Previous Paper (Solved)

Jawahar Navodaya Vidyalaya Entrance Exam, 2009*

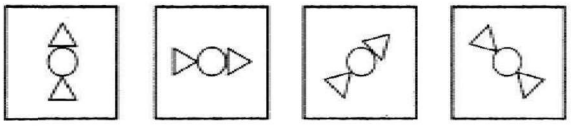
(CLASS-VI)

SECTION-I: MENTAL ABILITY TEST

Part–I

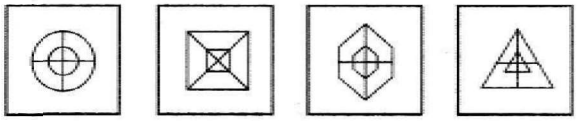
Directions—(Q. 1 to 5): *In the following questions, in each of the questions four figures (A), (B), (C) and (D) are given. There are three figures which are similar in any sense except one. Find the odd figure and indicate your correct answer.*

1.



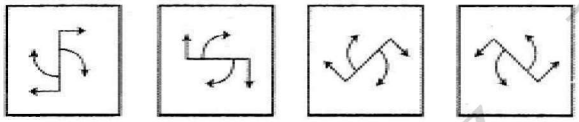
(A) (B) (C) (D)

2.



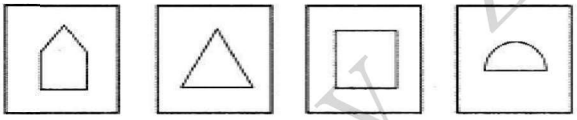
(A) (B) (C) (D)

3.



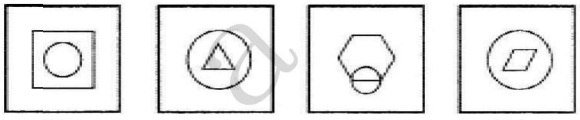
(A) (B) (C) (D)

4.



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

5.



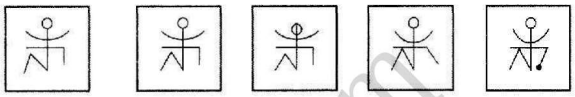
(A) (B) (C) (D)

Part–II

Directions—(Q. 6 to 10): *In the following questions, there is a problem figure on the left for the question and on right side there are four answer figures (A), (B), (C) and (D). Find out that figure which is exactly similar with the problem figure and indicate your correct answer.*

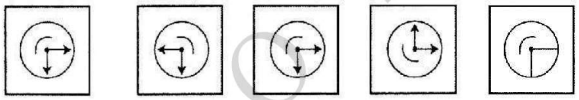
Problem Figure **Answer Figures**

6.



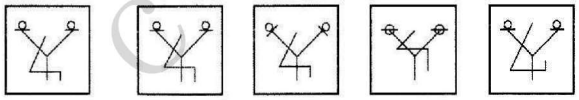
(A) (B) (C) (D)

7.



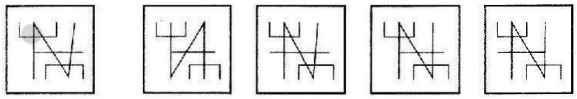
(A) (B) (C) (D)

8.



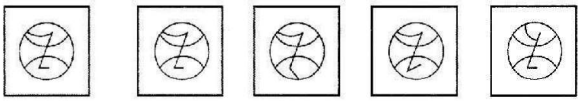
(A) (B) (C) (D)

9.



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

10.



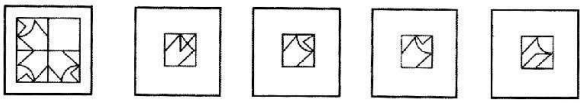
(A) (B) (C) (D)

Part–III

Directions—(Q. 11 to 15): *In the following questions, there is a problem figure for question towards the left side. One part of this figure is missing. Observe answer figure (A), (B), (C) and (D) to the right side. Find out the figure which complete the portion of embedded part of problem figure without changing its direction. Indicate your correct answer.*

Problem Figure **Answer Figures**

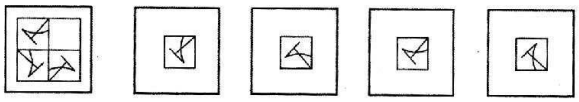
11.



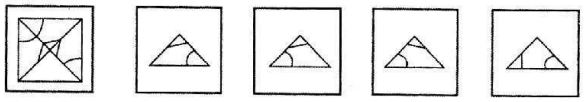
(A) (B) (C) (D)

*Based on Memeory

Problem Figure **Answer Figures**

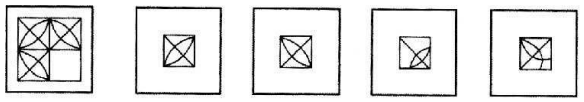
12. 

