Previous Paper (Solved)

JAWAHAR NAVODAYA VIDYALAYA SELECTION TEST—2011*

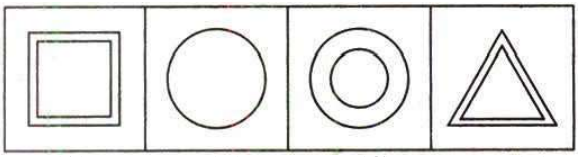
CLASS VI

SECTION-I: MENTAL ABILITY TEST

PART-I

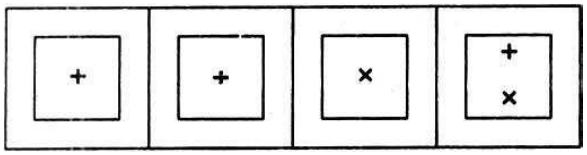
Directions (Questions 1 to 5) : *There are four figures (A), (B), (C) and (D). Out of these four figures, three figures are similar but one figure is different. Spot out the different figure and put a circle on the serial letter of the figure.*

1.



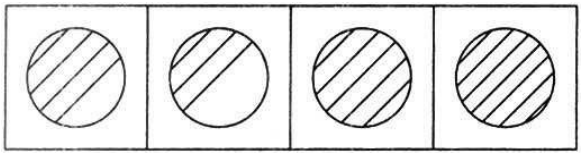
(A) (B) (C) (D)

2.



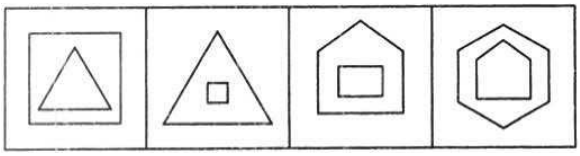
(A) (B) (C) (D)

3.



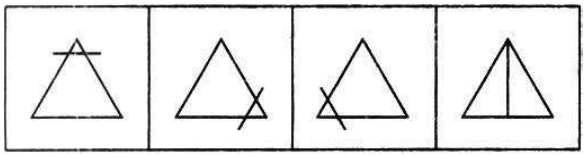
(A) (B) (C) (D)

4.



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

5.



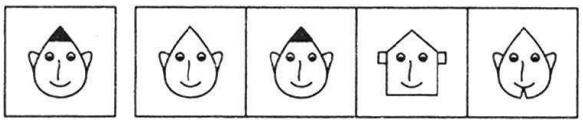
(A) (B) (C) (D)

PART-II

Directions (Questions 6 to 10) : *There is a given problem figure. There are four answer figures (A), (B), (C) and (D). You have to find out the answer figure which is similar to the given problem figures. Encircle the serial letter of the correct answer figure.*

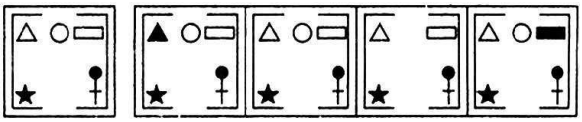
Problem Figures **Answer Figures**

6.



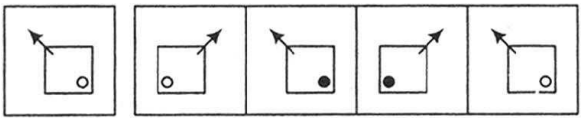
(A) (B) (C) (D)

7.



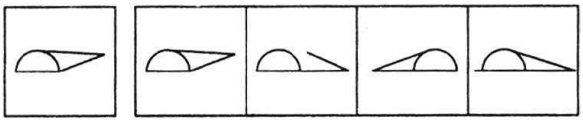
(A) (B) (C) (D)

8.



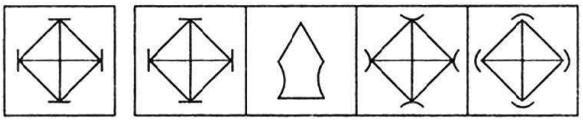
(A) (B) (C) (D)

9.



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

10.



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

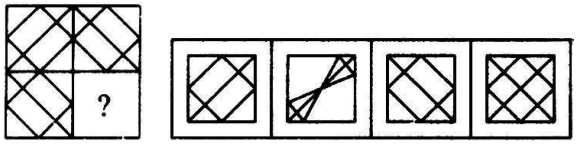
*Based on memory

PART-III

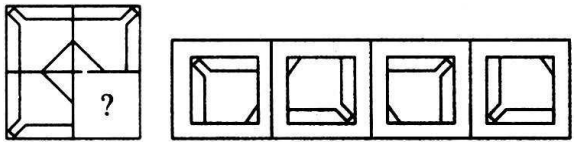
Directions (Questions 11 to 15) : *There is a problem figure, a part of which is missing. Observe the answer figures (A), (B), (C) and (D) and find out the answer figure which without changing the direction, fits in the missing part in the problem figure in order to complete the pattern in the problem figure. Encircle the serial letter of the correct answer.*

Problem Figure **Answer Figures**

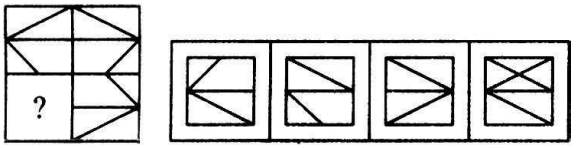
11.



