JAWAHAR NAVODAYA VIDYALAYA SELECTION TEST—2010*

CLASS VI

SECTION - A

MENTAL ABILITY TEST

PART- I

Directions (Questions 1 to 10) : *There are three problem figures and the space for the fourth figure is left blank. The problem figures are in a series. Find out one figure from among the answer figures given and which occupies, the blank space for the fourth figure to completes the series.*
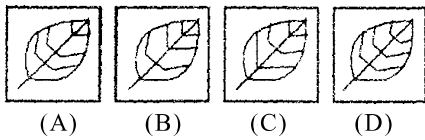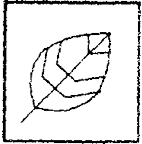
PART- II

Directions (Questions 11 to 20) : *There is a problem figure on the left for the question and on the right side, there are four answer figure i.e. (A), (B), (C) and (D). Find out the figure which is exactly similar with the problem figure.*

Problem Figure	Answer Figure	Problem Figure	Answer Figure

1.

11.

2.

12.

3.

13.

4.

14.

5.

15.

6.

16.

7.

17.

8.

9.

10.

Problem Figure   **Answer Figure**

18.

(A) (B) (C) (D)

19.

(A) (B) (C) (D)

20.

(A) (B) (C) (D)

PART - III

Directions (Questions 21 to 30) : *In each of the questions from 21 to 30, problem figure is given to the left side of the line. A portion of this figure in missing. Study the answer figures (A), (B), (C) and (D) given to the right side of the line. Identify the figure out of the answer figures which may fit into the vacant portion of the problem figure so as to complete its pattern.*

Problem Figure   **Answer Figure**

21.

(A) (B) (C) (D)

22.

(A) (B) (C) (D)

23.

(A) (B) (C) (D)

24.

(A) (B) (C) (D)

25.

(A) (B) (C) (D)
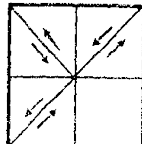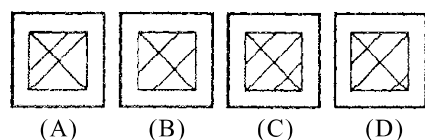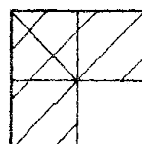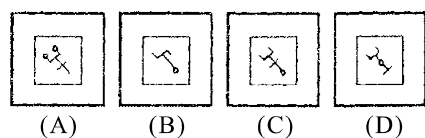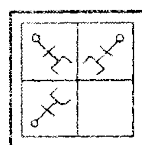
Problem Figure   **Answer Figure**

26.

(A) (B) (C) (D)

27.

(A) (B) (C) (D)

28.

(A) (B) (C) (D)

29.

(A) (B) (C) (D)

30.
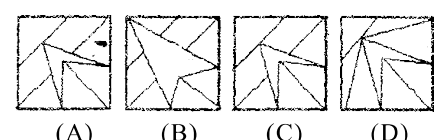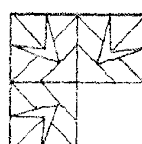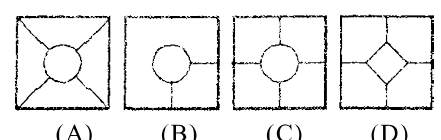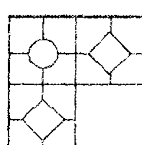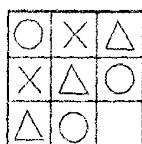
(A) (B) (C) (D)

PART - IV

Directions (Question 31 to 40) : *Four figures (A), (B), (C) and (D) have been given in each question. Out of these four figures, three figures are similar in some way and one figure is different. Select the figure which is different.*

31.

(A) (B) (C) (D)

32.

(A) (B) (C) (D)

