Previous Paper (Solved)

JAWAHAR NAVODAYA VIDYALAYA ENTRANCE EXAM, 2014*

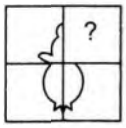
CLASS VI

SECTION-I: MENTAL ABILITY TEST

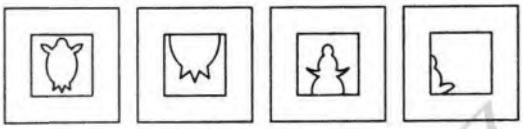
PART-I

Directions (Qs. 1-5) : *In question figure is given followed by four alternatives. Select a figure from the four alternatives, which when placed in the blank space of question figure would complete the pattern of question figure without altering the direction of answer figure.*

1. Question Figure

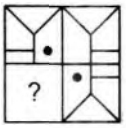


Answer Figures

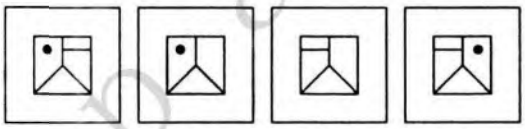


(A) (B) (C) (D)

2. Question Figure

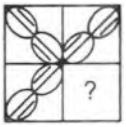


Answer Figures

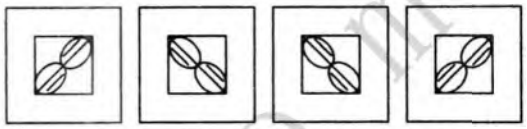


(A) (B) (C) (D)

3. Question Figure



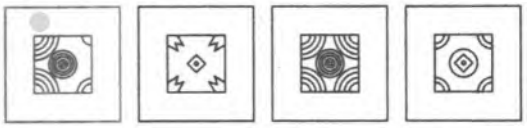
Answer Figures



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

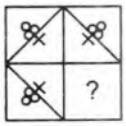
4. Question Figure

Answer Figures

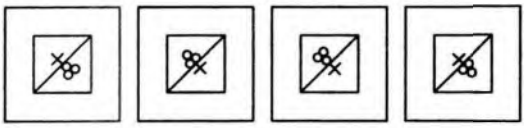


(A) (B) (C) (D)

5. Question Figure



Answer Figures



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

PART-II

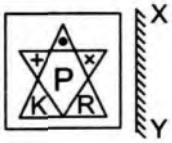
Directions (Qs. 6-10): *There are four alternatives (A), (B), (C) and (D) given. You have to choose the correct mirror image of the question figure, when the mirror held on the line XY.*

6. Question Figure

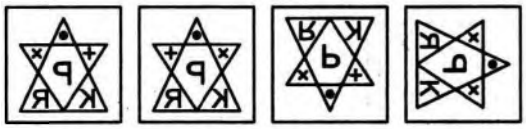
Answer Figures

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

7. Question Figure

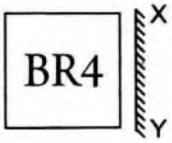


Answer Figures



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

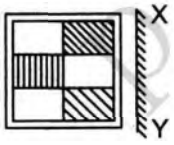
8. Question Figure



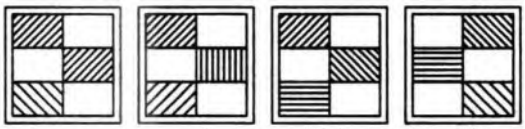
Answer Figures

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

9. Question Figure

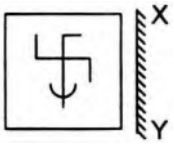


Answer Figures

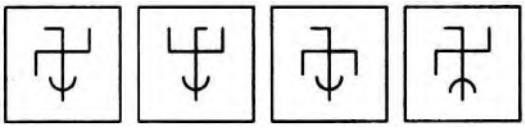


(A) (B) (C) (D)