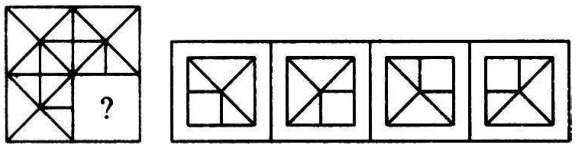
12.



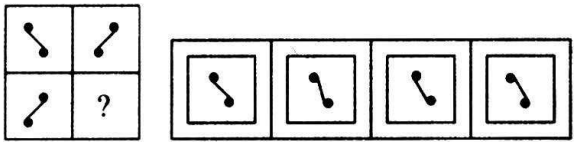
13.



14.



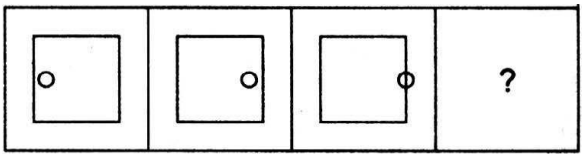
15.



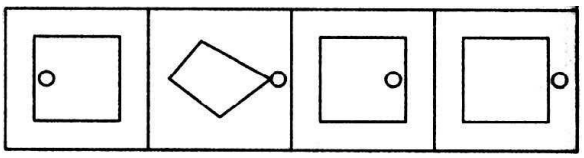
PART-IV

Directions (Questions 16 to 20) : *There are problem figures and the question mark (?) for fourth figure. The problem figures are in a series. Find out one figure among the answer figures which occupies the question mark (?) for the fourth figure and which completes the series. Encircle the serial letter of the correct answer figure.*

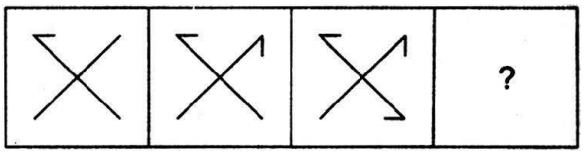
16. Problem Figures



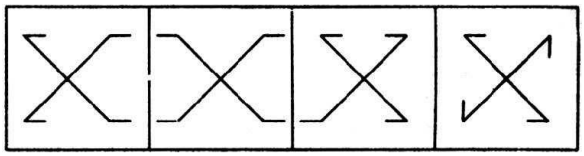
Answer Figures



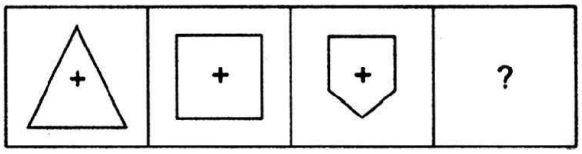
17. Problem Figures



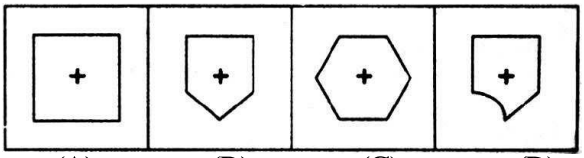
Answer Figures



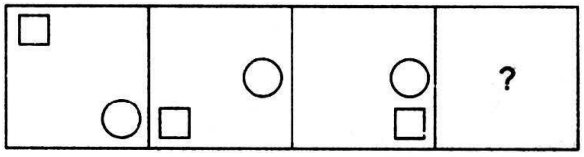
18. Problem Figures



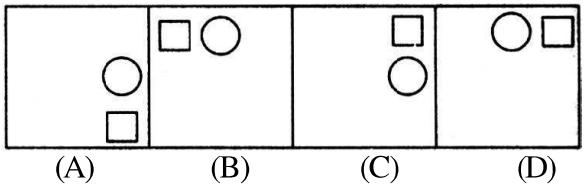
Answer Figures



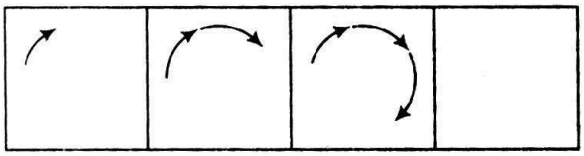
19. Problem Figures



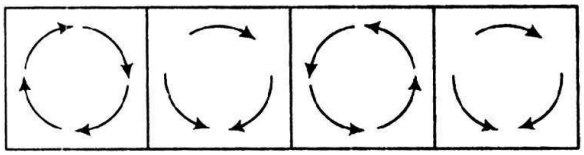
Answer Figures



20. Problem Figures



Answer Figures

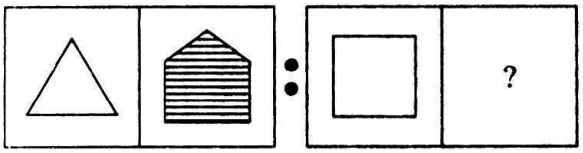


(A) (B) (C) (D)