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

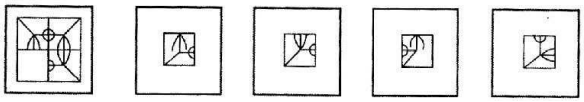
13. 

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

Problem Figure **Answer Figures**

14. 

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

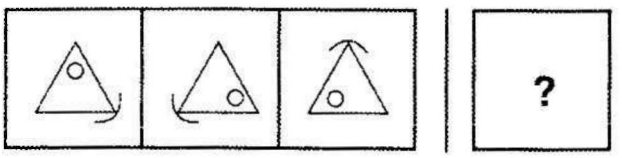
15. 

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

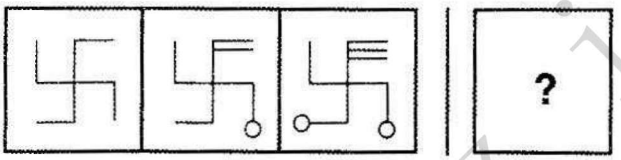
Part–IV

Directions—(Q. 16 to 20): *There are three problem figure for the questions towards the left side and fourth place is vacant with question mark (?). These problem figures are in a series. Find out the proper figure which completes the series. Choose your correct alternative and indicate it.*

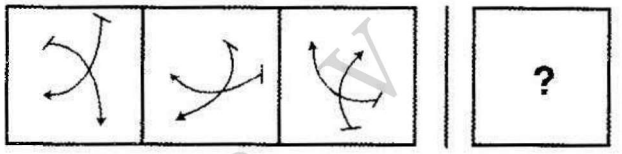
Problem Figures **Answer Figures**

16. 

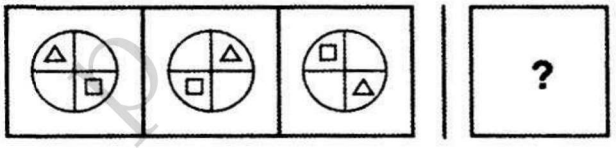
(A) (B) (C) (D)

17. 

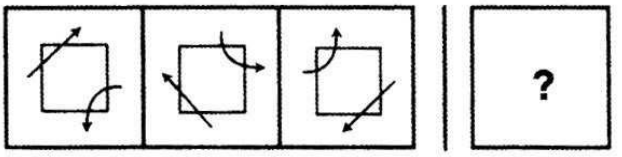
(A) (B) (C) (D)

18. 

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

19. 

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

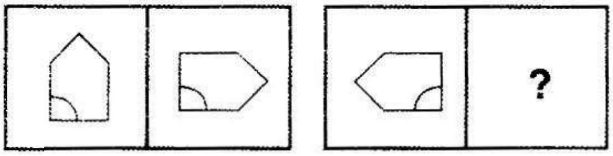
20. 

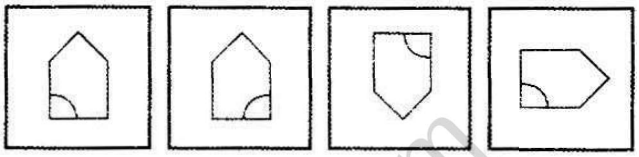
(A) (B) (C) (D)

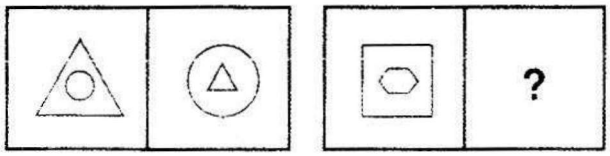
Part–V

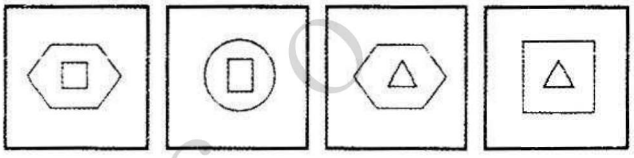
Directions—(Q. 21 to 25): *In the following questions, there is a sign of question-mark (?) after three figures for fourth figure. There is a relation in some respect between first two problem figures. The same relationship should also be adopted between third and fourth figure. Find out the answer figure from the given four answer figures. Indicate your correct response.*

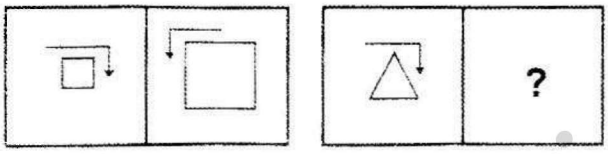
Problem Figures **Answer Figures**

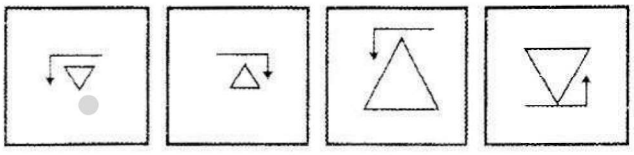
21. 

