu mm}$$

51. Let x be the other fraction.

$$\text{Then, } x \times \frac{5}{3} = 6 \Rightarrow \frac{5x}{3} = 6$$

$$\therefore x = \frac{6 \times 3}{5} = \frac{18}{5}$$

52. Total length of fabric = 14 m 25 cm

$$= 1400 + 25 = 1425 \text{ cm}$$

$$\text{Length of 4 pieces of } 75 \text{ cm} = 75 \times 4 = 300 \text{ cm}$$

$$\text{Remaining length} = 1425 \text{ cm} - 300 \text{ cm}$$

$$= 1125 \text{ cm} = 11 \text{ m 25 cm}$$

53. Number of plants sold from Monday to Friday

$$= 20 \times (2 + 4 + 5 + 3 + 5) = 20 \times 19 = 380$$

54. Cost of the maped = ₹ 7250

$$\text{Cost of the scooter} = ₹ 7250 + 3750 = ₹ 11000$$

$$\therefore \text{Total cost of both the vehicles} = 11000 + 7250 \\ = ₹ 18250$$

55. $\begin{array}{r|l} 2 & 37800 \\ \hline 2 & 18900 \\ \hline 2 & 9450 \\ \hline 3 & 4725 \\ \hline 3 & 1575 \\ \hline 3 & 525 \\ \hline 5 & 175 \\ \hline 5 & 35 \\ \hline & 7 \end{array}$

Prime factorisation

$$= 2 \times 2 \times 2 \times 3 \times 3 \times 3 \times 5 \times 5 \times 7$$

56. $\begin{array}{r|l} 2 & 30, 36, 90 \\ \hline 2 & 15, 18, 45 \\ \hline 3 & 15, 9, 45 \\ \hline 3 & 5, 3, 15 \\ \hline 5 & 5, 1, 5 \\ \hline & 1, 1, 1 \end{array}$

$$\text{LCM} = 2 \times 2 \times 3 \times 3 \times 5 = 180$$

$$30 = 2 \times 3 \times 5 \Rightarrow 36 = 2 \times 2 \times 3 \times 3$$

$$90 = 2 \times 3 \times 3 \times 5$$

$$\text{HCF} = 2 \times 3 = 6$$

$$\therefore \text{Required difference} = 180 - 6 = 174$$

57. B, runs 36 m in 18 s

$$B \text{ will run 1000 m in } = \frac{18}{3} \times 1000 \text{ s} = 500 \text{ s}$$

So, taken time by A for complete the race
= 500 - 18 = 482 s

58. Number of tiles required

$$\begin{aligned} &= \frac{\text{Area of floor}}{\text{Area of one tile}} = \frac{3.6 \times 4.5}{0.15 \times 0.15} \\ &= \frac{36}{10} \times \frac{45}{10} \times \frac{100}{15} \times \frac{100}{15} = 720 \end{aligned}$$

59. Average = $\frac{567 + 434 + 323 + 290 + 401}{5} = \frac{2015}{5} = 403$

60. B's share in the amount = $\frac{9861 \times 11}{19} = ₹ 5709$

Jawhar Navodaya Vidyalaya

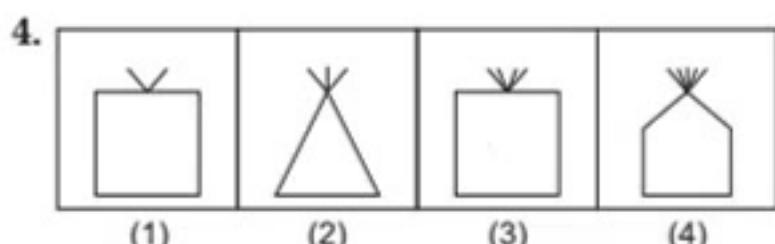
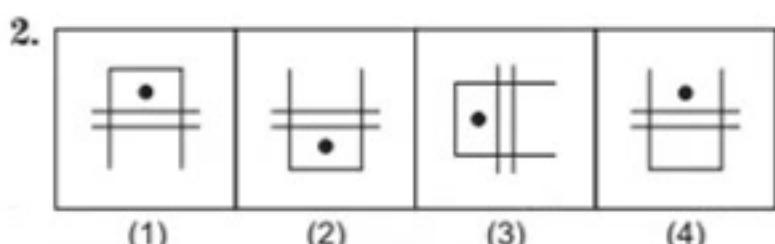
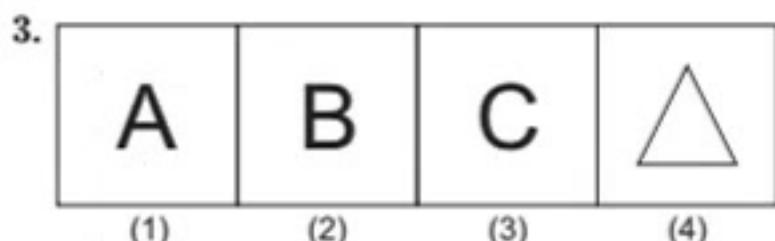
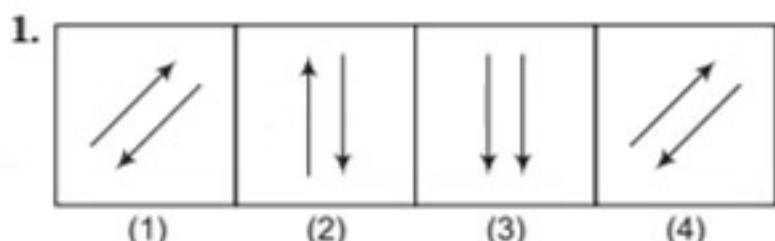
Entrance Exam (Class VI)

PRACTICE SET 5

Section I Mental Ability Test

Part I

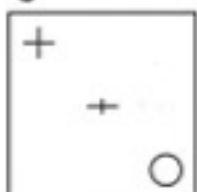
Directions (Q.Nos. 1-4) In questions, four figures 1, 2, 3 and 4 have been given in each question of these four figures, there figures are similar in some way and one figure is different. Select the figure which is different.



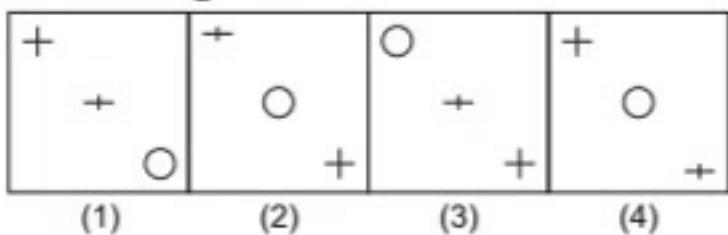
Part II

Directions (Q. Nos. 5-8) In questions, a question figure is given and four answer figures marked 1, 2, 3 and 4 are also given. Select the answer figure which is exactly the same as the question figure.