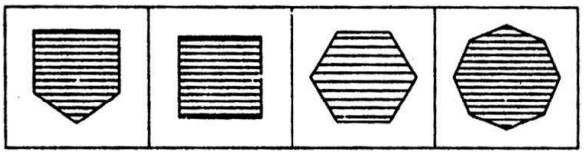
PART-V

Directions (Questions 21 to 25) : *There are three problem figures followed by a question mark (?) for the fourth one. There exists a relationship between first two problem figures. A similar relationship should exist between the third and the fourth problem figure. Select one figure from answer figures which replaces the question mark (?). Encircle the serial letter of answer figure selected by you.*

21. Problem Figures

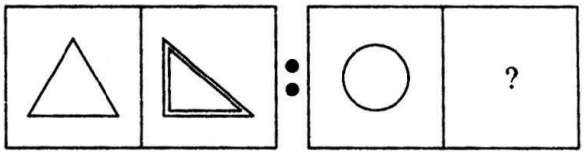


Answer Figures

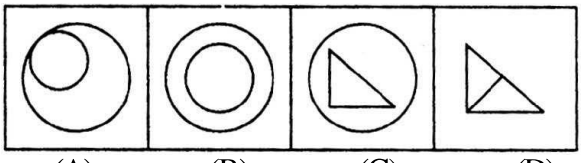


(A) (B) (C) (D)

22. Problem Figures

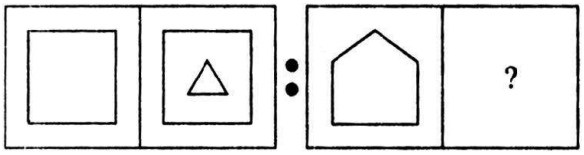


Answer Figures

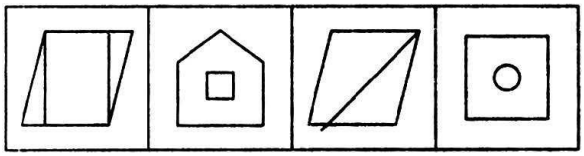


(A) (B) (C) (D)

23. Problem Figures

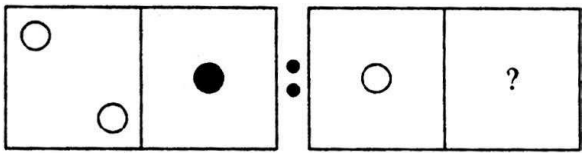


Answer Figures

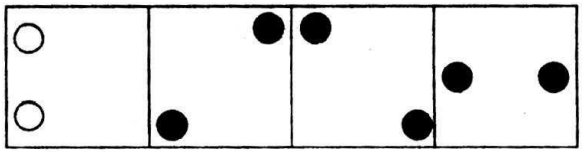


(A) (B) (C) (D)

24. Problem Figures

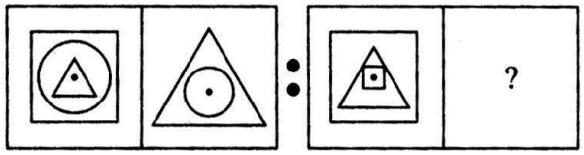


Answer Figures

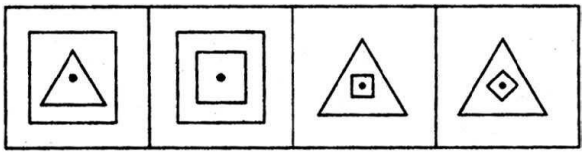


(A) (B) (C) (D)

25. Problem Figures



Answer Figures

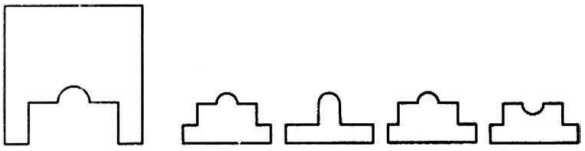


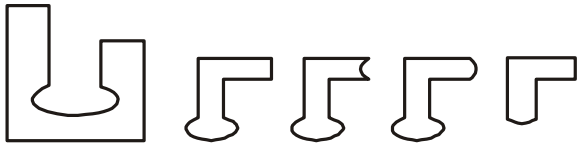
(A) (B) (C) (D)

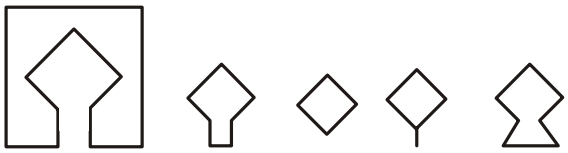
PART-VI

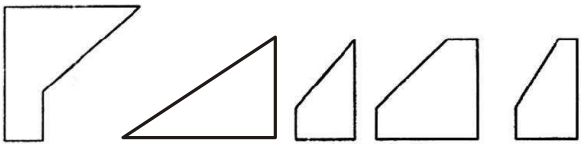
Directions (Questions 26 to 30) : *One part of the square and other one is among the figures (A), (B) (C) and (D). Find out the figure which completes the square. Encircle the serial letter of the correct answer figure.*

