Jawhar Navodaya Vidyalaya
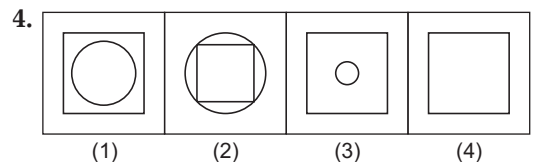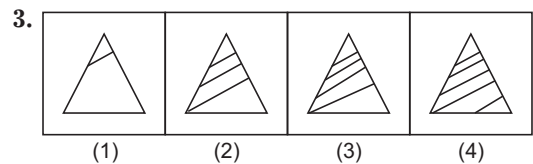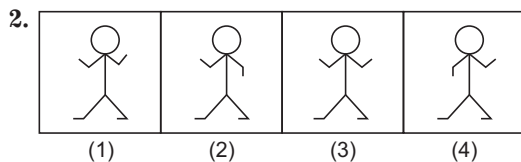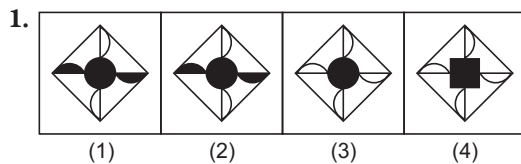## Entrance Exam (Class VI)

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.*
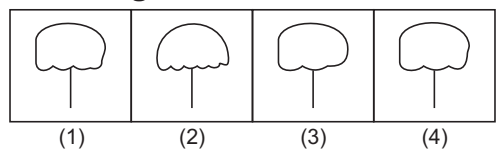
1.

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

3.

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

2.

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

4.

(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
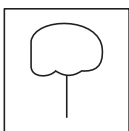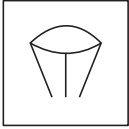
Answer Figures

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

6. Question Figure

Answer Figures

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

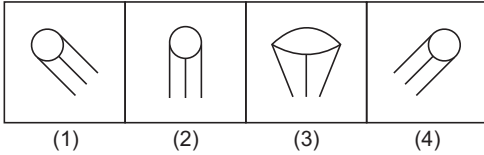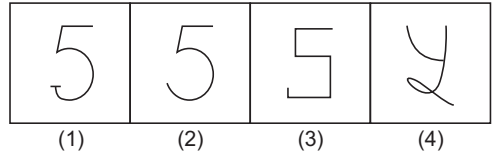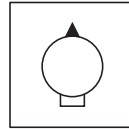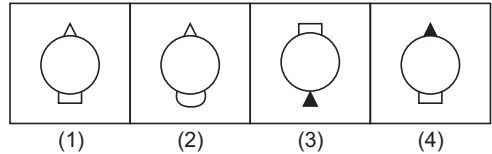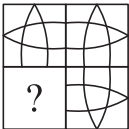**7. Question Figure**

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)
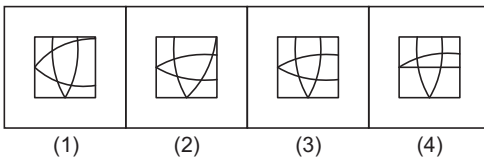
10. Question Figure

Answer Figures

(1)   (2)   (3)   (4)
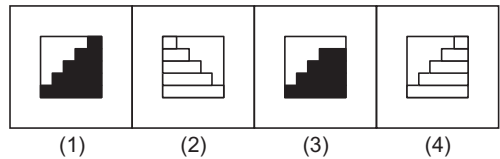
11. Question Figure

Answer Figures

(1)   (2)   (3)   (4)
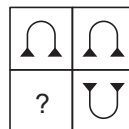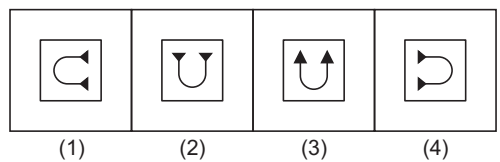
12. Question Figure

Answer Figures

(1)   (2)   (3)   (4)
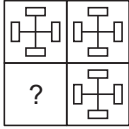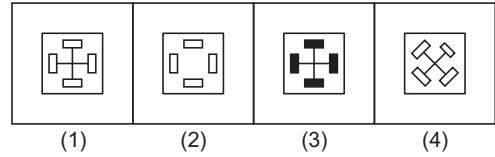
Part IV

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

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

14.