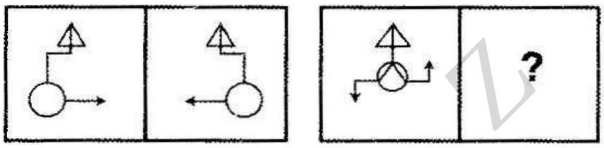

(A) (B) (C) (D)

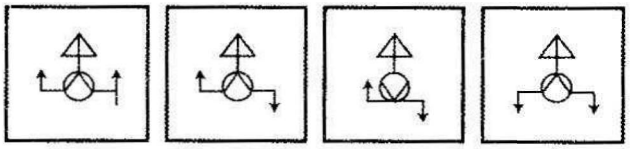
22. 

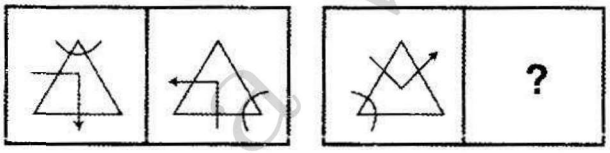

(A) (B) (C) (D)

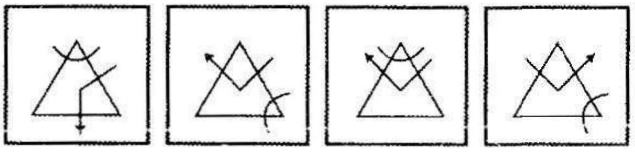
23. 


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

24. 


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

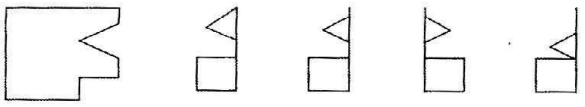
25. 

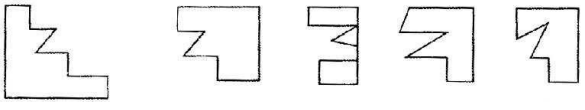

(A) (B) (C) (D)

Part–VI

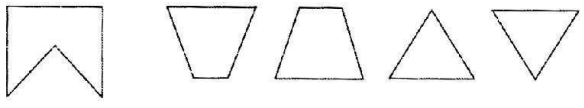
Directions—(Q. 26 to 30): *In the following questions, there is a part of square towards the left side and on the right side there is a remaining part of that square given in four figures (A), (B), (C) and (D). Find out that figure which can complete the square. Choose your correct response and indicate it.*

Problem Figure **Answer Figures**

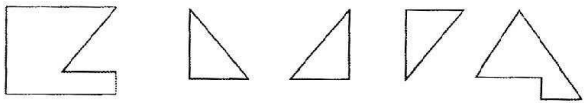
26. 
(A) (B) (C) (D)

27. 
(A) (B) (C) (D)

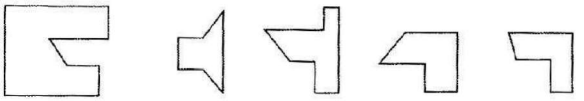
Problem Figure **Answer Figures**

28. 

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

29. 

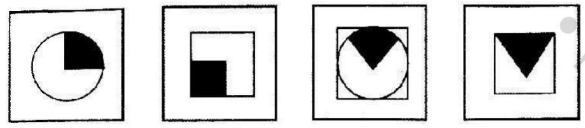
(A) (B) (C) (D)

30. 

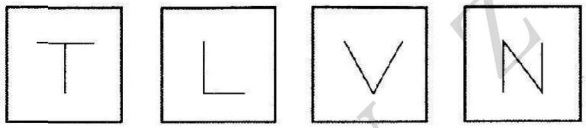
(A) (B) (C) (D)

Part–VII

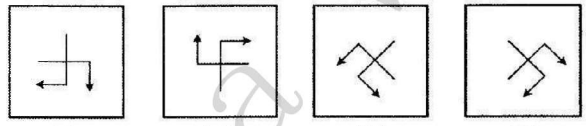
Directions—(Q. 31 to 35): *In each of the question four figures (A), (B), (C) and (D) are given. Three figures, which are similar in any sense except one. Find out the odd figure. Choose your correct alternative and indicate it.*

31. 