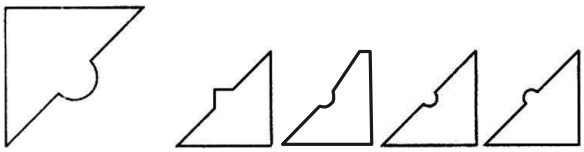
Problem Figure **Answer Figures**

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

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

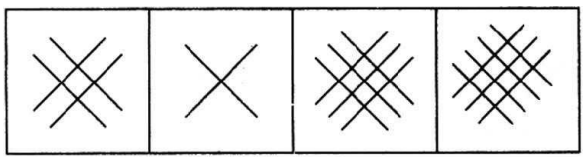
28. 
(A) (B) (C) (D)

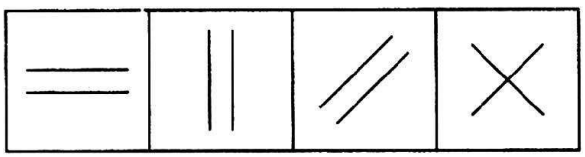
29. 
(A) (B) (C) (D)

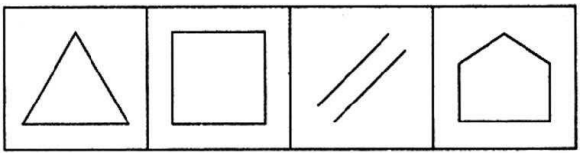
30. 
(A) (B) (C) (D)

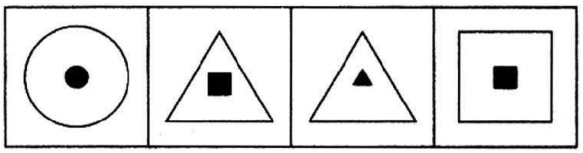
PART-VII

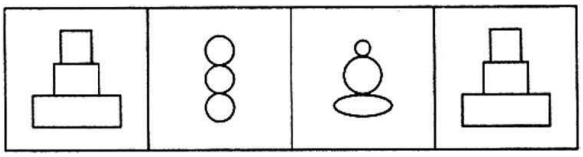
Directions (Questions 31 to 35) : *There are four figures (A), (B) (C) and (D). Out of these four figures, three figures are similar but one figure is different. Spot out the different figure and put a circle on the serial letter of the figure.*

31. 
(A) (B) (C) (D)

32. 
(A) (B) (C) (D)

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

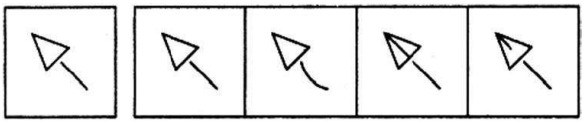
34. 
(A) (B) (C) (D)

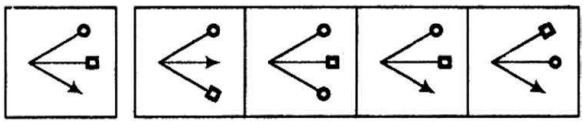
35. 
(A) (B) (C) (D)

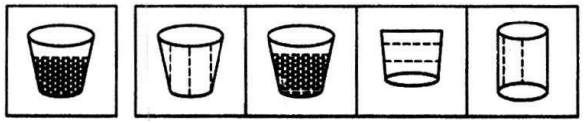
PART-VIII

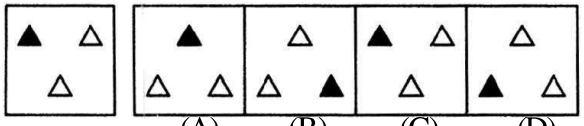
Directions (Questions 36 to 40) : *There is a given problem figure. There are four answer figures (A), (B), (C) and (D). You have to find out the answer figure which is similar to the given problem figure. Encircle the serial letter of the correct answer figure.*

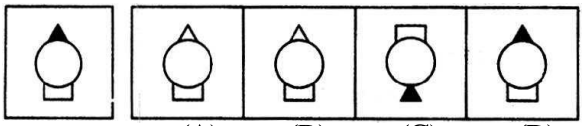
Problem Figure **Answer Figures**

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

37. 
(A) (B) (C) (D)

38. 
(A) (B) (C) (D)

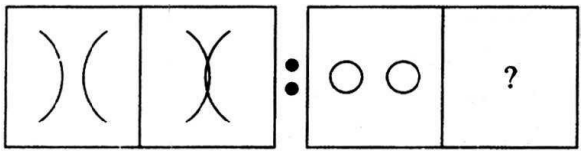
39. 
(A) (B) (C) (D)

40. 
(A) (B) (C) (D)

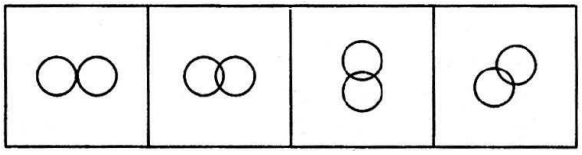
PART-IX

Directions (Questions 41 to 45) : *There are three problem figures followed by a question mark (?) for the fourth one. There exists a relationship between first two problem figures. A similar relationship should exist between the third and the fourth problem figure. Select one figure from answer figures which replaces the question mark (?). Encircle the serial letter of answer figure selected by you.*