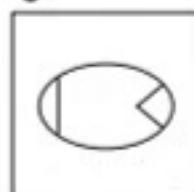
5. Question Figure



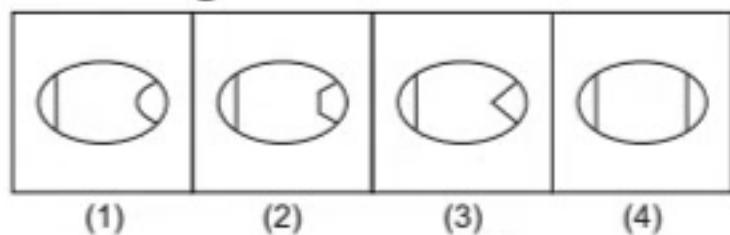
Answer Figures

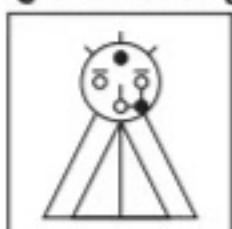
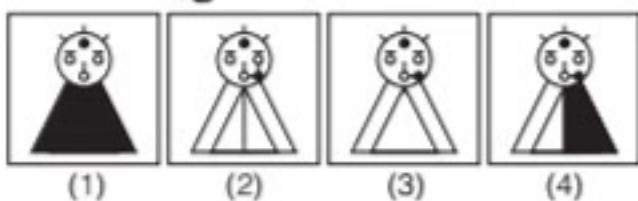


6. Question Figure



Answer Figures



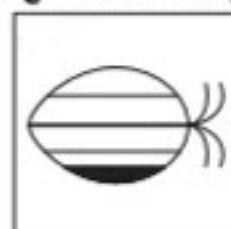
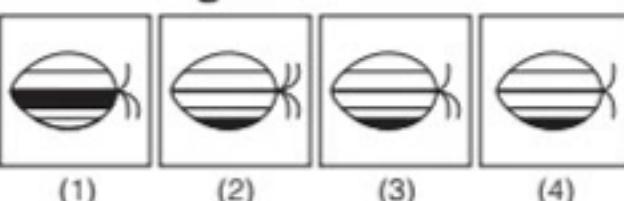
7. Question Figure**Answer Figures**

(1)

(2)

(3)

(4)

8. Question Figure**Answer Figures**

(1)

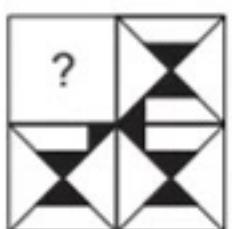
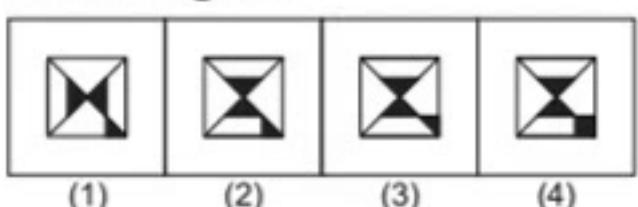
(2)

(3)

(4)

Part III

Directions (Q. Nos. 9-12) In questions, there is a question figure, a part of which is missing. Observe the answer figure 1, 2, 3 and 4 and find out the answer figure which without changing the direction, fits in the missing part of the question figure in order to complete the pattern in the question figure.

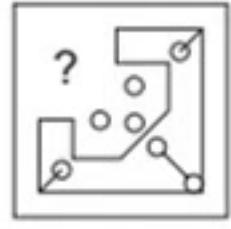
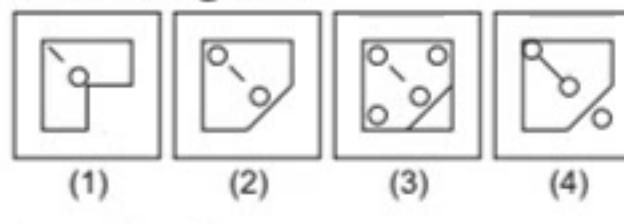
9. Question Figure**Answer Figures**

(1)

(2)

(3)

(4)

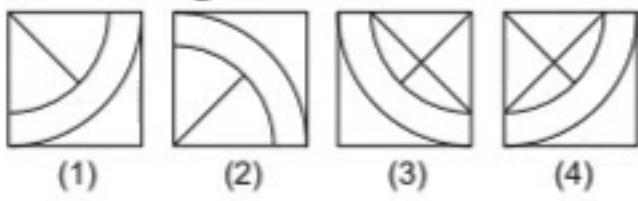
11. Question Figure**Answer Figures**

(1)

(2)

(3)

(4)

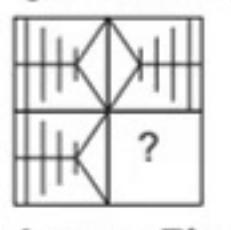
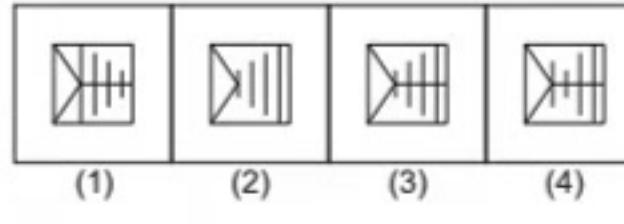
10. Question Figure**Answer Figures**

(1)

(2)

(3)

(4)

12. Question Figure**Answer Figures**

(1)

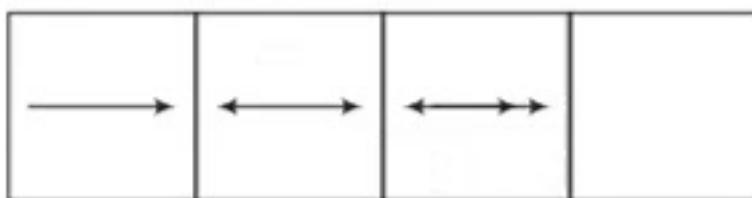
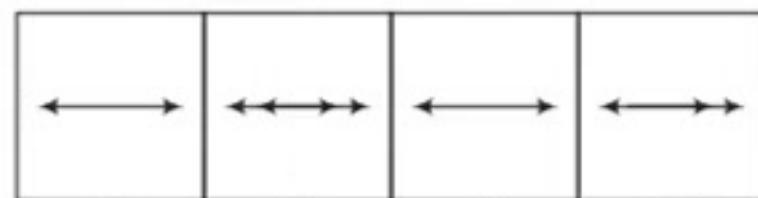
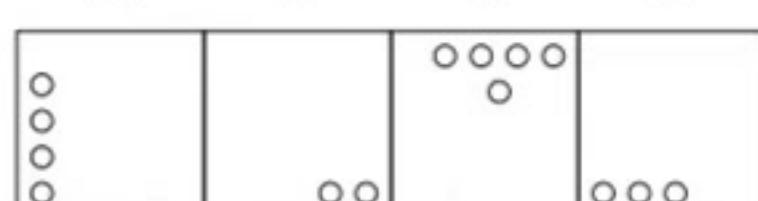
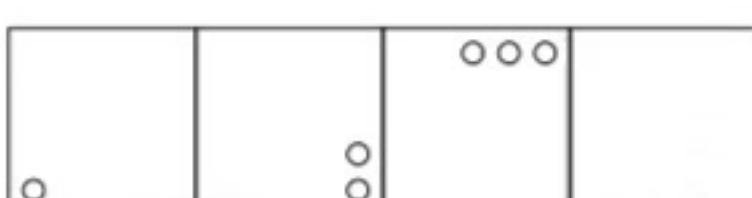
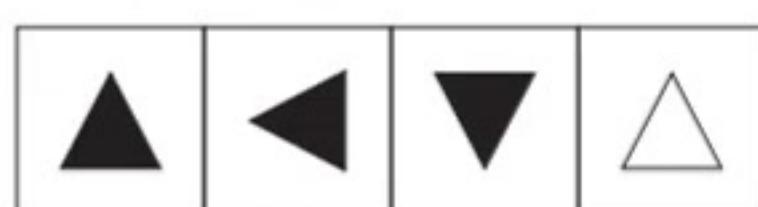
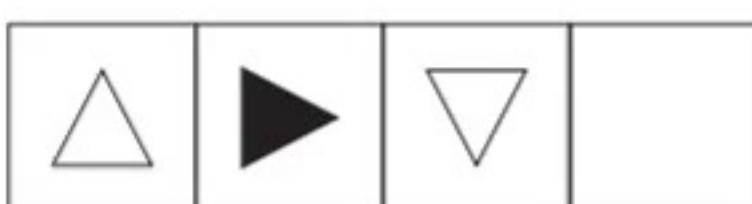
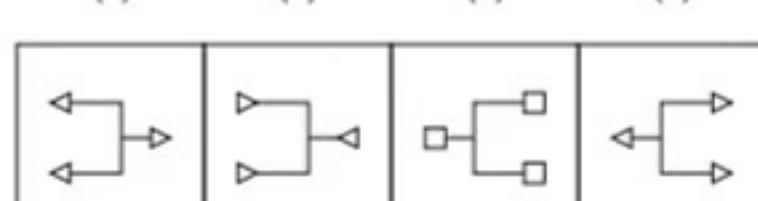
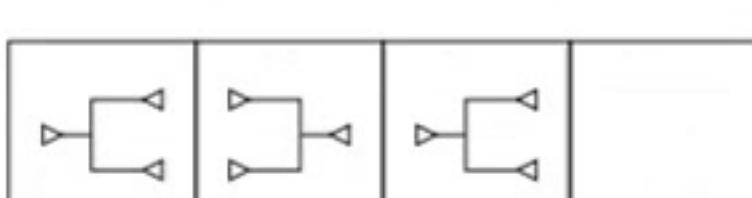
(2)