33.
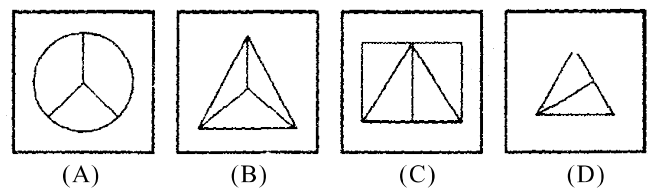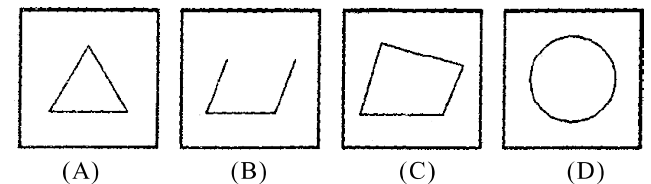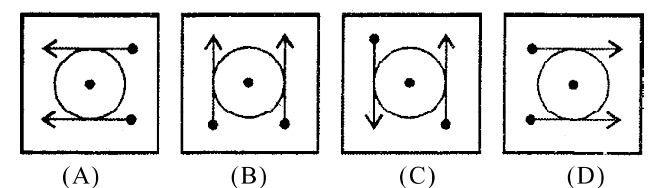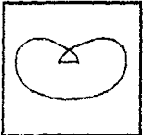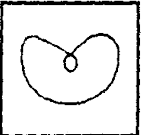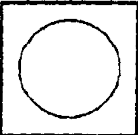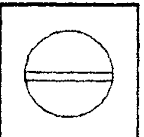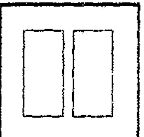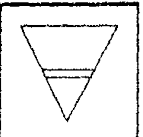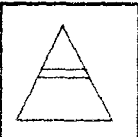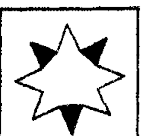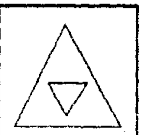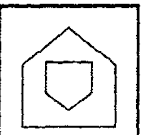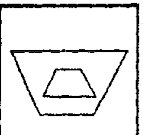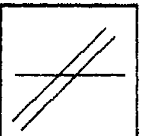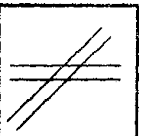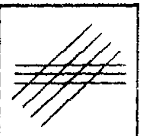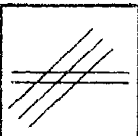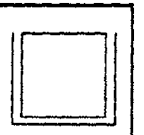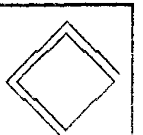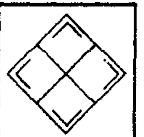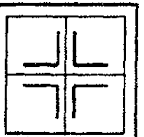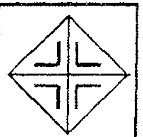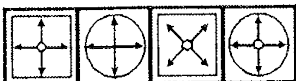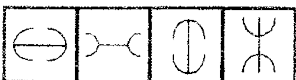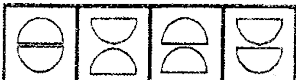
(A) (B) (C) (D)

34.

(A)   (B)   (C)   (D)

35.

(A)   (B)   (C)   (D)

36.
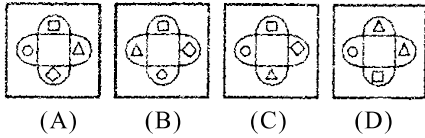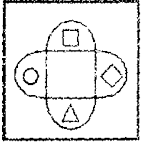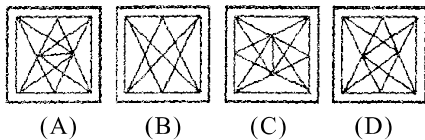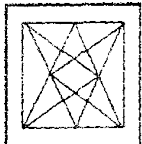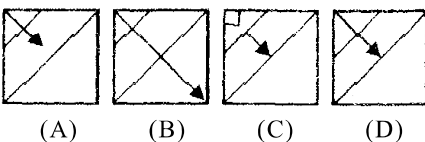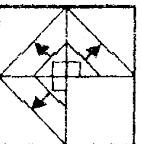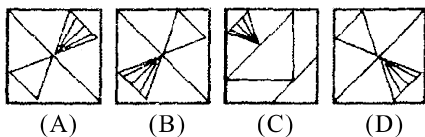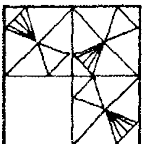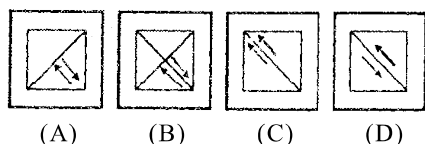
(A)   (B)   (C)   (D)

37.

(A)   (B)   (C)   (D)

38.

(A)   (B)   (C)   (D)

39.

(A)   (B)   (C)   (D)

40.