10. Question Figure



Answer Figures

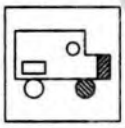


(A) (B) (C) (D)

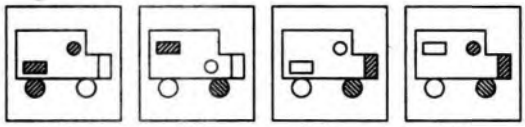
PART-III

Directions (Qs. 11-15): *In the given question figure followed by four alternatives (A), (B), (C) and (D). Select the figure from answer list which is exactly similar to question figure.*

11. Question Figure

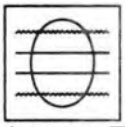


Answer Figures

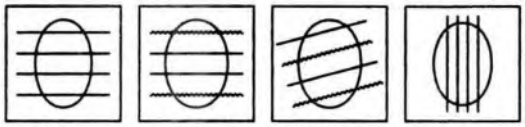


(A) (B) (C) (D)

12. Question Figure



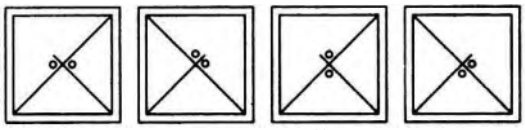
Answer Figures



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

13. Question Figure

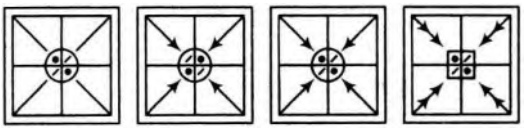
Answer Figures



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

14. Question Figure

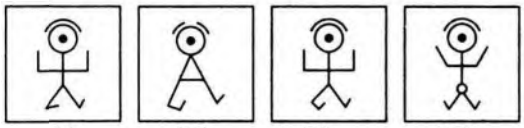
Answer Figures



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

15. Question Figure

Answer Figures

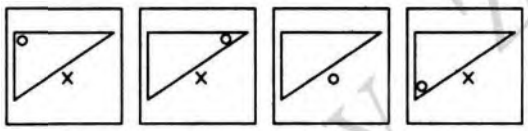


(A) (B) (C) (D)

PART-IV

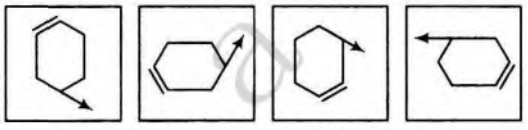
Directions (Qs. 16-20) : *In the following four figures (A), (B), (C), and (D) are given, three are similar in a certain manner. However, one figure is not like the other three. Choose the figure which is different from the rest.*

16.



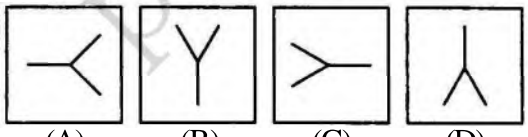
(A) (B) (C) (D)

17.



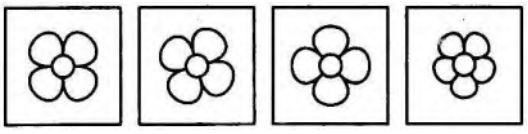
(A) (B) (C) (D)

18.



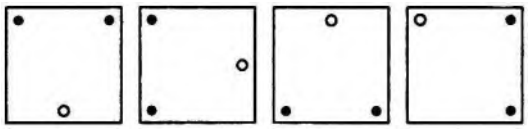
(A) (B) (C) (D)

19.



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

20.