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

15.

| 5 | 10 | 15 | |

| 14 | 20 | 17 | 25 |

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

16.

(1)   (2)   (3)   (4)
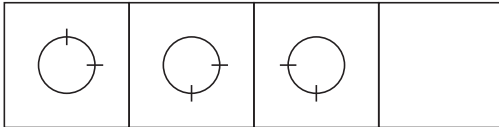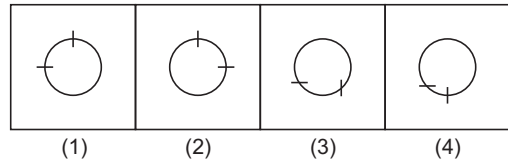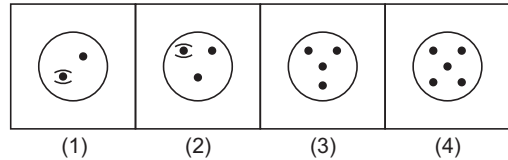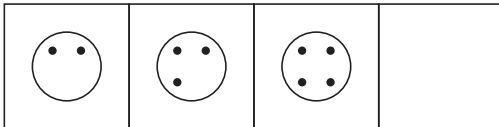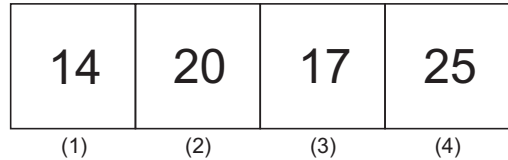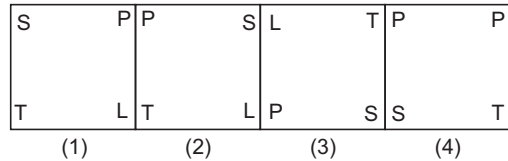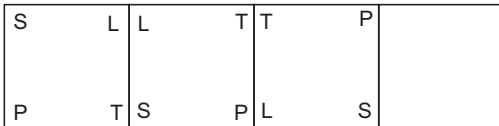
Part V

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**

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

18.

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

19.

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

20.

(1)   (2)   (3)   (4)
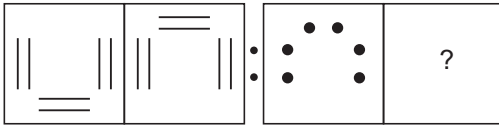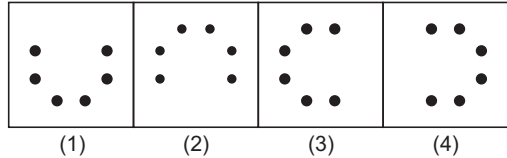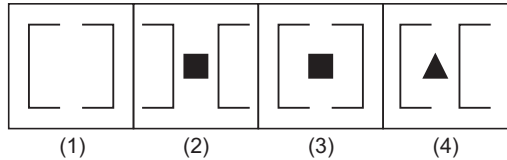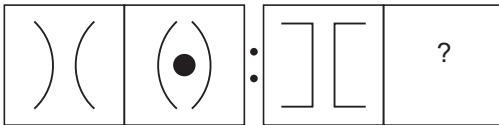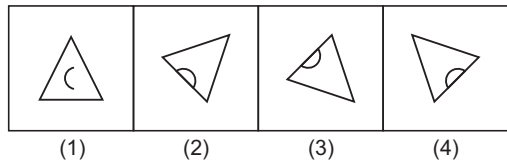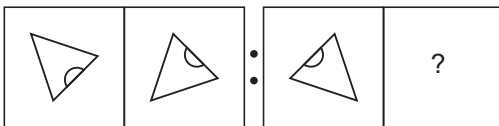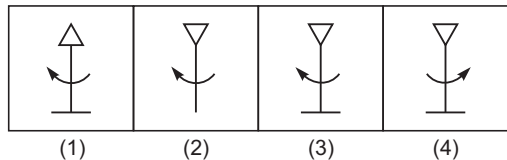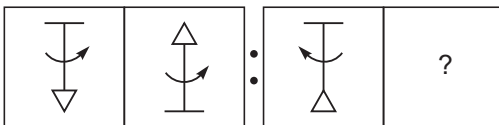
Part VI