(3)

(4)

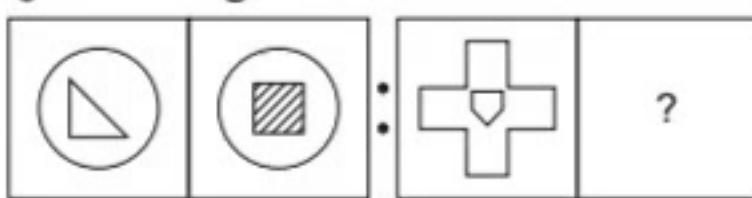
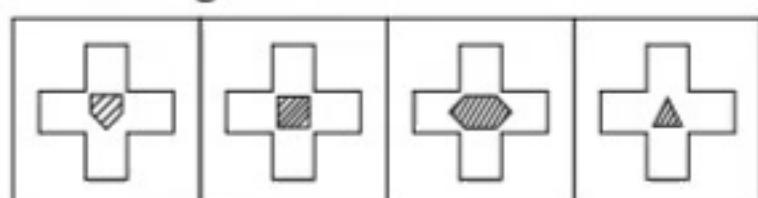
Part IV

Directions (Q. Nos. 13-16) There are three question figures and the space for the fourth figure is left blank. The question figures are in a series. Find out one figure among the answer figures given, which occupies the blank space for the fourth figure and completes the series.

13. Question Figures

Answer Figures

14.

15.

16.


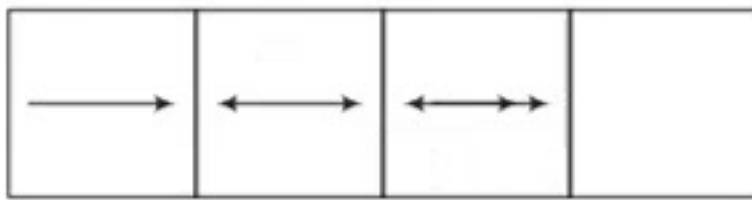
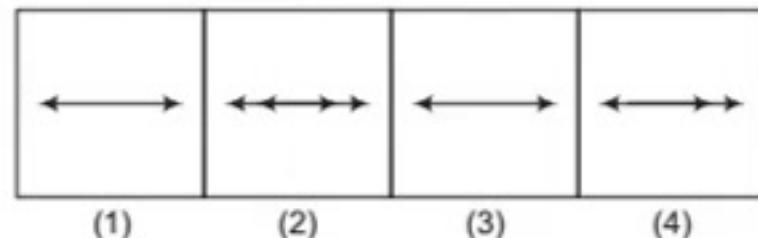
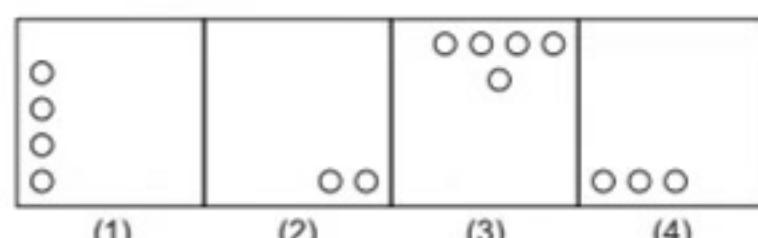
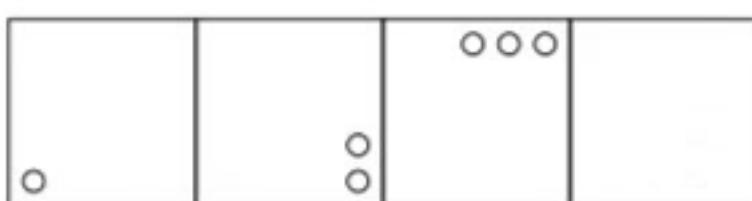
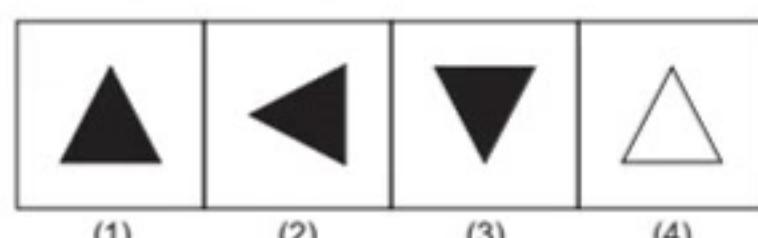
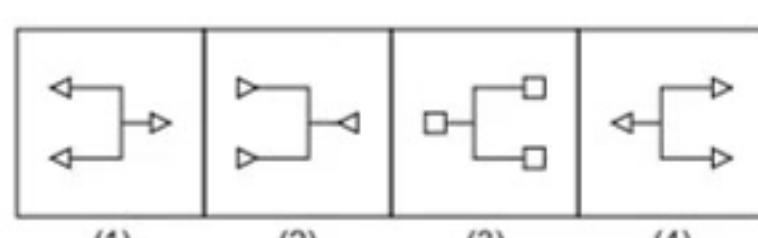
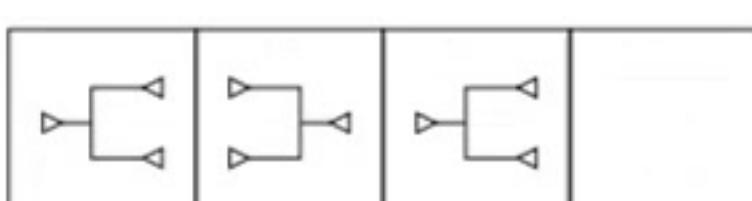
Part V

Directions (Q.Nos. 17-20) In questions, there are two sets of two question figures each. The second set has a mark of interrogation (?). There exists a relationship between the first two question figures, similar relationship should exist between the third and fourth question figure. Select one of the answer figure which replace the mark of interrogation.