(A)   (B)   (C)   (D)
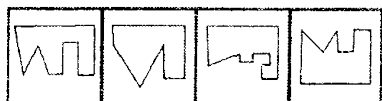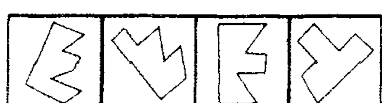
PART - V

Directions (Question 41 to 45) : *There is a sign of question mark (?) after three problem figures for fourth figure. There is a relation in some respect between first two problem figures. The same relationship should also be adopted between third and fourth problem figures. Find out the answer figure from the given four figures that answer should be rightly resembled. By selecting the right answer.*
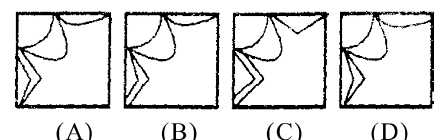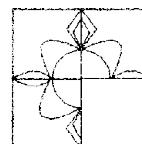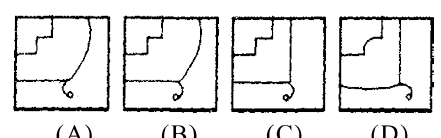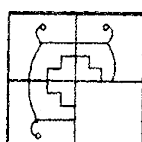
Problem Figure   **Answer Figure**

41. K   Ж   IX   ?   XI   IX   XI   IX

    (A) (B) (C) (D)

42.   ?

    (A) (B) (C) (D)

43.   ?

    (A) (B) (C) (D)

44.   ?

    (A) (B) (C) (D)

45.   ?

    (A) (B) (C) (D)

PART - VI

Directions (Question 46 to 50) : *One part of a square is on the left hand side and the other one is among the four figures marked (A), (B), (C) and (D) on the right-hand side. Find the figure on the right-hand side that completes the square.*

Problem Figure   **Answer Figure**

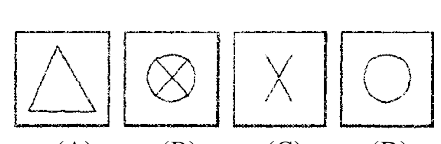**46.**

    (A) (B) (C) (D)

47.

    (A) (B) (C) (D)

48.

    (A) (B) (C) (D)

49.

    (A) (B) (C) (D)

50.

    (A) (B) (C) (D)

Directions (Question 51 to 75) : *For every question, four probable answers bear in letters (A), (B), (C) and (D) are given. Only one out of these is correct. You have to choose the orrect answer.*

51. Difference of greatest number of 7 digits to the smallest number of 8 digits is
    (A) 10   (B) 1
    (C) 101   (D) 100

52. Which of the following decimals are written in decreasing order
    (A) 12.075, 12.705, 12-750
    (B) 12.750, 12.705, 12.070
    (C) 12.075, 12.750, 12.705
    (D) 12.750, 12.075, 12.705

53. A lizard moves 675 cm in 25 minutes. How much distance will it cover in 1 hour?
    (A) 16 m   (B) 16.1 m
    (C) 16.15 m   (D) 16.2 m

54. Which of the following is equal to 6.25%
    (A) 0.625   (B) 0.0625
    (C) 6.25   (D) 6.025

55. The perimeter of a square is 144 m. It's area is
    (A) 1712 m^2 (B) 1726 m^2
    (C) 1296 m^2 (D) 1728 m^2

56. In how much time an amount doubles at the rate of 20%?
    (A) 4 years   (B) 8 years
    (C) 10 years   (D) 5 years

57. A chair was sold for Rs 240 with a loss of 20%. Cost price of chair is
    (A) Rs. 290   (B) Rs. 300
    (C) Rs. 310   (D) Rs. 320

58. Simple interest of Rs. 1650 for 3 years at the of 5% per annum is
    (A) Rs. 250   (B) Rs. 260
    (C) Rs. 247.50   (D) Rs. 255.70

59. 1 litre of milk was purchased for Rs. 20 and sold for Rs. 25. The gain or loss % is
    (A) 25% Loss   (B) 25% Profit
    (C) 20% Profit   (D) 20% Loss

60. A train travels for 15 hour and 15 minutes. If train reached to its destination at 9.30 a.m. than at what time train started to travel?
    (A) 6 a.m.   (B) 6:05 p.m.
    (C) 6:10 p.m.   (D) 6:15 p.m.