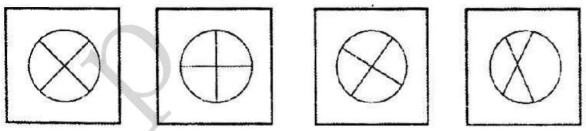
(A) (B) (C) (D)

32. 

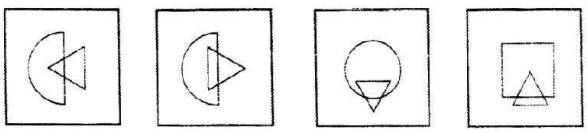
(A) (B) (C) (D)

33. 

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

34. 

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

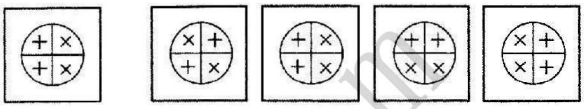
35. 

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

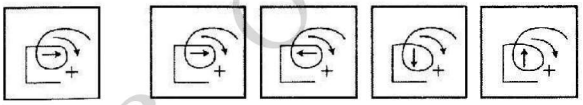
Part–VIII

Directions—(Q. 36 to 40): *In the following questions, there is a problem figure for the questions and then, there are four answer figures (A), (B), (C) and (D). Find out that figure which is exactly similar to the problem figure. Indicate your correct response.*

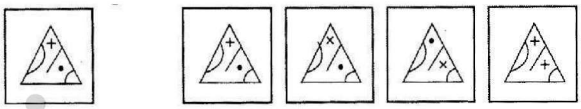
Problem Figure **Answer Figures**

36. 

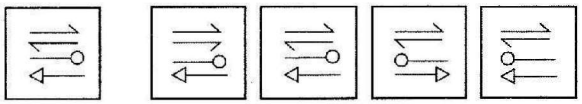
(A) (B) (C) (D)

37. 

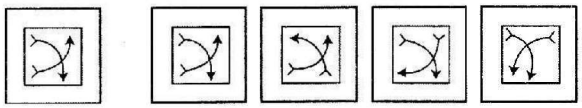
(A) (B) (C) (D)

38. 

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

39. 

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

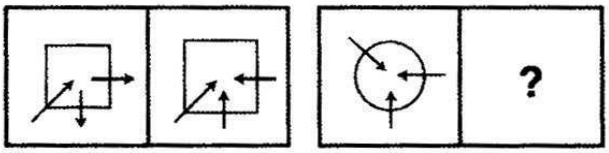
40. 

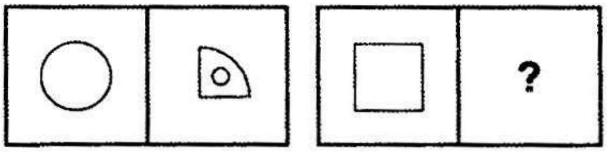
(A) (B) (C) (D)

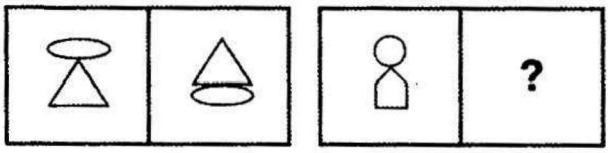
Part–IX

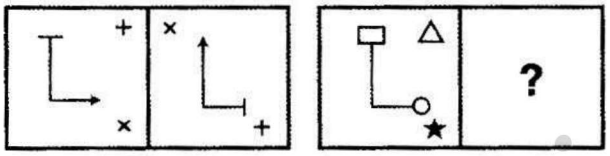
Directions—(Q. 41 to 45): *In the following questions, there is a question mark after three figures for the fourth figure. There is a relation in same respect between first two problem figures. The same relationship should also be adopted between the third and the fourth problem figures. Find out the answer figure and given four figures. Indicate your correct response.*

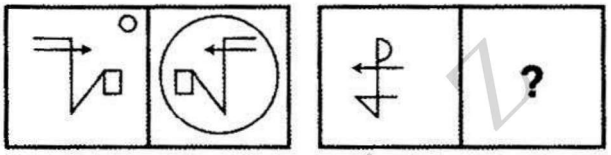
Problem Figures **Answer Figures**

41. 
(A) (B) (C) (D)

42. 
(A) (B) (C) (D)

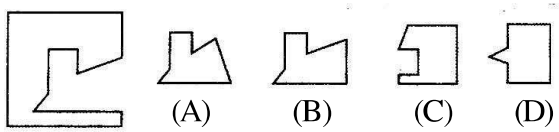
43. 
(A) (B) (C) (D)

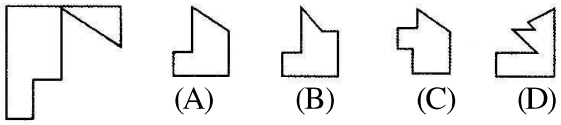
44. 
(A) (B) (C) (D)