17. Question Figures

Answer Figures


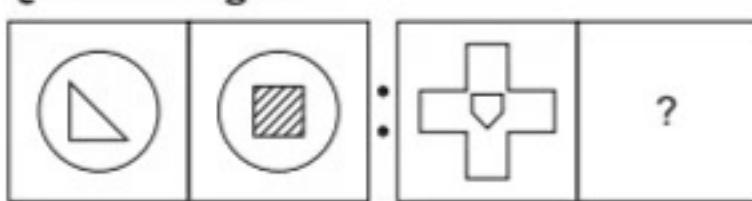
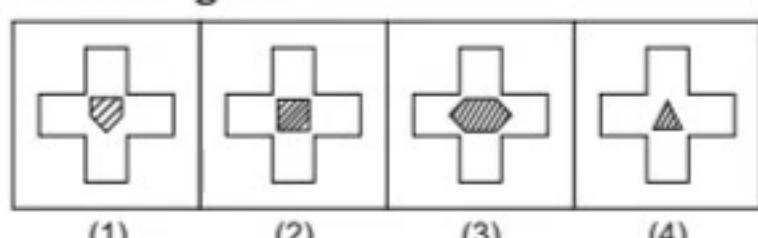
Part IV

Directions (Q. Nos. 13-16) There are three question figures and the space for the fourth figure is left blank. The question figures are in a series. Find out one figure among the answer figures given, which occupies the blank space for the fourth figure and completes the series.

13. Question Figures

Answer Figures

14.

15.

16.


Part V

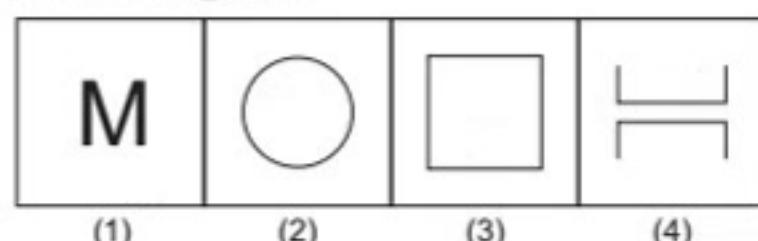
Directions (Q.Nos. 17-20) In questions, there are two sets of two question figures each. The second set has a mark of interrogation (?). There exists a relationship between the first two question figures, similar relationship should exist between the third and fourth question figure. Select one of the answer figure which replace the mark of interrogation.

17. Question Figures

Answer Figures


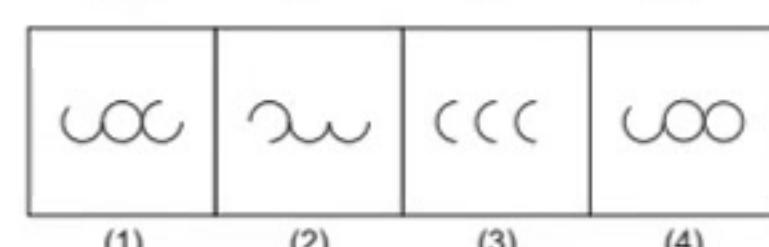
18. Question Figures



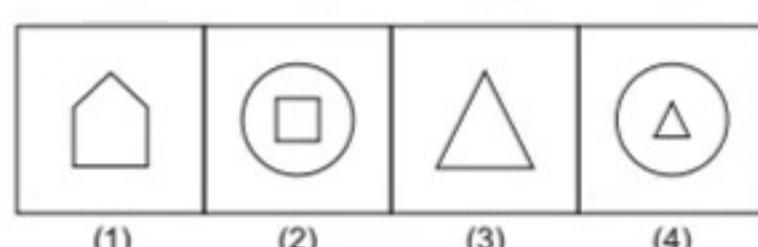
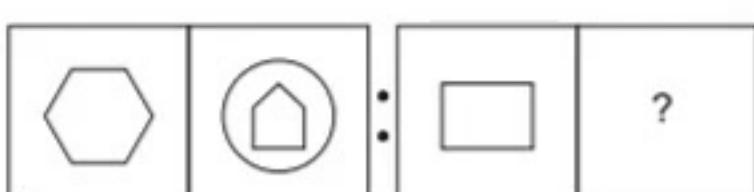
Answer Figures



19.



20.

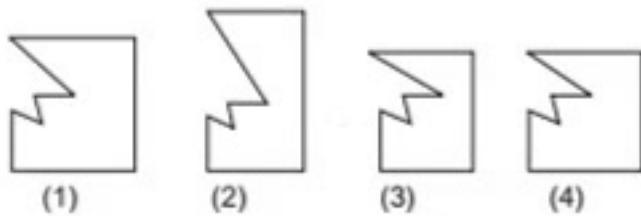
**Part VI**

Directions (Q.Nos. 21-24) In questions, one part of a geometrical figure is given as question figure and the other one is among the four answer figures 1, 2, 3 and 4 are also given. Find out the figure that completes the geometrical figure.

21. Question Figure



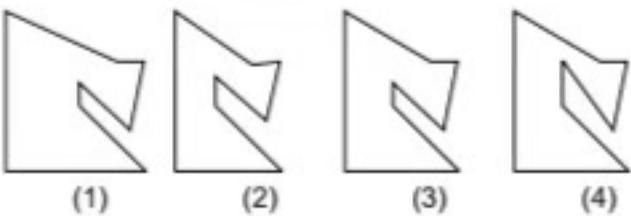
Answer Figures



22. Question Figure



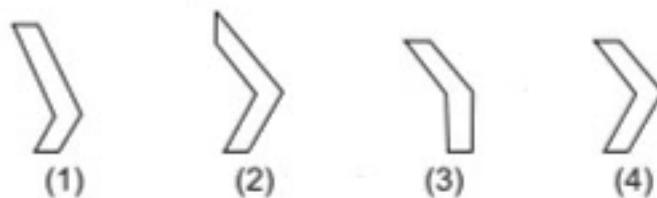
Answer Figures



23. Question Figure



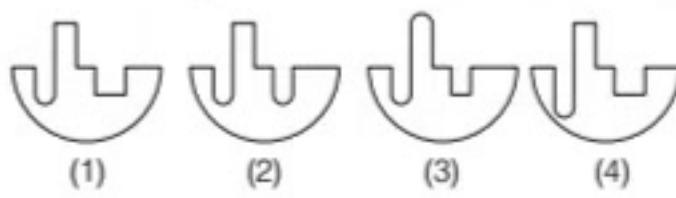
Answer Figures



24. Question Figure



Answer Figures



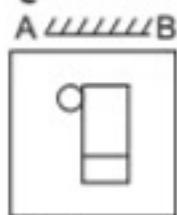
Part VII

Directions (Q.Nos. 25-28) In questions, there is a question figure and four answer figures marked 1, 2, 3 and 4 are also given. Select the answer figure which is exactly the mirror image of the question figure when the mirror is held at AB.