61. The Product $0.4 \times 0.04 \times 0.004$ is
    (A) 0.00064   (B) 0.00640
    (C) 0.640   (D) 0.000064

62. Simplified value of
    $118 \div \{121 \div (11 \times 11) + 14 - (9 - \overline{6 - 2})\}$ is
    (A) 11.8   (B) 118
    (C) 1.118   (D) 1.18

63. HCF and LCM of two numbers are 3 and 120 respectively. If one of the number is 90 then the other number is
    (A) 4   (B) 5
    (C) 6   (D) 8

64. The greatest number that will divide 480 and 840 exactly is
    (A) 110   (B) 115
    (C) 120   (D) 125

65. Which of the given number is greatest?
    (A) 98787878   (B) 8787877
    (C) 9725319   (D) 87878787

66. The greatest number formed by using the digits 1, 3, 0, 9, 7 when one digit is used only once is
    (A) 10379   (B) 97310
    (C) 99731   (D) 79031

67. Which of the following fraction is greatest?
    (A) $\dfrac{3}{4}$ (B) $\dfrac{3}{8}$
    (C) $\dfrac{2}{3}$ (D) $\dfrac{5}{9}$

68. Value of 888.888 m when rounded off to the nearest metre is

(A) 888 m   (B) 890 m

(C) 889 m   (D) 887 m

69. Simplified form of expression

$\{(0.25 + 0.37 - 0.12) \times 0.4 + 0.8\} - 0.37 + 2.13 - 1\}$ is

(A) 1.36   (B) 1.57

(C) 2.76   (D) 1.76

70. The least number which is divisible by 12, 15 and 25 is

(A) 300   (B) 150

(C) 200   (D) 400

71. Profit of company in 2006 will be how much time of the profit in 2002
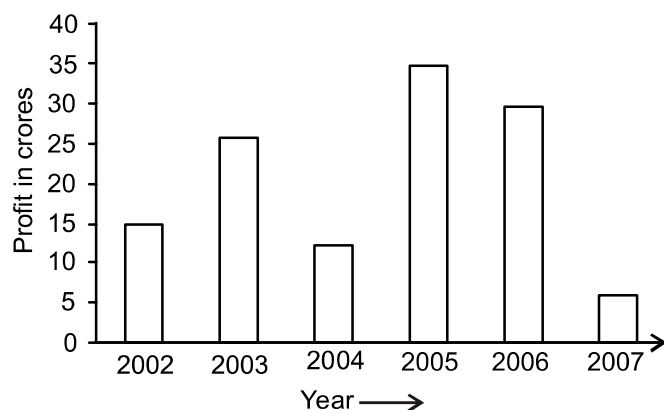
(A) 2 times

(B) 3 times

(C) 4 times

(D) 5 times

72. Simplified form of expression

$$12 - \left\{ \frac{5}{3} + \left(3\frac{7}{9} - 2\frac{1}{3} + 7\frac{1}{9} \right) \right\} \text{ is}$$

(A) $\dfrac{9}{26}$ (B) $\dfrac{7}{26}$

(C) $\dfrac{26}{9}$ (D) $\dfrac{16}{9}$

73. 12 students are absent in a class of 48 students. What percent of students is present?

(A) 50 %   (B) 75 %

(C) 20 %   (D) 25 %

74. What will be the cost of fencing a square park of side 210 m if the cost of fencing is Rs. 5.50 per meter?

(A) Rs. 4620   (B) Rs. 4000

(C) Rs. 4680   (D) Rs. 4840

75. Marks of student are shown in following figure. What is total marks?
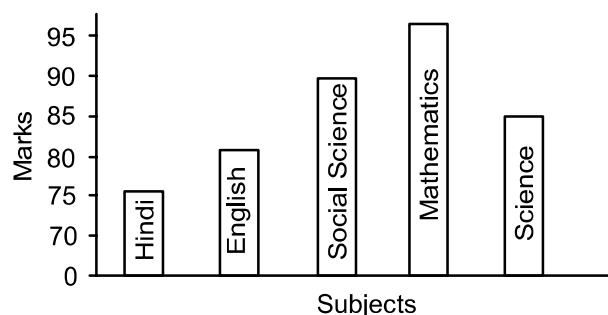
(A) 425   (B) 430

(C) 400   (D) 95

LANGUAGE

PASSAGE – I

It was a flowering mustard-field, pale like melting gold as it swept across miles and miles of even land. A group of dragon-flies were bustling about on their gaudy purple wings, intercepting the flight of a lone black bee or butterfly in search of sweetness from the flowers. The child followed them in the air with his gaze, till one of them would still its wings and rest, and he would try to catch it. But it would go fluttering, flapping, up into the air, when he had almost caught it in his hands. Then his mother gave a cautionary call, "Come, child, come, come on to the footpath".