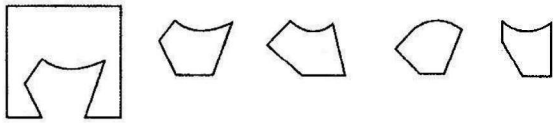
45. 
(A) (B) (C) (D)

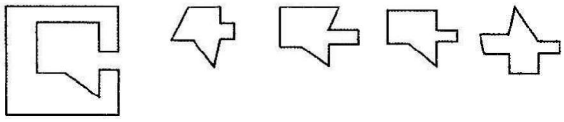
Part–X

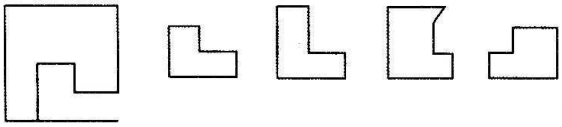
Directions—(Q. 46 to 50): *In the following questions, thre is a part of square towards the left side and on right side there is a remaining part of that square given in four figures (A), (B), (C) and (D). Find out that figure which can complete the square. Choose your correct response and indicate it.*

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)

SECTION-II: ARITHMETIC

Directions—*In the following questions, each question has four options (A), (B), (C) and (D). Choose the correct option and indicate your correct response.*

51. 0.05% of 42000 is
A. 2.10 B. 21
C. 0.210 D. 210

52. Express 6% of 5.25 + 5% of 8.65 in decimal number
A. 0.7574 B. 7.475
C. 0.7475 D. 7.574

53. The H.C.F. and L.C.M. of two numbers are 21 and 420 respectively, one of these number is 84. Find the another number?
A. 105 B. 126
C. 63 D. None of these

54. The value of $[25 + \{205 \times 5 \div 10 - 10 + 15\}]$ is:
A. 13.25 B. 132.50
C. 1325 D. None of these

55. Round up the number 725670 upto thousand:
A. 726000 B. 725000
C. 725600 D. 725700

56. What is the next row of numbers in the following system?

23 46 92
31 62 124
39 78 156
....

A. 47, 94, 188 B. 46, 92, 184
C. 41, 82, 164 D. 48, 96, 192

57. The perimeter of a rectangle and a square is same. Length and breadth of rectangle are 10 cm and 8 cm respectively. What is the area of square?
A. 144 sq. cm B. 36 sq. cm
C. 81 sq. cm D. 64 sq. cm

58. The dimensions of a cubical box are 10 cm. While the capacity of a drum is 1000 litre. How many cubical boxes are needed to fill the drum ?
A. 100 B. 1000
C. 10000 D. 10

59. A boat is flowing in still water at the speed of 18 km/hour. The speed of boat in m/s is:
A. 50 m/s B. 72 m/s
C. 7.2 m/s D. 5 m/s

60. A train started from Patna to Mumbai at 8 : 25 A.M. and reached Mumbai at 7 : 35 P.M. same day. The time taken by train in journey is:
A. 11 hours 50 minutes
B. 11 hours 40 minutes
C. 12 hours 50 minutes
D. 11 hours 10 minutes

61. What is the sum of first 6 multiples of 16?
A. 336 B. 240
C. 180 D. 192

62. Which is the least number in the following numbers?

16192, 16099, 16289, 16329, 16129
A. 16129 B. 16099
C. 16192 D. 16289

63. What is the difference between the least four digit number and the greatest 5 digit number?
A. 0 B. 98999
C. 11111 D. 9999

64. The greatest number of 5 digits formed with the digits 6, 9, 0, 2 and 1 is:
A. 10926 B. 69210
C. 96210 D. 29610

65. If the digits 7 and 6 exchange their place in the number 96750, then what will be difference between original and new number?
A. 1050 B. 1100
C. 1000 D. 900

66. The equivalent decimal number of $\frac{325}{1000}$ is:
A. 0.325 B. 3.25
C. 0.0325 D. 32.5

67. What will the sum of numbers 2.363, 7.965, 0.0363 and 0.0079 ?
A. 103.722 B. 1.03722
C. 10.3722 D. None of these

68. What will come when 6.25 is divided by 0.25?
A. 0.25 B. 2.5
C. 250 D. 25

69. The H.C.F. of 104, 169, 117 is:
A. 17 B. 13
C. 19 D. 23

70. The greatest prime number of two digits is:
A. 99 B. 98
C. 97 D. 93

71. The value of 200°F in degree Celsius is:
A. 80.3°C B. 93.3°C
C. 100.3°C D. 105.3°C

72. A shopkeeper purchases a motorcycle for Rs. 12000 and he spends Rs. 3000 on its repair. He sold the motorcycle for Rs. 18000. What is his profit per cent?
A. 20% B. 80%
C. 30% D. 70%