25. Question Figure

Answer Figures

YAKA	AKAY	A KAY	YAAK
(1)	(2)	(3)	(4)

26. Question Figure

Answer Figures

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

27. Question Figure

Answer Figures

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

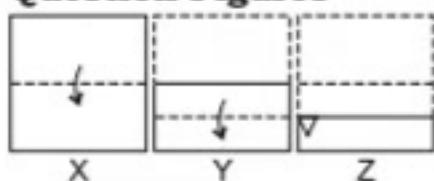
28. Question Figure

Answer Figures

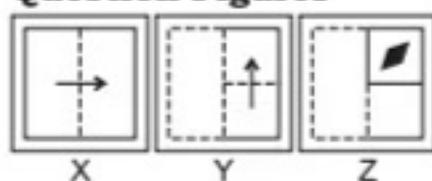
(1)	(2)	(3)	(4)

Part VIII

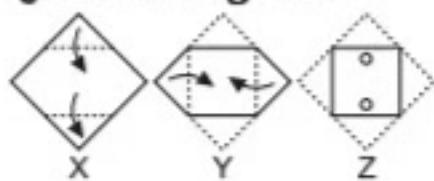
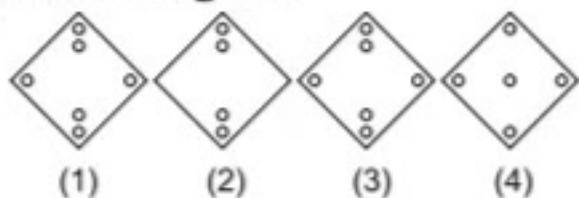
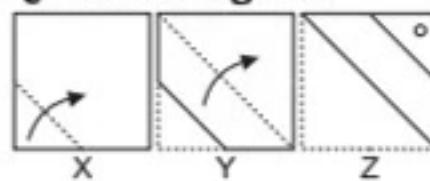
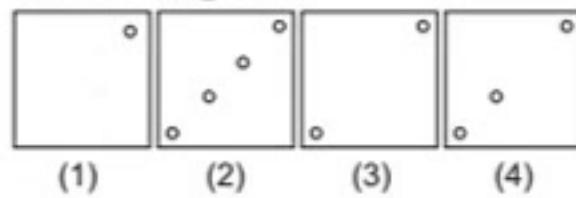
Directions (Q.Nos. 29-32) In questions, a piece of paper is folded and punched as shown in question figures and four answer figures marked 1, 2, 3 and 4 are also given. Select the answer figure which indicated how the paper will appear when opened (unfolded).

29. Question Figures

Answer Figures

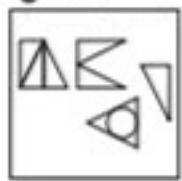
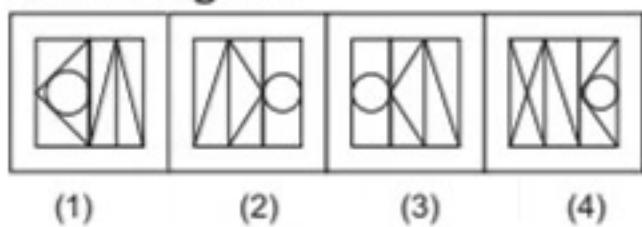
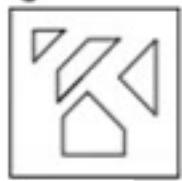
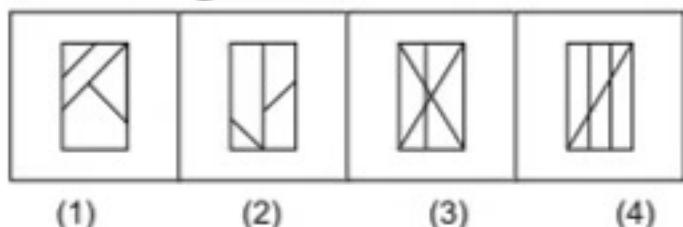
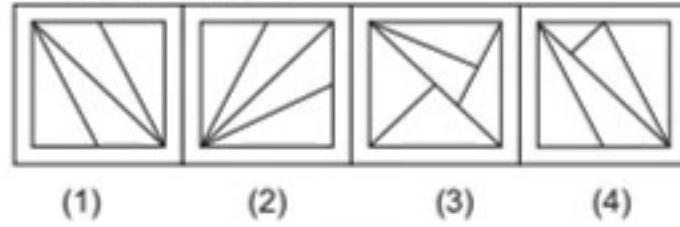
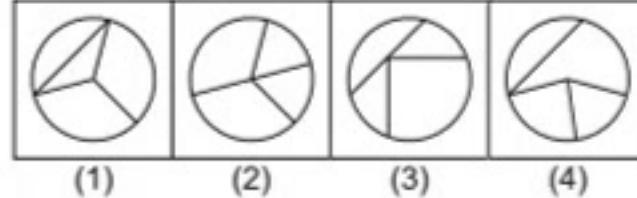
(1)	(2)	(3)	(4)

30. Question Figures

Answer Figures

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

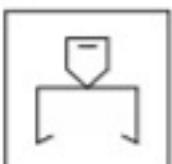
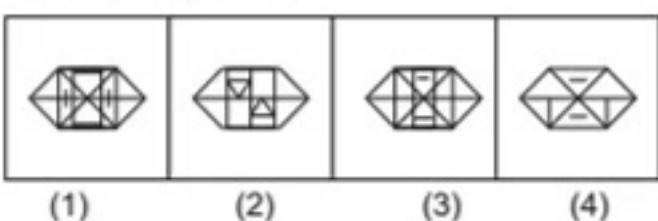
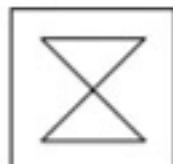
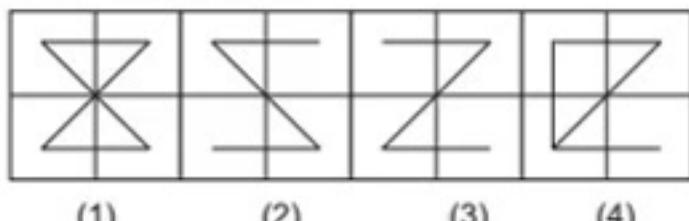
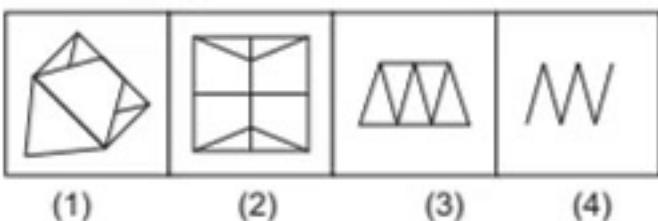
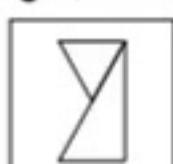
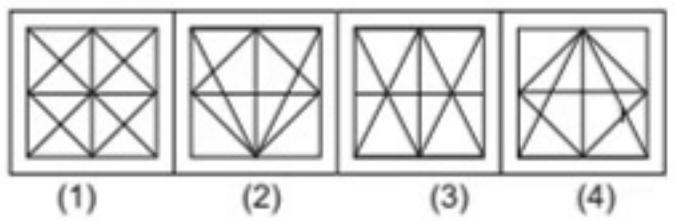
31. Question Figures**Answer Figures****32. Question Figures****Answer Figures****Part IX**

Directions (Q.Nos. 33-36) In questions, a question figure is given and four answer figures, marked 1, 2, 3 and 4 are also given. Select the answer figure which can be formed from the cut off pieces given in the question figure.

33. Question Figure**Answer Figures****34. Question Figure****Answer Figures****35. Question Figure****Answer Figures****36. Question Figure****Answer Figures**

Part X

Directions (Q.Nos. 37-40) In questions, a question figure is given and four answer figures, marked 1, 2, 3 and 4 are also given. Select the answer figure in which the question figure is hidden/embedded.

37. Question Figure**Answer Figures****39. Question Figure****Answer Figures****38. Question Figure****Answer Figures****40. Question Figure****Answer Figures**

Section II Arithmetic Test

Directions (Q.Nos. 41-60) Four alternative choices 1, 2, 3 and 4 are given for the all questions, in which only one is correct. To select the correct answer.