Directions (Question 76 to 90) : *For every question, four probable answers bear in letters (A), (B), (C) and (D) are given. Only one out of these is correct. You have to choose the orrect answer.*

76. The mustard-field looked like —

(A) melting gold   (B) shining silver

(C) golden sun   (D) silvery moon

77. The dragon flies were —

(A) dancing in the air

(B) searching the flowers

(C) intercepting a lone black bee or butterfly

(D) sitting on the ground

78. The child followed:
- (A) the butter flies
- (B) the black bees
- (C) the dragon flies
- (D) the lady birds

79. The boy tried to catch —
- (A) when it was still
- (B) when it was flying
- (C) when it circle around
- (D) when it fell

80. His mother asked him to come to —
- (A) the road
- (B) the field
- (C) the shop
- (D) the footpath

PASSAGE – II

Santosh's parents were affluent landowners who could afford to send their children to the best schools, even to the country's capital Delhi, which was quite close by. But in line with the prevailing custom in the family, Santosh had to make do with the local village school. So, She decided to fight the system in her own quiet way when the right moment arrived. And the right moment came when she turned sixteen. At sixteen, most of the girls in her village used to get married. Santosh was also under pressure from her parents to do the same.

81. The parents of Santosh were —
- (A) traders
- (B) land owners
- (C) shopkeepers
- (D) labourers

82. Santosh had to study in the local village school due to —
- (A) poverty
- (B) her age
- (C) prevailing custom
- (D) less distance

83. The right moment for Santosh came when the —
- (A) her family shifted to the city
- (B) came to the age of eighteen
- (C) her parents agreed
- (D) turned sixteen

84. What happened to the village girls at the age of 16 years?
- (A) they used to get married
- (B) they used to be sent to village school
- (C) they were sent to city schools
- (D) they came free to do anything

85. Santosh's parents pressurised her to —
- (A) go to city school
- (B) get married
- (C) learn how to cook food
- (D) work in fields

PASSAGE – III

The small shrine was on the river bank which the writer visited during his stay in Kathmandu. It was somewhere on the bank of the river Bagmati. It belonged to the Hindu Mythological Goddess. The small shrine was half immersed in the water. It was standing on a stone platform. The people had a belief that when the shrine would emerge fully, the Goddess of the shrine would disappear. Then the Kaliyug would end, which is supposed to be the evil period. Hence it would lead to the arrival of the new era of good virtues.

86. The shrine was situated on the bank of the river—
- (A) Ganga
- (B) Yamuna
- (C) Bagmati
- (D) Naramada

87. To which religion did the Goddess related?
- (A) Hindu
- (B) Sikh
- (C) Jain
- (D) Buddhist

88. The belief about the shrine was about —
- (A) breaking of shrine
- (B) disappearance of the Goddess
- (C) disappearance of the river
- (D) flooding of the river

89. The Kaliyug is said to be a —
- (A) good period
- (B) god and bad period
- (C) evil period
- (D) period of death

90. The end of Kaliyug will bring _____
- (A) era of mourning
- (B) era of death
- (C) era of diseases
- (D) era of good virtues

Directions (Question 91 to 100) : *For every question, four probable answers bear in le tters (A), (B), (C) and (D) are given. Only one out of these is correct. You have to choose the orrect answer.*

91. An _____ consists of soldiers and commanders. The suitable collective noun is
- (A) herd
- (B) group
- (C) mob
- (D) army

92. The suitable adjective in the following sentence is—

A_____workman blames his tools.

(A) good   (B) bad

(C) intelligent   (D) wise

93. The suitable verb in the sentence is—

They_____(go) to Agra every year in June.

(A) go   (B) goes

(C) went   (D) have gone

94. The suitable preposition in the sentence is—

Please do not compare him_____her brother.

(A) to   (B) with

(C) from   (D) of

95. The correct article in the sentence is—

I have met____boy who lives in London

(A) a   (B) this

(C) that   (D) the

From 96-100, there is mistake in use of underlined verb. Select the suitable form of verb from the choices.