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)
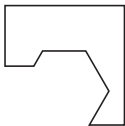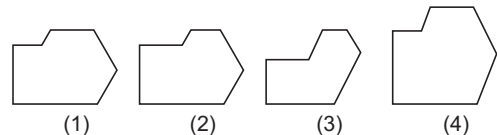
22. Question Figure

Answer Figures

(1)   (2)   (3)   (4)
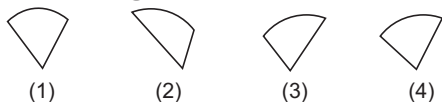
23. Question Figure

Answer Figures

(1)   (2)   (3)   (4)
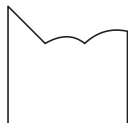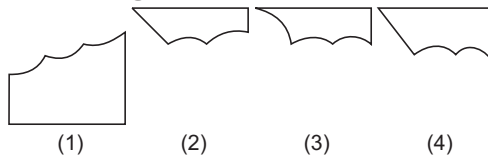
24. Question Figure

Answer Figures

(1)   (2)   (3)   (4)
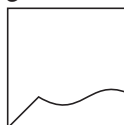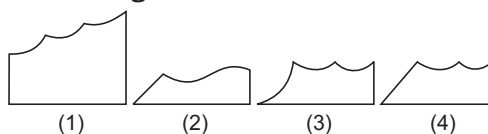
Part VII

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

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

26. Question Figure

Answer Figures

(1)   (2)   (3)   (4)
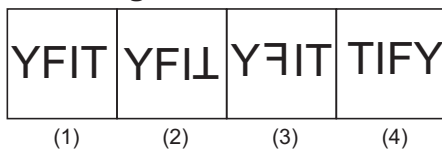
27. Question Figure

Answer Figures

(1)   (2)   (3)   (4)
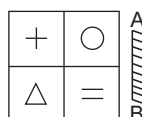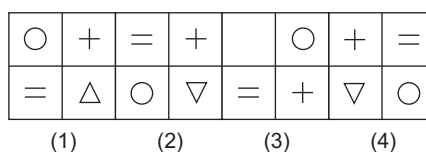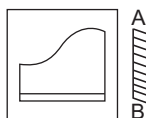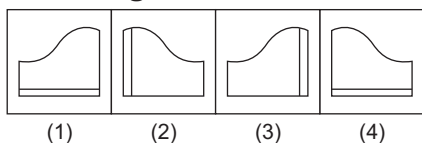
28. Question Figure

Answer Figures

(1)   (2)   (3)   (4)
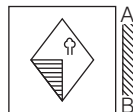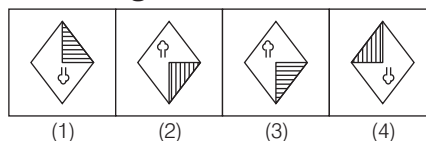
Part VIII

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 indicates how the paper will appear when opened (unfolded).*

29. Question Figures

Answer Figures

(1)   (2)   (3)   (4)
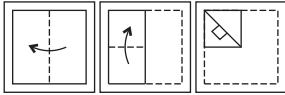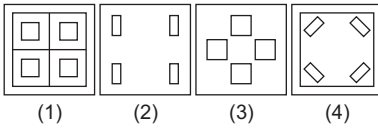
30. Question Figures

Answer Figures

(1)   (2)   (3)   (4)
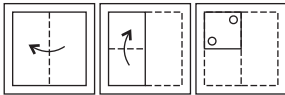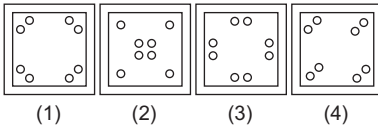
31. Question Figures

Answer Figures

(1)   (2)   (3)   (4)
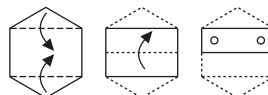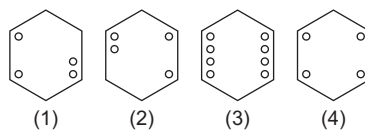
32. Question Figures