41. Problem Figures

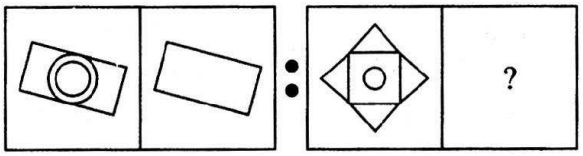


Answer Figures

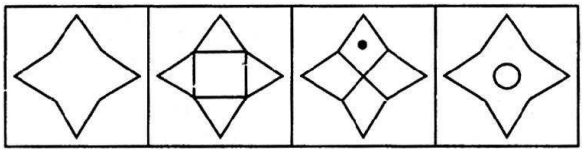


(A) (B) (C) (D)

42. Problem Figures

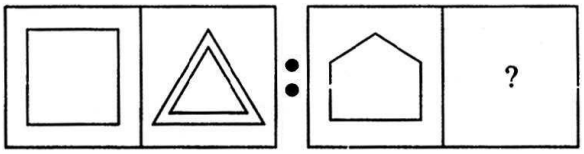


Answer Figures

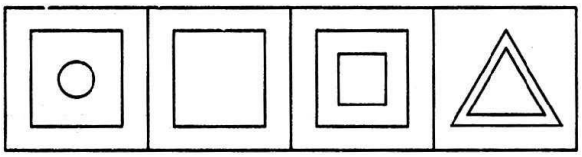


(A) (B) (C) (D)

43. Problem Figures

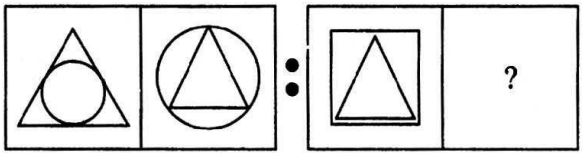


Answer Figures

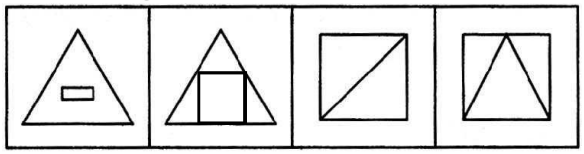


(A) (B) (C) (D)

44. Problem Figures

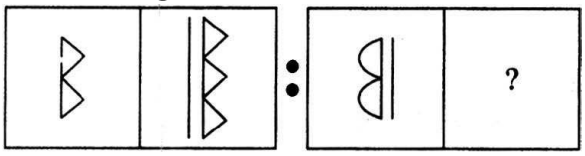


Answer Figures

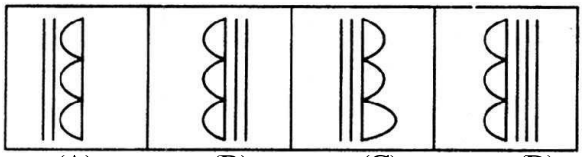


(A) (B) (C) (D)

45. Problem Figures



Answer Figures



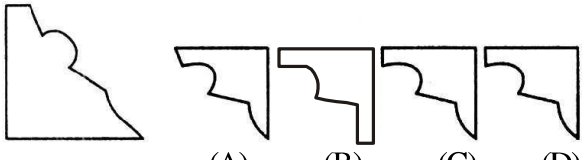
(A) (B) (C) (D)

PART-X

Directions (Questions 46 to 50) : *One part of the square and other one is among the figures (A), (B), (C) and (D). Find out the figure which completes the square. Encircle the serial letter of the correct answer figure.*

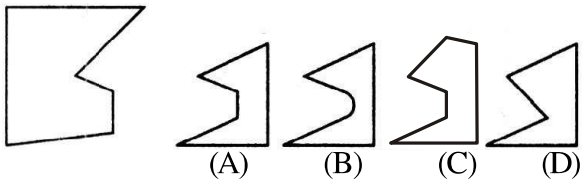
Problem Figure **Answer Figures**

46.



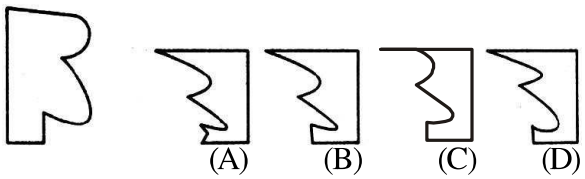
(A) (B) (C) (D)

47.

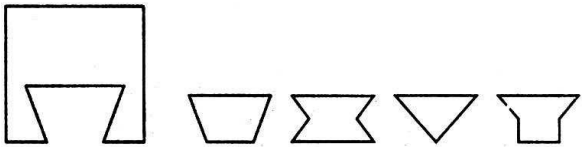


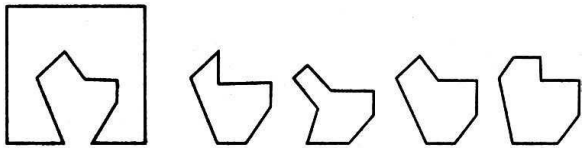
(A) (B) (C) (D)

48.