96. Last night, the police has caught a thief.

(A) have cought   (B) had cought

(C) caught   (D) was caught

97. The children were playing while the parents are talking.

(A) were talking   (B) have been talking

(C) had been talking   (D) were being talking

98. Her father go to office at 8 a.m. everyday.

(A) went   (B) had gone

(C) goes   (D) has gone

99. The Prime Minister has inaugurated our function next week.

(A) had inaugurated   (B) will inaugurate

(C) shall inaugurate   (D) inaugurated

100. If he will work hard, he will pass.

(A) works   (B) worked

(C) has worked   (D) had worked

ANSWERS

1	2	3	4	5	6	7	8	9	10
C	C	C	D	B	D	D	A	A	D

11	12	13	14	15	16	17	18	19	20
C	A	B	C	D	C	B	A	C	D

21	22	23	24	25	26	27	28	29	30
C	A	D	B	C	B	B	C	C	C

31	32	33	34	35	36	37	38	39	40
D	B	C	D	B	B	D	B	B	A

41	42	43	44	45	46	47	48	49	50
C	D	B	A	C	B	B	A	B	C

51	52	53	54	55	56	57	58	59	60
B	B	D	B	C	D	B	C	B	D

61	62	63	64	65	66	67	68	69	70
D	A	A	C	A	B	A	C	D	A

71	72	73	74	75	76	77	78	79	80
A	D	B	A	A	A	C	C	A	D

81	82	83	84	85	86	87	88	89	90
B	D	B	A	B	C	A	B	C	D

91	92	93	94	95	96	97	98	99	100
D	B	A	A	D	C	A	C	B	A

SOME SELECTED EXPLANATORY ANSWERS

1. In each successive figure one line increases, so the answer figure must have 3 lines.

2. In each successive figure one line is joining with the last figure, so answer figure must be C.

3. The small circle is rotating in clock-wise direction while the line joining the intersecting point of the diagonals to the side of the squre and line joining the two diagonals at any point other than the intersecting point are moving in anti-clockwise direction. Thus answer figure (C) is the correct answer.

4. The small circle and arrow in the problem figure at first moves two places ahead in clock-wise direction and then one place further to reach the third stage, so at the last stage the circle and the arrow will move one place more to attain the answer figure (C).

5. In problem figures empty circle and blackened circle are moving in clockwise direction. Therefore (B) will the answer figure.

6. In problem figures a small line is increasing by one in subsequent figures, so figure (D) will be correct answer.

7. The main diagram is same in the series but outer part moves in anticlockwise direction step by step and it will be different than the previous figure.

8. In the diagram, number of lines are increasing in one pattern and decreasing in other pattern, so fourth figure must have 1 and 5 line in pattern.

9. Figure (A) is correct answer.

10. In series each subsequent figure the main design is moved by 90° anti-clockise, 'X' and 'O' are replacing each other every time, size of the lines is changed every time so figure (D) is appropriate.