41. What will be the sum of the numbers from 1 to 25?

- (1) 322 (2) 325
 (3) 340 (4) 285

42. What will be the HCF of 48, 144 and 576?

- (1) 576 (2) 144
 (3) 48 (4) 1

43. Simplify $(0.50 + 0.15 \div 0.05) \times \frac{2}{7}$.

- (1) 1 (2) 0
 (3) 3 (4) 5

44. What is the approx value of 16268?

- (1) 16200 (2) 16300
 (3) 16260 (4) 16270

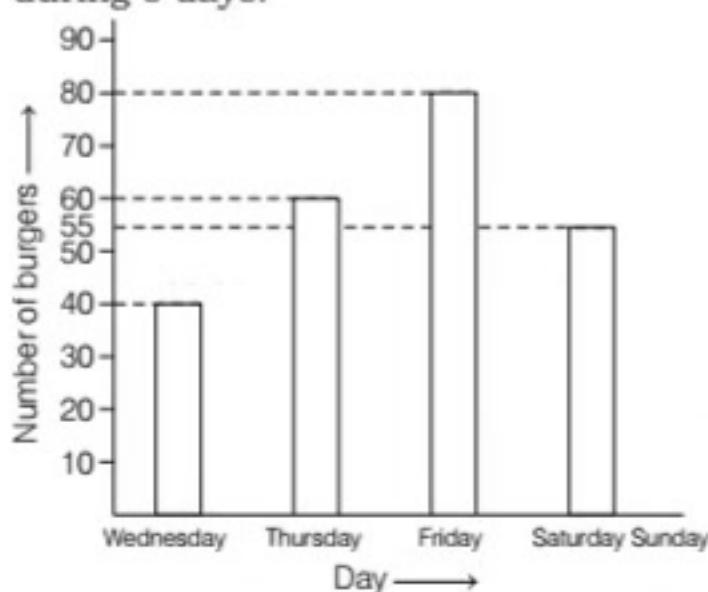
45. After bought a ceiling fan on ₹ 750, one sells it with a profit of 18%, then find the selling price.

- (1) ₹ 850 (2) ₹ 885
 (3) ₹ 860 (4) ₹ 855

46. A sum amounted to ₹ 2486 with the interest of 13% per annum, then what is the sum?

- (1) ₹ 2300 (2) ₹ 2150
 (3) ₹ 2000 (4) ₹ 2200

- 47.** Sampurna Kranti Express departs from Patna at 5:50 pm and arrives New Delhi at 8:15 am of the next day. What is the total time of the journey?
 (1) 12 h 25 min (2) 14 h 35 min
 (3) 14 h 25 min (4) 12 h 35 min
- 48.** What is the greatest four digits number in which all the digits are different?
 (1) 9876 (2) 9768
 (3) 9867 (4) 9786
- 49.** Next term of 258, 130, 66, 34, 18,..... is
 (1) 12 (2) 10
 (3) 8 (4) 13
- 50.** In which number quotient is 23 and remainder is 7. When divided by 17?
 (1) 368 (2) 328
 (3) 358 (4) 398
- 51.** The product of two decimals is 20.7326. If one decimal is 4.13, what is the other decimal?
 (1) 5.12 (2) 4.82
 (3) 5.23 (4) 5.02
- 52.** If the cost price of 12 packets of biscuits is ₹ 240, the cost price of 8 packets of biscuits will be
 (1) ₹ 160 (2) ₹ 140
 (3) ₹ 120 (4) ₹ 240
- 53.** The following bar diagram shows the sale (number of burgers) of a burger saler during 5 days.



- If total sale of burger was 320. Then number of burger sold on Sunday?
 (1) 85 (2) 80
 (3) 75 (4) 90
- 54.** The value of $5 - \left(2\frac{1}{2} - \frac{3}{4}\right) + \left(3\frac{1}{2} - 1\frac{1}{4}\right)$ is
 (1) $4\frac{1}{2}$ (2) $5\frac{1}{2}$
 (3) $5\frac{1}{4}$ (4) $3\frac{1}{2}$
- 55.** The value of 0.05% is
 (1) 0.0005
 (2) 0.005
 (3) 0.05
 (4) 0.5
- 56.** Find a prime even number out of the following numbers.
 (1) 4 (2) 6
 (3) 2 (4) 13
- 57.** I bought a watch for ₹ 400 and sold it for ₹ 484. Find the gain per cent.
 (1) 40 (2) 21
 (3) 36 (4) 24
- 58.** What is the greatest number that divides both 16 and 20 exactly?
 (1) 40
 (2) 32
 (3) 80
 (4) 4
- 59.** A cyclist travels at a speed of 25 km/h. How far will he travel in 30 min?
 (1) 12.5 km
 (2) 12 km
 (3) 10 km
 (4) 15 km
- 60.** Each side of square is of 10 m. What will be the area of the square?
 (1) 100 m^2
 (2) 90 m^2
 (3) 30 m^2
 (4) 40 m^2

Section III Language Test (English)

Directions (Q.Nos. 61-80) There are four passages in this section. Each passage is followed by five questions. Read each passage carefully and answer the questions that follow. For each question four probable answers bearing numbers 1, 2, 3 and 4 are given. Only one out of these are correct. You have to choose the correct answer.

Passage 1

A certain king once fell ill and doctors declared that only a sudden fright would restore him to health. But the king was not a man for anyone to play tricks on, except his fool. One day, when the fool was with him in his boat, he cleverly pushed the king into the water. Help had already been arranged and the king was drawn ashore and put to bed. The fright, the bath and the rest in bed cured the diseased king, but he was so angry with the fool that he turned him out of the country. The fool returned, however and the king ordered him to be put to death. Saying privately that he would only repay fright with fright, he directed the executioner not to use the axe but to let fall a single drop of water on the fool's neck. The fool was led to the gallows. The executioner dropped a drop of water on the fool's neck and amidst shouts and laughter the fool was asked to rise and thank the king for his kindness. But the fool never moved; he was dead-killed by his master's joke.

61. How could the sick king be cured?

- (1) The fool pushed the king into the water from his boat. The fright so caused, the bath and the rest in bed cured the king of his sickness
- (2) The fool arranged for expert doctors who cured the sick king
- (3) The doctors attending on the sick king cut with him fine jokes which cured the sick king
- (4) The king undertook the treatment given by the doctors very carefully; therefore, he was cured in due course

62. Who alone could afford to play tricks on the king?

- (1) The queen alone
- (2) The fool alone
- (3) The doctor alone
- (4) The king's son alone

63. Why did the king turn the fool out of his country?

- (1) Because the fool was useless and didn't do anything

- (2) Because the fool played a dangerous trick on the king and this made the king very angry with him
- (3) Because the doctors had advised him to do so since the fool overstepped his authority
- (4) Because the fool had consciously misbehaved with the king

64. How did the fool meet his end?

- (1) His master, the king's joke killed him
- (2) He was drowned into the water and was killed
- (3) The king got him hanged on the gallows
- (4) The king turned the fool out of the country; the fool starved and died uncared for

65. Did the king really want the fool to die?

- (1) Yes, the king really wanted the fool to die
- (2) No, the king didn't really want the fool to die
- (3) No mention has been made in the passage regarding the king's intention in this regard
- (4) It is difficult to ascertain from king's order to send him to gallows

Passage 2

Prevention is better than cure, and it is recognised that the only way to get rid of malaria completely is to get rid of the mosquitoes which cause it. Malaria is always associated with damp and marshy land. This is not because the land is damp, but because stagnant water is the breeding place of the mosquito which begins its life as a larva living in the water. Malaria does not frequently occur in dry desert countries because mosquitoes cannot breed there. The only way to destroy mosquitoes is to prevent their breeding in standing water.