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

49. 
(A) (B) (C) (D)

50. 
(A) (B) (C) (D)

SECTION-II: ARITHMETIC

Directions (Questions 51 to 60) : *For every question, four probable answers bearing (A), (B), (C) and (D) given. Only one out of these is correct. You have to choose the correct answer.*

51. How many days are there in 2 months, 5 weeks and 18 days?
(A) 113 days (B) 115 days
(C) 116 days (D) 114 days

52. LCM of 42, 70, 98 and 126 is
(A) 126 (B) 2205
(C) 4410 (D) 8820

53. What value must be given to ✷ so that the number 6912✷ is divisible by 25?
(A) 3 (B) 5
(C) 4 (D) 7

54. Which of the following is the smallest four digit number?
(A) 1000 (B) 1100
(C) 1300 (D) 1900

55. The difference between the place values of two 7s in 27307 is
(A) 6993 (B) 7300
(C) 307 (D) 40

56. Which one of the following is a prime number?
(A) 81 (B) 83
(C) 85 (D) 87

57. The multiple of 7 between 14 and 77 is
(A) 10 (B) 9
(C) 8 (D) 7

58. Convert 4 metres 2604 centimetres into centimetres.
(A) 3040 cm (B) 3400 cm
(C) 3004 cm (D) 6604 cm

59. The sum total of 975, 983, 923, 913 and 985 to its nearest hundred will be
(A) 4500 (B) 4600
(C) 4700 (D) 4800

60. Eighty thousand nine hundred and five is represented in number form as
(A) 8095 (B) 80905
(C) 809005 (D) 8009005

61. Which one of the following is equivalent of 6/20?
(A) 6% (B) 20%
(C) 26% (D) 30%

62. The HCF and LCM of two numbers are 4 and 48 respectively. If one of these numbers is 12, the second number is
(A) 16 (B) 12
(C) 8 (D) 4

63. The average of the height of 5 students having height 30, 40, 50, 60, 70 is
(A) 40 (B) 50
(C) 55 (D) 45

64. The cost of 6 kg rice is equal to the cost of 8 kg wheat. If the cost of wheat is ₹ 6 per kg, then the cost of 1 kg rice is
(A) ₹ 6 (B) ₹ 8
(C) ₹ 12 (D) ₹ 14

65. 11, 13, 17, 19, 23, 29, 31, 37, 41, ...
(A) 42 (B) 43
(C) 44 (D) 45

66. A person buys 10 dozen pens at the rate of ₹ 24 per dozen and sells them at the rate of ₹ 36 a dozen. What is his profit or loss?

(A) ₹ 100, profit (B) ₹ 100, loss
(C) ₹ 120, loss (D) ₹ 120, profit

67. Out of 600 students 240 are girls. What is the percentage of girls?
(A) 250% (B) 60%
(C) 40% (D) 24%

68. $[\{(6 \div 2) \times 3) \times 2] = ?$
(A) 11 (B) 18
(C) 13 (D) 27

69. What is simple interest on ₹ 1800 for 10 yr at the rate of 10% per annum?
(A) ₹ 3600 (B) ₹ 1000
(C) ₹ 360 (D) ₹ 1800

70. A man buys a radio for ₹ 900 and sells it for ₹ 1200. Find his gain per cent.
(A) 20% (B) 25%
(C) 30% (D) $33\frac{1}{3}\%$

71. Which of the following is not a factor of 316?
(A) 1 (B) 8
(C) 79 (D) 158

72. Simplify $10\frac{2}{5} \times 8\frac{4}{5} \div 4\frac{2}{5}$.
(A) $20\frac{4}{5}$ (B) $\frac{5}{104}$
(C) 64 (D) 21

73. The average score of a cricketer in two matches is 27 runs and in three other matches is 32 runs. Then, his average score in all the five matches is
(A) 28 (B) 29
(C) 30 (D) 31

74. The sum of the fraction $\frac{2}{9}, \frac{4}{3}$ and $\frac{6}{18}$ is
(A) $\frac{17}{9}$ (B) $\frac{16}{9}$
(C) $\frac{2}{5}$ (D) $\frac{11}{18}$

75. The value of $20.91 \div 0.17$ is
(A) 0.0123 (B) 1.230
(C) 12.30 (D) 123.0

SECTION-III: LANGUAGE

Directions (Questions 76 to 90) : *Read the following passages carefully and answer the questions given below them.*

PASSAGE – I

The family sat down at the table and began to talk about the summer holidays. They had to decide a place to visit during the vacation. Should they go to their village or to a hill station? The parents preferred the village while the children wished to go to the hill station. After few moments of discussion, the elders decided to visit both the places. First they shall go to the village for a week and then stay at the hill station for the remaining days. For the first time, the family shall be together during the holidays. The children were happy with the holiday plan.