73. A fruit seller bought some oranges at the rate of Rs. 20 for 5 and sold them at the rate of Rs. 20 for 4. His profit per cent is:
A. 20% B. 25%
C. 30% D. 75%

74. A farmer borrowed Rs. 20000 for 2 years at the rate of 12% per annum from a bank. How much will he have to pay after two years?
A. Rs. 28400 B. Rs. 24000
C. Rs. 24800 D. None of these

75. If a merchant buys a T.V. of Rs. 900 and sells it for Rs. 1080. The profit per cent of merchant is:
A. 20% B. 2%
C. 25% D. 10%

SECTION-III: LANGUAGE

Directions: *There are three passages in this Section. Each passage is followed by five questions. For each question four probable answers bearing letters (A), (B), (C) and (D) are given only one out of these is correct. Choose the correct answer and write your correct response.*

PASSAGE-1

The first thing that struck anyone about Lincon was his extraordinary appearance. He always dressed in black with a big black tie, very often untied, or in the wrong place. His clothes looked as if they had been made to fit some one else, and have never been new. His feet were enormous', so were his hands, often covered on state occasions white kid gloves. In cold weather he used to wear a large gray shawl instead of an over-coat one day some friends were discussing Lincon and Douglas and comparing their heights. When Lincon came into the room some one asked him, "How long ought a man's legs to be?" Long enough to reach from his body to the ground said Lincon coolly.

76. What was the thing about Lincon which struck anyone?
A. his face
B. his clothes
C. his legs and hand
D. his extraordinary appearance

77. His clothes looked as if they had been made to fit someone else because:
A. his clothes were not clean
B. his dress was of black colour
C. he used big black tie, very often untied, or in the wrong place
D. his legs and hands were very long

78. Very often what he used to wear on state occasions?
A. Over coat B. White shawl
C. White kid gloves D. Big black tie

79. What discussion was making some friends about Lincon and Douglas?
A. About their height
B. About their clothes
C. About their habbits
D. About their personality

80. What was asked by someone when Lincon came into the room?
A. How long ought a man's hands to be
B. How long ought a man's legs to be

C. How long a men ought to be
D. What type of clothes should be wear a man

PASSAGE-2

One great defect of our civilization is that it does not know what to do with its knowledge. Science as we have seen has given us powers fit for gods, yet we use them like small children. For example we do not know how to manage our machines. Machines were made to be man's servants, yet he was grown so dependent on them that they are in a fair way to become his masters. Already most men spend most of their time in looking after and waiting upon machines. Besides, machines are very stern masters. They must be fed with coal and given petrol to drink and oil to wash with and must be kept at a right temperature. If they do not get their meals when they expect them they refuse to work or burst with rage.

81. Why writer has assumed a great defect of our civilization?
A. Because it gives a proper knowledge of right way
B. Because it does not know what to do with its knowledge
C. Because it has provided machines to us
D. Because its base is science

82. How we use the powers fit for gods of science?
A. Like scientists
B. Like animals
C. Like human beings
D. Like small children

83. We do not know how to manage our machines. It is said in the section why?
A. Because there is a fault in our civilization
B. We are illiterates
C. Because we use them like small children
D. Because machines are very big

84. 'Machines have become man's master in a fair way', because
A. Machines were made to be man's servant
B. We do not know how to manage them
C. Man has depended on machines
D. Man spends- a great part of his time to look after them

85. What should they want for eating and drinking?
A. They must be fed with coal and given petrol to drink
B. Machines neither eat nor drink
C. They must be fed with food and water to drink
D. They want proper temperature to eat and drink

PASSAGE–3

Mahatma Gandhi once said that there is enough on this earth of all men's need but not for one man's greed. When we start falling green trees in our hurry to make more profit in less time. We strike at the root of our own survival. Increasing population has burdened our forests too much to let them remain green and rich. Industrialisation and mechanical means if cutting timber have accelerated the rate of deforestation. Forests are being cleared to provide land for farming and constructing colonies for people.