66. What can be a suitable title for the passage?

- (1) Prevention is better than cure
- (2) How to get rid of malaria
- (3) The breeding ground of malaria
- (4) The deadly mosquito

67. How does malaria occur?

- (1) It is caused by contaminated food
- (2) It is caused by contaminated water
- (3) It is caused by mosquitoes breeding in damp and marshy land
- (4) It is a seasonal disease, no cause is associated with it

68. How can we get rid of malaria?

- (1) We can get rid of malaria by destroying mosquitoes and preventing their breeding in standing water
- (2) We can get rid of malaria by inoculation

- (3) We can get rid of malaria by vaccination
- (4) We can prevent malaria by taking quinine pills regularly

69. Why do we not get malaria in the dry desert?

- (1) Because the sand of the dry desert kills mosquitoes causing malaria
- (2) Because mosquitoes causing malaria do not breed in dry desert
- (3) Because there is no pollution in the atmosphere of a dry desert
- (4) Because we develop immunity to malaria in the climate of dry desert

70. Give the opposite word of 'stagnant'.

- (1) still
- (2) deep
- (3) shallow
- (4) flowing

Passage 3

All the housewives who went to the Kalpatharu Supermarket in Bengaluru had one great ambition : to be the lucky customer who did not have to pay for her shopping. For this was what the notice just inside the entrance promised. It said : 'Remember, once a week, one of our customers gets free goods. This may be your lucky day !'

For several weeks Mrs Batliwala hoped, like many of her friends, to be the lucky customer. Unlike her friends she never gave up hope. Her kitchen was full of things which she did not need. Her husband failed to dissuade her. She dreamed of the day when the manager of the Supermarket would approach her and say : "Madam, this is your lucky day. Everything in your basket is free". One Saturday morning, Mrs Batliwala finished her shopping and left the Supermarket. But soon she discovered that she had forgotten to buy tea. She rushed back, got the tea and went towards the cash-desk. As she did so, she saw the manager of the Supermarket come up to her. 'Madam', he said, holding out his hand, "I want to congratulate you ! You are our lucky customer and everything you have in your basket is free".

71. 'It said' What does 'It' stand for?

- (1) The notice
- (2) The cash-desk
- (3) The basket
- (4) The Supermarket

- (2) She was fond of shopping for shopping's sake

72. What happened on lucky days?

- (1) Prize was awarded to the customer having made the largest purchases
- (2) One of the customers got free goods
- (3) Every customer got some prize money irrespective of what he or she purchased
- (4) One of the items of purchase was allowed to be taken free by every customer

- (3) She was generous enough to share items, which she did not need, with her friends

- (4) She used to flaunt her superiority by buying things which she didn't need

73. Why did Mrs Batliwala buy things which she did not need?

- (1) She dreamed of the lucky day when she would get every item in the basket free of cost

74. 'Her husband failed to dissuade her'. What did her husband want?

- (1) Her husband wanted her to continue shopping every day until she became the lucky customer
- (2) Her husband wanted her to stop purchasing of things which she did not need
- (3) Her husband wanted her not to be misguided by the manager of the Supermarket
- (4) Her husband wanted to make purchases himself

75. Why did the manager congratulate Mrs Batliwala?

- (1) As she had become their permanent customer
- (2) Since she had become the luckiest of all customers

(3) Since he knew that she had got a very generous husband

- (4) Mrs Batliwala had become the lucky customer for she did not have to pay for her shopping

Passage 4

A person who looks at the good side of things sees good things. We call such a person an *optimist*. One who looks at the bad side of things is a *pessimist*. One who looks at the good qualities of others will make many friends and live a happy life. The others will make their own as well as the lives of others miserable. We expect others not to look at or mind our bad qualities. Let us remember that the others too expect the same from us. A very good way to live a happy life with several friends is to lean to look at the good qualities of other.

76. Who is an optimist?

- (1) One who looks at the dark side of things
- (2) One who looks at the good side of things
- (3) One who enjoys helping others
- (4) One who relishes finding fault with others

79. In what way does being an optimist help one?

- (1) It helps one make many friends and live a happy life
- (2) An optimist acquires good habits which help him to live happily
- (3) An optimist can easily withstand the troubles of life
- (4) An optimist helps others, therefore others are always ready to help him

77. What do we expect from others?

- (1) They must help us
- (2) They must be friendly with us
- (3) They must not look at or mind our bad qualities
- (4) They should live like good neighbours

80. Which word in the passage means 'unhappy, pitiable'?

- (1) Pessimist
- (2) Optimist
- (3) Bad
- (4) Miserable

78. What does a pessimist do?

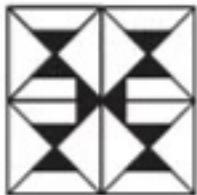
- (1) A pessimist looks at the good side of things
- (2) A pessimist looks at the bad side of things
- (3) A pessimist believes in making friends with others
- (4) A pessimist is a selfish sort of person

Answers

1 (3)	2 (4)	3 (4)	4 (1)	5 (1)	6 (3)	7 (2)	8 (2)	9 (2)	10 (3)
11 (4)	12 (3)	13 (2)	14 (1)	15 (2)	16 (2)	17 (3)	18 (3)	19 (4)	20 (4)
21 (3)	22 (3)	23 (4)	24 (2)	25 (3)	26 (4)	27 (2)	28 (1)	29 (1)	30 (4)
31 (2)	32 (1)	33 (1)	34 (1)	35 (4)	36 (1)	37 (3)	38 (1)	39 (1)	40 (3)
41 (2)	42 (3)	43 (1)	44 (4)	45 (2)	46 (4)	47 (3)	48 (1)	49 (2)	50 (4)
51 (4)	52 (1)	53 (1)	54 (2)	55 (1)	56 (3)	57 (2)	58 (3)	59 (1)	60 (1)
61 (1)	62 (2)	63 (2)	64 (1)	65 (2)	66 (2)	67 (3)	68 (1)	69 (2)	70 (4)
71 (1)	72 (2)	73 (1)	74 (2)	75 (4)	76 (2)	77 (3)	78 (2)	79 (1)	80 (4)

Hints and Solutions

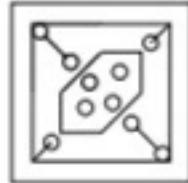
1. Except figure (3), in all the figures, both the arrow opposite from each other. Hence, answer figure (3) is odd one out.
2. Figure (4) is different from other due to positioning of darkened smaller circle. Hence, answer figure (4) is odd one out.
3. Except figure (4), there are all the English language letters in all the figures. Hence, answer figure (4) is odd one out.
4. Figure (1) is different from other due to having the lesser number of line as compare to the sides of geometrical shape inside the figure. Hence, answer figure (1) is odd one out.
9. Answer figure (2) will complete the given question figure.



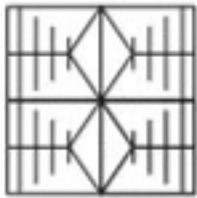
10. Answer figure (3) will complete the given question figure.



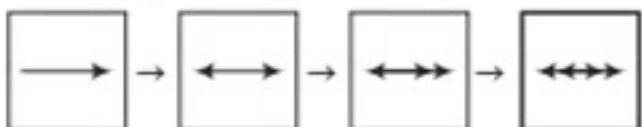
11. Answer figure (4) will complete the given question figure.