76. Why were children happy?
(A) Because a hill station was included in their holiday plan
(B) Because a visit to their village was excluded from their holiday plan
(C) Because their choice prevailed
(D) Because they were going all alone to the hill station

77. The final plan was to visit
(A) their village
(B) a hill station
(C) their village as well as a hill station
(D) their home town

78. The final decision was made by the
(A) boys (B) girls
(C) women (D) elders

79. They decided first to go to their village and stay there for
(A) a day (B) a week
(C) ten days (D) a fortnight

80. The purpose for which the family sat down at the table was to
(A) decide a place to visit during the vacation
(B) educate the children how to carry articles during a visit to a hill station
(C) decide the date when they should start their journey
(D) tell the children that they visit a hill station during this vacation

PASSAGE –II

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 whole mornings on the river, I always go home with an empty bag. "You must give up fishing!" my friends say. It's a waste of time. But they don't realise one important thing. I'm not really interested in fishing. I am only interested in sitting in a boat and doing nothing at all.

81. Fishing is the writer's favourite sport as he
(A) always catches fish
(B) finds it a funny sport
(C) enjoys doing nothing while sitting in a boat
(D) collects old boots

82. Some fishermen are unlucky because
(A) they never catch a fish
(B) fishing is not their favourite sport
(C) they fish for hours together
(D) sometimes they catch old boots and rubbish instead to fish

83. What does writer carry when he go home from the river?
(A) fish (B) old boots
(C) new boots (D) empty bag

84. Who says "You must give up fishing"?
(A) Writer's brother (B) Writer's mother
(C) Writer's father (D) Writer's friends

85. Who is not interested in fishing?
(A) Writer (B) Writer's friends
(C) Writer's family (D) All of the above

PASSAGE – III

Laws of nature are not commands but statements of facts. The use of the word ''Law'' in this context is rather unfortunate. It would be better to speak of uniformities of nature. This would do away with the elementary fallacy that a law implies a law-giver. If a piece of matter does not obey a law of nature, it is not punished. On the contrary, we say that the law has been incorrectly stated.

86. If a piece of matter violates nature's law, it is not punished because
(A) it is not binding to obey it
(B) there is no superior being to enforce the law of nature
(C) it cannot be punished
(D) it simply means that the facts have not been correctly stated by the law

87. The author is not happy with the word 'law' because
(A) it expresses rigidity and harshness
(B) it implies an agency which has made them
(C) it does not convey the sense of nature's uniformity
(D) it gives rise to false beliefs

88. Laws of nature differ from man-made laws because
(A) the former state facts of nature
(B) they must be obeyed
(C) they are nature
(D) unlike human laws, they are systematic

89. The laws of nature based on observation are
(A) conclusive about the nature of the universe
(B) true and unfalsifiable
(C) figments of the observer's imagination
(D) subject to change in the light of new facts

90. The antonyms of 'obey' is
(A) disobey (B) refused
(C) accept (D) obedient

Directions (Questions 91 to 93) : *Find out the part which has an error in the following sentences. If there is no errror, the answer is (D).*

91. The students (A) / returned back (B) / home well in time. (C) / No error (D)

92. English should (A) / be make (B) / the national language. (C) / No error (D)

93. Ravi is a (A) / intelligent student (B) / of my school. (C) / No error (D)

Directions (Questions 94 and 95) : *Choose the word, which is most* ***opposite*** *in meaning of the given word.*

94. Queen
(A) Man (B) Person
(C) King (D) Woman

95. Honest
(A) Cruel (B) Kind
(C) Dishonest (D) Good

Directions (Questions 96 and 97) : *Choose the word, which is most* ***similar*** *in meaning of the given word.*

96. Part
(A) Handle (B) Section
(C) Save (D) Sense

97. Keen
(A) Careful (B) Perfect
(C) Efficient (D) Eager

Directions (Questions 98 to 100) : *In each of the following questions, choose the proper order of the words to make a meaningful sentence.*

98. (1) reach (2) time they (3) By the (4) the train will have left (5) the railway station.
(A) 31254 (B) 31245
(C) 32154 (D) 12543

99. (1) cannot (2) second fiddle (3) to others (4) John (5) play.
(A) 41523 (B) 45123
(C) 42315 (D) 32154

100. (1) of the (2) have rotten (3) pillars (4) Nine tenth (5) away.
(A) 43125 (B) 42315
(C) 41325 (D) 41352

ANSWERS

1	2	3	4	5	6	7	8	9	10
B	D	A	B	D	B	B	D	A	A
11	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
A	B	A	D	A	D	D	C	D	A
21	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
C	B	B	C	A	B	A	A	B	C
31	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
D	D	C	B	B	A	C	B	C	D
41	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**
B	A	C	B	B	A	A	B	A	C
51	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**
A	C	B	A	A	B	C	C	D	B
61	**62**	**63**	**64**	**65**	**66**	**67**	**68**	**69**	**70**
D	A	B	B	B	D	C	B	D	D
71	**72**	**73**	**74**	**75**	**76**	**77**	**78**	**79**	**80**
B	A	C	A	D	A	C	D	B	A
81	**82**	**83**	**84**	**85**	**86**	**87**	**88**	**89**	**90**
C	D	D	D	A	C	C	A	C	C
91	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**99**	**100**
B	B	A	C	C	B	D	C	A	C

SOME SELECTED EXPLANATORY ANSWERS

1. Option (B) has only one circle.

2. Option (D) has more than one signs, inside the square.

3. In all others, the number of lines in the circles is odd.

4. The number of sides in increasing by one from the inner design to outer designs.

5. In option (D) the line segment bisect the triangle.

17. One line is adding in clockwise direction in the design.

18. One side is increasing in the next figure. Thus, answer figure will be a hexagon.

19. The figure □ is moving 90° and the circle by 45° anti-clockwise.

20. One curved line is adding in clockwise direction. Thus, the answer figure will consist four curved lined and construct a complete circel.