86. For what means the forests can not remain green and rich?
A. By means of increasing population
B. By means of root dryness
C. By means of mechanical sources
D. By means of cutting forests

87. Gandhiji said, "The forests are being cleared', because
A. to provide land for farming and constructing colonies for people
B. there is enough burden on the forests
C. mechanical sources are available to cut wood
D. forests strike at the root of their own

88. To make profit we cut forests in hurry. Then
A. we strike off the root of our own survival
B. our greed increase more
C. the importance and area of farming land increase
D. we get enough wood

89. "There are enough source on the earth for all men but not for one man's greed." The mean of this is
A. greed is the cause of sin

B. surplus is painful
C. use the means properly
D. means are cause to pleasure

90. The rate of deforestation has increased because
A. There is a requirement of more wood
B. There is a lack of land
C. Green and rich forests are not good
D. The mechanical means of industrialisation and cutting wood are available

Directions (Q. 91 to 93): *Each of the following questions consists of a sentence in which four words/phrases are given as (A), (B), (C) and (D). Identify the incorrect word/phrase.*

91. Teacher / has / a / umbrella.
(A) (B) (C) (D)

92. Anup / go / to his / school daily.
(A) (B) (C) (D)

93. He / is / telling not / a lie.
(A) (B) (C) (D)

Directions (Q. 94 to 96): *Fill in the blanks with suitable words selecting the right word from the given four choices (A), (B), (C) and (D).*

94. He ..... Agra a few days ago.
A. leaves B. left
C. has been leaving D. had left

95. It ..... heavily last night.
A. rains B. rained
C. would rain D. had rained

96. The swallow is a ..... bird.
A. flight B. fly
C. flying D. flow

Directions (Q. 97 to 98): *Each of the following questions consists of four phrases/words (A), (B), (C) and (D). Choose one phrase/word to complete the sentence given on the top.*

97. A large number of books
A. is missing from the library
B. are missing from the library
C. missing from are the library
D. from missing are the library

98. Ram and Mohan
A. are fast friends B. is fast friends
C. fast are friends D. friends is fast

Directions (Q. 99 to 100): *Each of the following questions consists of four sentences 1,2,3, and 4. These four sentences are to be put in an order to make a meaningful passage. Select the correct order from the given four choices (A), (B), (C) and (D).*

99. 1. Sow good seeds in the farm.
2. Before harvesting the crop, examine the grains.
3. Use fertilizer in the youth age of crop.
4. Ploughing is very necessary in the time of growing plants.
A. 1, 4, 3, 2 B. 1, 2, 3, 4,
C. 1, 3, 4, 2 D. 1, 4, 2, 3

100. 1. Reaching the school, fIrst salute teachers.
2. Take exercise after Bathing.
3. Wake up early in the morning.
4. Have a light breakfast.
A. 3, 2, 4, 1 B. 3, 4, 2, 1
C. 4, 3, 2, 1 D. 1, 3, 4, 2

ANSWERS

1	2	3	4	5	6	7	8	9	10
D	D	D	D	C	A	B	A	C	A
11	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
C	D	A	A	B	A	C	A	B	C
21	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
B	A	C	B	C	B	A	C	B	D
31	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
D	D	C	D	D	B	A	A	B	A
41	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**
D	B	C	C	A	B	A	A	C	A

51	52	53	54	55	56	57	58	59	60
B	C	A	B	A	A	C	B	D	D
61	**62**	**63**	**64**	**65**	**66**	**67**	**68**	**69**	**70**
A	B	B	C	D	A	C	D	B	C
71	**72**	**73**	**74**	**75**	**76**	**77**	**78**	**79**	**80**
B	A	B	C	A	D	C	C	A	B
81	**82**	**83**	**84**	**85**	**86**	**87**	**88**	**89**	**90**
B	D	C	C	A	A	A	A	C	D
91	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**99**	**100**
C	B	C	B	B	C	B	A	A	A

SOME SELECTED EXPLANATORY ANSWERS

1. Except (D) in all the rest problem figures both the triangles are in same direction.

2. Except (D) in all the rest problem figures the small and large designs are divided into four equal parts.

3. Except (D) the direction of all the rest are same.

4. Except (D) all the rest are made with lines.

5. Except (C) in all the rest the small design is inside the large design.

16. Except (A) in each successive problem figure the inner small design shifts clockwise in the next corner and the outer curve shifts anticlockwise in the next corner. Thus, the answer figure (A) is obtained.

17. Except (C) in each successive problem figure a line and a small circle increase in the anticlockwise direction. Thus the answer figure (C) is obtained.

18. Except (A) in each successive problem figure the whole design rotates through 90° clockwise. Thus, the answer figure (A) is obtained.

19. Except (B) In each successive problem figure small designs move clockwise one step ahead. Thus, the answer figure (B) is obtained.

20. Except (C) in each successive problem figure the small designs of vertices reaches at the next corner in anticlockwise direction. Thus, the answer figure (C) is obtained.

21. From problem figure 1 to 2 whole design rotates through 90° clockwise and the corner curve shifts to next corner in the anticlock wise direction. Thus, the answer figure (B) is obtained.