Answer Figures

(1)   (2)   (3)   (4)
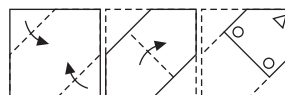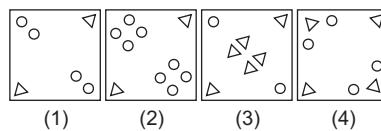
Part IX

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
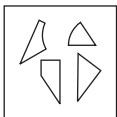
Answer Figures
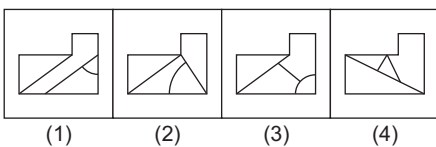
(1)   (2)   (3)   (4)

34. Question Figure
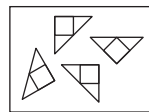
Answer Figures
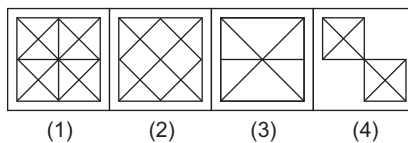
(1)   (2)   (3)   (4)

35. Question Figure
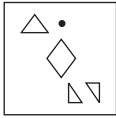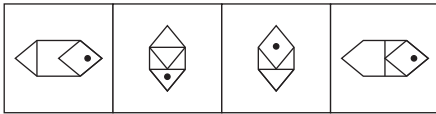
Answer Figures

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

36. Question Figure
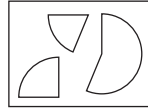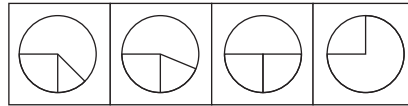
Answer Figures

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

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
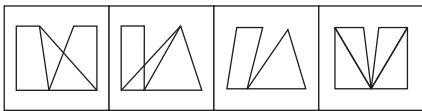
Answer Figures

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

38. Question Figure

Answer Figures

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

39. Question Figure
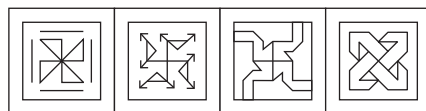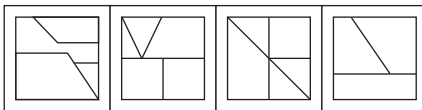
Answer Figures

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

40. Question Figure
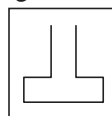
Answer Figures
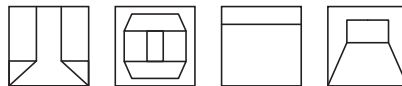
(1)   (2)   (3)   (4)

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 $100 \text{ m} \times 80 \text{ m}$. 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, "Its a waste of time." But they don't realise one important thing. I am not really interested in fishing. I am only interest 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

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

68. The writer is not a good fisherman because
(1) he never catches anything
(2) he only catches old boots and rubbish

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

69. The bag that writer carries home is
(1) empty
(2) old
(3) full of fish
(4) full of 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 though 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 wold 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

1. Except figure (4) in all others shadded portion is circle. But in figure (4) shaded portion is square. Hence, option (4) is odd one out.

2. Except figure (4) right side of the figure changes its direction and left side remains same. Hence, option (4) is odd one out.

3. 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.

4. Except figure (4), all others have two figures, whereas figure (4) has single figure. Hence, option (4) is odd one out.

5. Answer figure (3) is same as the question figure.

6. Answer figure (3) is same as the question figure.

7. Answer figure (2) is same as the question figure.

8. Answer figure (4) is same as the question figure.

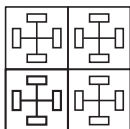9. Answer figure (3) will complete the given question figure.
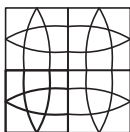
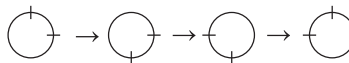10. Answer figure (2) will complete the given question figure.