21. The new design is forming with the addition of two sides to the previous design and become shaded.

22. The triangle changes into circle and double triangle changes into double circle.

25. Inner two designs are changing their place and outer design disappears.

31. In all others, both crossed lines are equal.

32. In all others, two lines are parallel while in option (D) the lines intersect to each other.

33. In all others, there are closed figures.

34. In all others, the both designs are same and outer design converted into dark one.

35. In all others, the successive designs are becoming short.

41. In the figure, designs come near and adjoining to each other.

42. In the figures, the inner designs are omitting.

45. In the successive figure, one design in added with a line.

51. 2 months, 5 weeks and 18 days

$= (2 \times 30 + 5 \times 7 + 18)$ days

$= 60 + 35 + 18$

$= 113$ days.

52.

2	42,	70,	98,	126
3	21,	35,	49,	63
7	7,	35,	49,	21
	1,	5,	7,	3

Hence, LCM $= 2 \times 3 \times 7 \times 5 \times 7 \times 3 = 4410$.

53. The numbers divisible by 25 are only the numbers with last digit 25, 50, 75 and 100. Therefore, 5 is required number.

54. Smallest four digit number = 1000

55. $\because$ Place values of two 7s in 27307 are

$= 7000$ and 7

Hence, difference $=(7000 - 7) = 6993$

56. 83 is a prime number.

57. $\because$ Multiples of 7 between 14 and 77 is

$= 21, 28, 35, 42, 49, 56, 63, 70$

Therefore, total numbers of multiples are = 8

58. $\because$ 1 m = 100 cm

$\therefore$ 4 m = 400 cm

Now, 400 cm + 2604 cm = 3004 cm

59. Since, the sum = (975 + 983 + 923 + 913 + 985)

$= 4779$

Hence, in nearest hundred, it will be written as 4800.

60. Eighty thousand nine hundred and five = 80905.

61. $\frac{6}{20}$ in percentage is $= \frac{6}{20} \times \frac{100}{1} = 30\%$.

62. $\therefore$ The second number $= \frac{\text{HCF} \times \text{LCM}}{\text{First number}}$

$= \frac{4 \times 48}{12} = 16$.

63. Average height of the students

$$= \frac{30+40+50+60+70}{5} = \frac{250}{5} = 50 .$$

64. $\because$ Cost of 1 kg of wheat = ₹ 6

$\therefore$ Cost of 8 kg of wheat = ₹ (8×6) = ₹ 48

6 kg rice cost = ₹ 48

$$1 \text{ kg rice costs} = \frac{48}{6} = ₹ 8.$$

65. The series consists of prime numbers.

$\therefore$ The missing number should be the next prime number = 43.

66. Cost price = 24×10 = ₹ 240

Sale price = 36×10 = ₹ 360

Profit = 360 – 240 = ₹ 120.

67. Percentage of girls = $\frac{240}{600} \times 100 = 40\%$.

68. $[\{(6 \div 2) \times 3\} \times 2] = [\{3 \times 3\} \times 2]$

$= [9 \times 2] = 18.$

69. Simple Interest = $\frac{P \times R \times T}{100} = \frac{1800 \times 10 \times 10}{100}$

= ₹ 1800.

70. CP of the radio = ₹ 900

SP of the radio = ₹ 1200

Gain = ₹ (1200 – 900) = ₹ 300

$\therefore$ Gain % = $\frac{300}{900} = 100$

$= 33\frac{1}{3}\%$.

71. Since factors of 316 are

$316 = 1 \times 316 = 2 \times 158$

$= 4 \times 79$ (1, 2, 4, 79, 158, 316)

Hence, 8 is not a factor of 316.

72. $10\frac{2}{5} \times 8\frac{4}{5} \div 4\frac{2}{5} = \frac{52}{5} \times \frac{44}{5} \div \frac{22}{5}$

$= \frac{52}{5} \times \frac{44}{5} \times \frac{5}{22}$

$= \frac{52}{5} \times 2 = \frac{104}{5} = 20\frac{4}{5}$.

73. Total score in first two matches = $2 \times 27 = 54$

Total scores in other three matches = $3 \times 32 = 96$

$\therefore$ Average score of 5 matches = $\frac{54+96}{5}$

= 30 runs

74. Sum of the fraction = $\frac{2}{9} + \frac{4}{3} + \frac{6}{18}$

$= \frac{4+24+6}{18}$

$= \frac{34}{18} = \frac{17}{9}$.

75. $\because$ $20.91 \div 0.17 = \frac{2091}{100} \times \frac{100}{17} = 123.0$.