22. From problem figure 1 to 2 the inner design and the outer design are mutually changed their position. Thus, the answer figure (A) is obtained.

23. From problem figure 1 to 2 the design at centre becomes larger and the direction of upper arrow reverses. Thus, the answer figure (C) is obtained.

24. From problem figure 1 to 2 whole design changes into plane mirror image. Thus, the answer figure (B) is obtained.

25. From problem figure 1 to 2 in the clockwise direction arrow reaches at the opposite end and the curve at the corner reaches at the next corner. Thus, the answer figure (C) is obtained.

41. From problem figure 1 to 2 the big arrow of the corner remains fixed while both small arrows change their direction to out side. Applying the same rule from problem figure 3 to 4, the answer figure (D) is obtained.

42. From problem figure 1 to 2 the quarter part of the main design left. In side that left part main design becomes smaller ones. Applying the same rule from problem figure 3 to 4 , the answer figure (B) is obtained.

43. From problem figure 1 to 2 the upper design and the lower design are mutually changed their position. With the same rule, applying from 3 to 4, the answer figure (C) is obtained.

44. From problem figure 1 to 2 main design rotates through 180°. The small design '+' one arm and design '×' two arms move ahead clockwise. Applying same rule from problem 3 to 4, the answer figure (C) is obtained.

45. From problem figure 1 to 2 main design changes into plane mirror image and the small design becoming larger comes around the main design with the same rule from 3 to 4 the answer figure (A) is obtained.

51. $42000 \times \frac{0.05}{100} = 420 \times 0.05 = 21$

52. 6% of 5.25 + 5% of 8.65

$= \frac{5.25 \times 6}{100} + \frac{8.65 \times 5}{100} = 0.3150 + 0.4325$

$= 0.7475$

53. Second number $= \frac{\text{H.C.F.} \times \text{L.C.M.}}{\text{First Number}}$

$= \frac{21 \times 420}{84} = 105$

54. $[25 + \{205 \times 5 \div 10 - 10 + 15\}]$

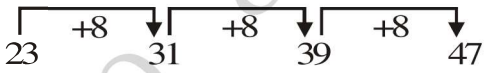
$= \left[25 + \left\{\frac{205 \times 5}{10} - 10 + 15\right\}\right]$

$= [25 + \{102.50 - 10 + 15\}]$

$= [25 + \{102.50 + 5\}]$

$= [25 + 107.50] = 132.50$

56. 23 46 (23 2) 92 (23 4)



Thus next row will be

47 94 188

57. Perimeter of the rectangle

$= 2(10 + 8) = 36$ cm

$\therefore$ One arm of square $= \frac{36}{4} = 9$ cm

$\therefore$ Area of the square $= 9 \times 9 = 81$ sq. cm

58. The capacity of box $= \frac{10 \times 10 \times 10}{1000} = 1$ litre

$\therefore$ Required number of boxes = 1000

59. 18 km/h $= \frac{18 \times 1000}{60 \times 60}$ mls = 5 m/s.

61. The sum of first six multiple of 16

$= 16 + 32 + 48 + 64 + 80 + 96 = 336$

63. Required difference = 99999 – 1000 = 98999

65. Original number = 96750

and the new number = 97650

$\therefore$ Required difference = 97650 – 96750

$= 900$

67. Required sum

$= 2.363 + 7.965 + 0.0363 + 0.0079 = 10.3722$

69. $104 = 2 \times 2 \times 2 \times 13$

$169 = 13 \times 13$

$117 = 3 \times 3 \times 13$

$\therefore$ H.C.F. = 13

71. $C = \frac{5}{9}(F - 32) = \frac{5}{9}(200 - 32)$

$= \frac{5}{9} \times 168 = \frac{840}{9} = 93.3°C$

72. Total cost of motorcycle

$= 12000 + 3000 =$ Rs. 15000

Profit $= 18000 - 15000 =$ Rs. 3000

$\therefore$ Profit per cent $= \frac{3000}{15000} \times 100 = 20\%$

73. C.P. of one orange $= \frac{20}{5} =$ Rs. 4

and S.P. of one orange $= \frac{20}{4} =$ Rs. 5

Profit = 5 – 4 = Re. 1

$\therefore$ Profit per cent $= \frac{1}{4} \times 100 = 25\%$

74. S.I. $= \frac{20000 \times 12 \times 2}{100} =$ Rs. 4800

$\therefore$ Required amount = 20000 + 4800

= Rs. 24800

75. Profit = 1080 – 900 = Rs. 180

Profit % $= \frac{180}{900} \times 100 = 20\%$

91. 'an' is correct.

92. 'goes' is correct.

93. 'not telling' is correct.