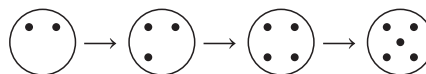11. Answer figure (2) will complete the given question figure.
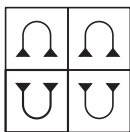
12. Answer figure (1) will complete the given question figure.

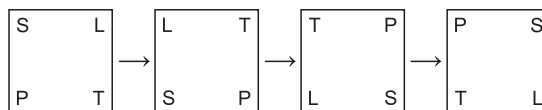13. In every step, figure is rotating 90° clockwise.

14. In every successive figure, one point is increasing.

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

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

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

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

18. 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.

19. 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.

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

21. Answer figure (1) will complete the given geometrical figure.
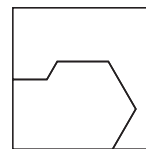
22. Answer figure (2) will complete the given geometrical figure.

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.
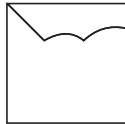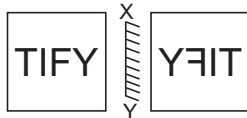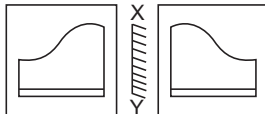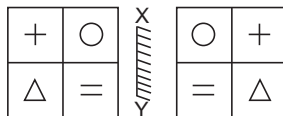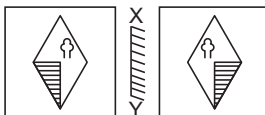

26. Answer figure (4) is the correct mirror image of the given question figure.

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).
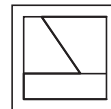
39. The question figure is embedded in the answer figure (2).
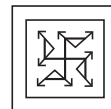
40. The question figure is embedded in the answer figure (1).
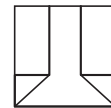
41. Total number of 4 digits are = 9999 – 999
$$= 9000$$

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

43. 2 months, 5 weeks and 18 days
$$= (2 \times 30 + 5 \times 7 + 18)$$
$$= 60 + 35 + 18$$
$$= 113 \text{ days}$$

44. Selling price of washing machine = ₹ 13489
Discount allowed = 18%
Let marked price of washing machine be ₹ x.
$$\therefore \quad x - \frac{18x}{100} = 13489$$
$$\frac{82x}{100} = 13489$$
$$\Rightarrow \quad x = \frac{13489 \times 100}{82}$$
$$= 16450$$
Marked price of washing machine is ₹ 16450.

45. 7510

46. Let the length of train = x m

∴ Speed of train crossing a pole = $\dfrac{x}{15}$ m/s

And speed of train crossing a platform

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

According to the question,

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

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

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

47. ∵ Product of two numbers = $\dfrac{5}{4}$

One number = $\dfrac{5}{6}$

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

48. ∵ $1.25 = \dfrac{125}{100} = \dfrac{5}{4} = 1\dfrac{1}{4}$

49.

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

∴ LCM $= 2 \times 2 \times 3 \times 2 \times 5 = 120$

50. ∵ $178 \times 34 = 6052$

or $\quad 34 = \dfrac{6052}{178}$

or $\quad \dfrac{34}{10} = \dfrac{6052}{178 \times 10}$

or $\quad 3.4 = 60.52 \div 17.8$

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

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

52. $15 \times 4 - 10 \div 5 = 15 \times 4 - 2$

$$= 60 - 2 = 58$$

53. Given,

length of rectangular plot = 100 m

Breadth of rectangular plot = 80 m

As we know that perimeter of plot

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

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

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

Length of wire to surround it three times

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

54. ∵ CP of radio = ₹ 900

SP of radio = ₹ 1200

∴ Profit = (1200 – 900) = ₹ 300

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

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

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

∴ Volume of tank = length × breadth × height

∴ $\quad V = 40 \times 60 \times 50$

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

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

∴ $\quad V = 120 \, l$

As tank already stored 50 l of water

∴ Amount of water to fill the tank completely

$$= 120 - 50 = 70 \, l$$

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; $r = 5\%$

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

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

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

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

Now, converting m/sec to km/h

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

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

59. The area of rectangular field = 120×160

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

The area of one rectangular plot = 40×60

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

∴ Number of rectangular plots $= \dfrac{19200}{2400} = 8$

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

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

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