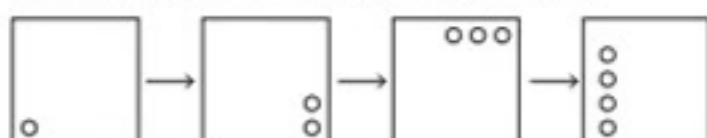
12. Answer figure (3) will complete the given question figure.



13. In every successive figure, a sign of an arrow is increasing in an opposite direction.



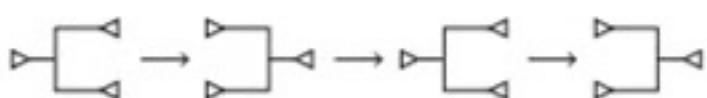
14. In every successive figure, there is an increase of smaller circle in anti-clockwise direction.



15. Every successive figure is rotating 90° clockwise and being white and black alternatively.



16. Figures are repeating an alternate basis, hence option (2) would be the right choice.



17. As in question figure, innermost design having increased one arm with shadow in second figure to first one, in the same way innermost design having increased one arm with shadow to have the final figure of third one.

18. As in question innermost of second is result of an joining the innermost of first one after getting rotated in either side in the same way innermost of fourth is result of a joining the innermost of third one after getting rotated in either side.

19. As in question figure, some part of first figure is missing in second in the same way some part of third is missing in fourth.

20. As in question figure, first figure getting lesser with one arm in the same way third figure getting lesser with one arm resulting fourth one.

21. Answer figure (3) will complete the given geometrical figure.



22. Answer figure (3) will complete the given geometrical figure.



23. Answer figure (4) will complete the given geometrical figure.



24. Answer figure (2) will complete the given geometrical figure.



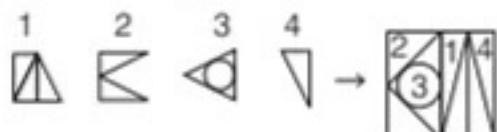
29. When the paper is unfolded, it is shown as in the answer figure (1).

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

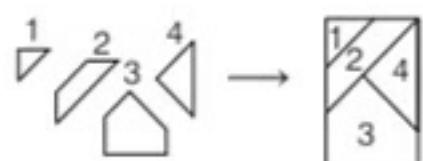
31. When the paper is unfolded, it is shown as in the answer figure (2).

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

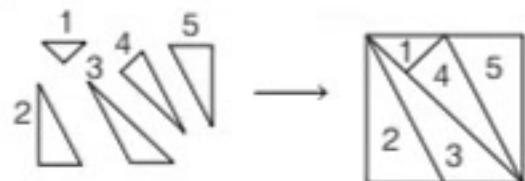
33. Answer figure (1) can be formed by using the cut pieces.



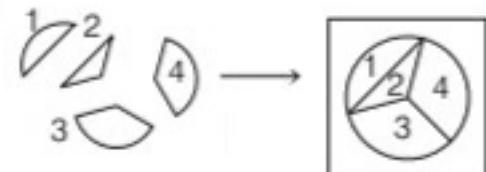
34. Answer figure (1) can be formed by using the cut pieces.



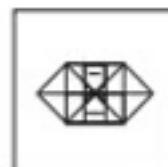
35. Answer figure (4) can be formed by using the cut pieces.



36. Answer figure (1) can be formed by using the cut pieces.



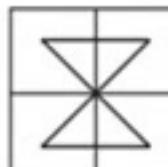
37. The question figure is embedded in the answer figure (3).



38. The question figure is embedded in the answer figure (1).



39. The question figure is embedded in the answer figure (1).



40. The question figure is embedded in the answer figure (3).



$$41. \text{The sum of } n\text{th term} = \frac{n(n+1)}{2}$$

Here, $n = 25$

$$\therefore \text{Sum} = \frac{25 \times (25+1)}{2} = \frac{25 \times 26}{2} \\ = 13 \times 25 = 325$$

42. 48) 144 (3

144
x

Again, 48) 576 (12

48
96
96
x

$\therefore \text{HCF} = 48$

$$43. \left(0.50 + 0.15 \times \frac{1}{0.05}\right) \times \frac{2}{7} = (0.50 + 3) \times \frac{2}{7} \\ = 3.5 \times \frac{2}{7} = \frac{7}{7} = 1$$

44. Approximate value of 16268 = 16270

45. Let the selling price be ₹ x.

According to the question,

$$\text{Selling price} = \frac{750 \times (100 + 18)}{100}$$

$$\therefore \text{Selling price} = ₹ 885$$

46. Let the sum is 100%, then sum amounted with 13% per annum interest = $(100 + 13)\% = 113\%$

$$\therefore 113\% = 2486$$

$$\therefore 100\% = \frac{100 \times 2486}{113} = ₹ 2200$$

47. Time taken in the journey

$$\begin{aligned} &= 8:15 \text{ am of the next day} - 5:50 \text{ pm} \\ &= 20:15 - 5:50 = 14:25 = 14 \text{ h } 25 \text{ min} \end{aligned}$$

48. Arrange it in descending order starting from 9. Hence, required number = 9876

- 49.
- | | | | | | |
|-------|-------|-------|-------|-------|----|
| 258 | 130 | 66 | 34 | 18 | 10 |
| + 2+1 | + 2+1 | + 2+1 | + 2+1 | + 2+1 | |

50. Number = $17 \times 23 + 7 = 391 + 7 = 398$

51. Suppose second decimal = x

Then $x \times 4.13 = 20.7326$

$$\Rightarrow x = \frac{20.7326}{4.13} = 5.02$$

52. ∵ Cost price of 12 packets = ₹ 240

$$\therefore \text{Cost price of 1 packet} = \frac{240}{12} = ₹ 20$$

$$\therefore \text{Cost price of 8 packets} = 8 \times 20 = ₹ 160$$

53. Total sale of Burger = 320

Burger sold on Wednesday = 40

Burger sold on Thursday = 60

Burger sold on Friday = 80

Burger sold on Saturday = 55

Now, burger sold on Sunday

= Total sale – Sale on (Wed+Thu+Fri+Sat)

$$= 320 - (40 + 60 + 80 + 55)$$

$$= 320 - 235 = 85$$

$$\begin{aligned} 54. 5 - \left[\frac{5}{2} - \frac{3}{4} \right] + \left[\frac{7}{2} - \frac{5}{4} \right] \\ = 5 - \left[\frac{10 - 3}{4} \right] + \left[\frac{14 - 5}{4} \right] \\ = 5 - \frac{7}{4} + \frac{9}{4} \\ = \frac{20 - 7 + 9}{4} = \frac{22}{4} \\ = \frac{11}{2} = 5\frac{1}{2} \end{aligned}$$

$$55. 0.05\% = \frac{0.05}{100} = 0.0005$$

56. Prime number are 2, 3, 5, 7, 11, 13, 17 etc.
∴ Prime even number is 2.

57. Profit = SP – CP = 484 – 400 = ₹ 84

$$\therefore \text{Gain percentage} = \frac{\text{Profit}}{\text{CP}} \times 100 \\ = \frac{84}{400} \times 100 = 21\%$$

58. LCM of 16 and 20,

2	16, 20
2	8, 10
2	4, 5
2	2, 5
5	1, 5
	1, 1

$$= 2 \times 2 \times 2 \times 2 \times 5 = 80$$

Hence, required number = 80

59. 1 h = 60 min

Distance covered in 60 min = 25 km

$$\text{Distance covered in 1 min} = \frac{25}{60} \text{ min}$$

$$\text{Distance covered in 30 min} = \frac{25}{60} \times 30 = 12.5 \text{ km}$$

60. Area of square = Side × Side = $10 \times 10 = 100 \text{ m}^2$