21. Fig (C)

22. Fig (A)

23. Fig (D)

24. Fig (B)

25. Fig (C)

26. Fig (B)

27. Fig (B)

28. Fig (C)

29. Fig (C)

30. Fig (C)
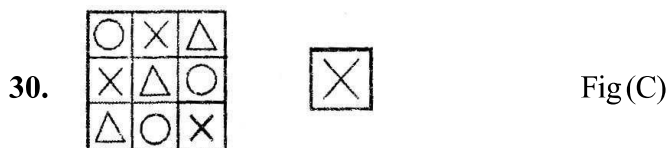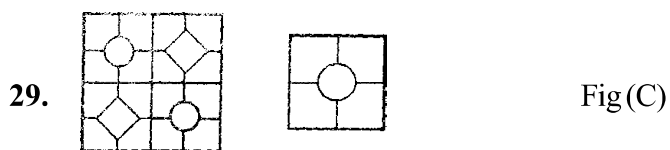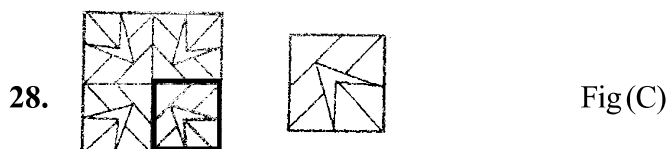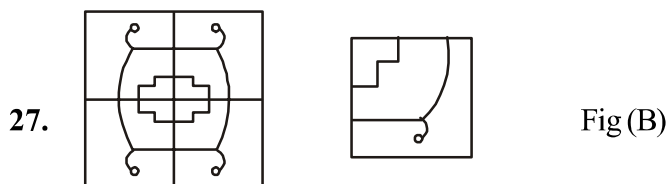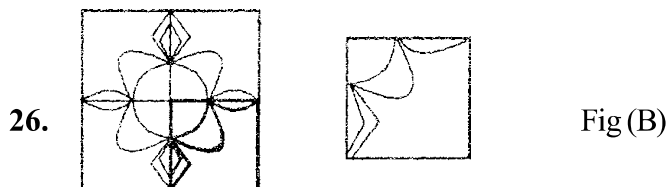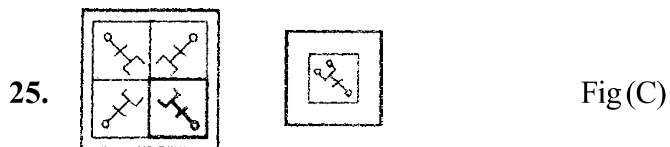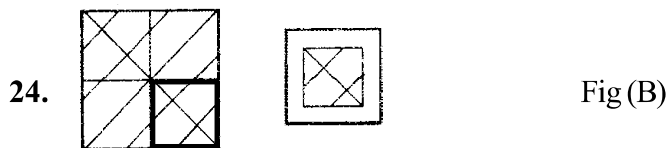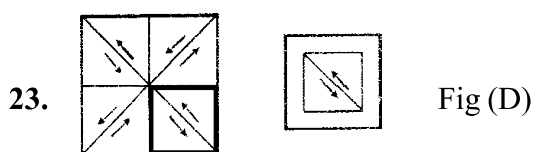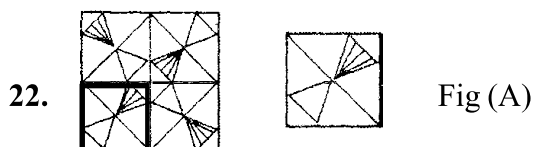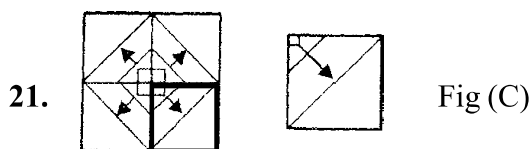
31. In figure (D), diagram have only one line in it.

32. In figure (B), diagram because it is not closeed shape.

33. In figure (C), the direction of arrows are opposite to each other, whereas other fitures have arrows in same direction.

34. Except figure (D) in all other figures design having a intersection of two curves but figure (D) is a perfect circle.

35. In figure A,C,D, there are two parallel lines drawn horizontally, but in figure (B) the lines are vertical.

36. Black shaded part is alternative in figure (B), but in other figures the trend is quite different.

37. Except figure (D), all other have the inner design

38. Except figure (B) the straight lines are one less than the inclined lines.

39. Except figure (B) one outer line of inner design is omitted but figure (B) have two lines omitted.

40. Except figure (A) the inner design in the figure is same ⊞ .

41. Figure (IV) must be mirror image of III |X| X|

42. By the changing attitude of arrows, figure (D) will the correct answer to fill the blank space of problem figure.

43. There is a diagonal in the first figure of problem figures. There are two diagonals in the second figure of problem figures. For this very reason, the figure letter (B) will fill the space of problem figure.

44. In the given problem figure set first each half circle figure turns and goes to the upper section of the perpendicular line. Similar changes are happened in the answer figure (A) to the problem figure.

45. First figure divided into two equal shapes, so ○ will be divided into △ figure, so figure (C) from answer figures is correct.
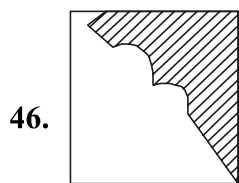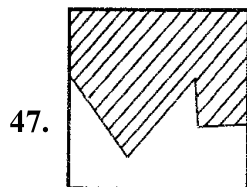
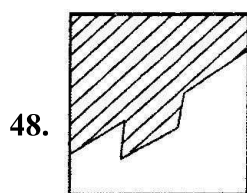**46.**   Fig (B)

47.   Fig (B)

48.   Fig (A)

49.   Fig (B)
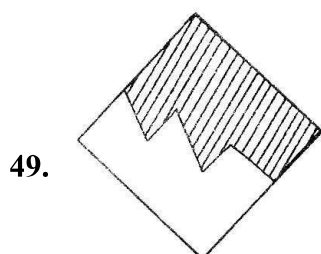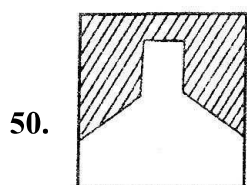
50.   Fig (C)

51. Smallest number of 8 digit = 10000000
greatest number of 7 digit = 9999999
difference = 100000000 − 9999999 = 1

52. 12.750, 12.705, 120.070

53. Distance covered in 25 minutes = 675 lseh
Distance covered in 1 minutes = $675 \div 25 = 27$ cm
Distance covered in 60 minutes = 60×27
$= 16.20$ cm $= 16.20$ m

54. $\dfrac{6.25}{100} = .0625$

55. Perimeter of square $= 4 \times$ side
$4 \times$ side $= 144$
side $= 36$
area $= 36 \times 36 = 1296$ m^2

56. Let amount $= 100$ Rs.

$$I = \frac{P \times R \times T}{100}$$

$$100 = \frac{100 \times 20 \times T}{100}$$

$$T = 5 \text{ years}$$

57. Cost Price $= $ S.P. $\times \dfrac{100}{100 - \text{Loss}\%}$

$= 240 = \dfrac{100}{100 - 20}$

$= 240 \times \dfrac{100}{80} = $ Rs. 300

58. $I = \dfrac{P \times R \times T}{100}$

$= \dfrac{1650 \times 5 \times 3}{100} = $ Rs. 247.50

59. Gain $= $ Rs. $(25 - 20) = $ Rs. 5.

Gain $\% = \dfrac{5}{20} \times 100 = 25\%$

60. 6:15 P.M.

61. 0.000064

62. $118 \div \{121 \div (11 \times 11) + 14 - (9 - \overline{6 - 2})\}$
$= 118 \div \{121 \div (11 \times 11) + 14 - (9 - 4)\}$
$= 118 \div \{121 \div 121 + 14 - 5\}$
$= 118 \div \{1 + 14 - 5\}$
$= 118 \div \{1\,5 - 5\}$
$= 118 \div 10$
$= 11.8$

63. Product of numbers = HCF × LCM

Number × 90 = 3 × 120

Other number $= \dfrac{3 \times 120}{90} = 4$

64. HCF of 480 and 840

480 = 2 × 2 × 2 × 2 × 2 × 3 × 5

840 = 2 × 2 × 2 × 3 × 7 × 5

HCF = 2 × 2 × 2 × 3 × 5 = 120

65. 98787878

66. 97310

67. $\dfrac{3}{4} = \dfrac{54}{72}, \quad \dfrac{3}{8} = \dfrac{27}{72}$

So $\dfrac{3}{4}$ is greatest $\dfrac{2}{3} = \dfrac{48}{72}, \quad \dfrac{5}{9} = \dfrac{40}{72}$

68. 889 m

69. $\{(0.25 + 0.37 - 0.12) \times 0.4 + 0.8\} - 0.37 + 2.13 - 1$

$= \{(0.62 - 0.12) \times 0.4 + 0.8\} - 1.37 + 2.13$

$= \{(0.5 \times 0.4 + 0.8\} - 1.37 + 2.13$

$= \{0.20 + 0.8\} - 1.37 + 2.13$

$= 1 - 1.37 + 2.13$

$= 3.14 - 1.37 = 1.76$

70. LCM of 12, 15, 25

2	12, 15, 25
2	6, 15, 25
3	3, 15, 25
5	1, 5, 25
5	1, 1, 5
	1, 1, 1

LCM = 2 × 2 × 3 × 5 × 5

= 300

71. Profit in 2002 = 15

Profit in 2006 = 30

which is 2 times

72. $12 - \left\{ \dfrac{5}{3} + \left(3\dfrac{7}{9} - 2\dfrac{1}{3} + 7\dfrac{1}{9} \right) \right\}$

$= 12 - \left\{ \dfrac{5}{3} + \left(\dfrac{34}{9} - \dfrac{7}{3} + \dfrac{64}{9} \right) \right\}$

$= 12 - \left\{ \dfrac{5}{3} + \left(\dfrac{34 - 21 + 64}{9} \right) \right\}$

$= 12 - \left\{ \dfrac{5}{3} + \dfrac{77}{9} \right\}$

$= 12 - \dfrac{92}{9}$

$= \dfrac{108 - 92}{9} = \dfrac{16}{9}$

73. No. of Present student = 48 − 12 = 36

Present % $= \dfrac{36}{48} \times 100 = 75\%$

74. Perimeter of Park = 4 × 210 = 840 eh

Cost fencing = 840 × 5.5 = Rs. 4620

75. Total Marks = 75 + 80 + 90 + 95 + 85

= 425