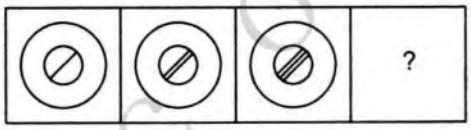


(A) (B) (C) (D)

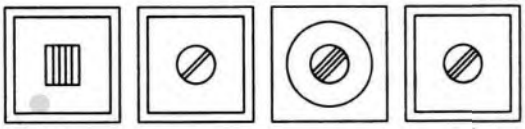
PART-V

Directions (Qs. 21-25): *Three complete and fourth blank space is given, choose the set of figures which follows the rule and would replace the blank space given in question figure from the four alternatives given.*

21. Question Figures

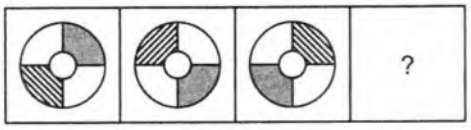


Answer Figures

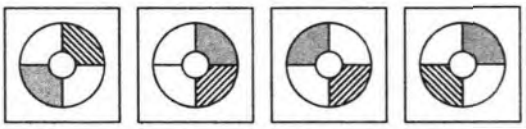


(A) (B) (C) (D)

22. Question Figures

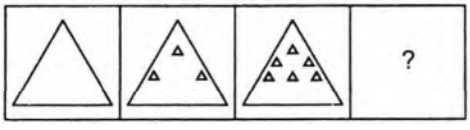


Answer Figures

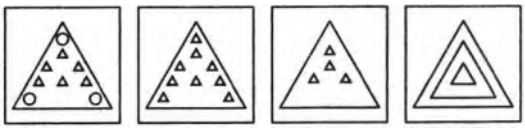


(A) (B) (C) (D)

23. Question Figures

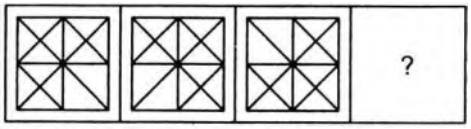


Answer Figures

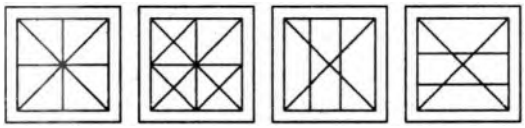


(A) (B) (C) (D)

24. Question Figures

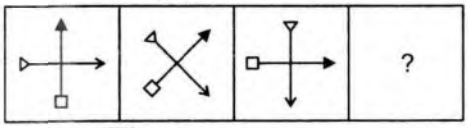


Answer Figures

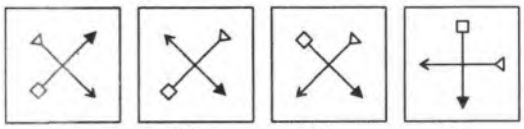


(A) (B) (C) (D)

25. Question Figures



Answer Figures

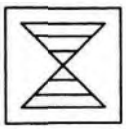


(A) (B) (C) (D)

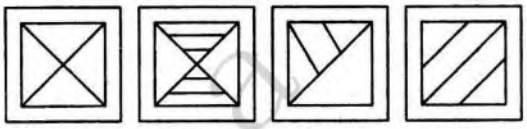
PART-VI

Directions (Qs. 26-30): *In question figure is embedded in any one of the four alternatives (A), (B), (C) and (D). Find out the alternatives which contains question figure as its part.*

26. Question Figure



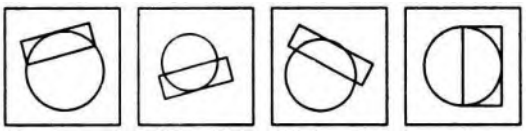
Answer Figures



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

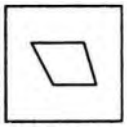
27. Question Figure

Answer Figures

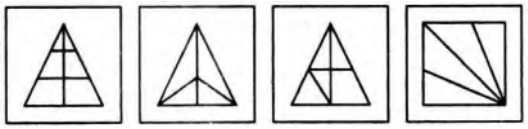


(A) (B) (C) (D)

28. Question Figure



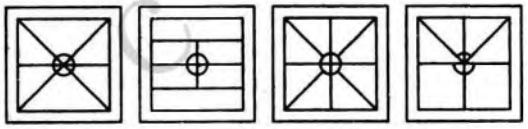
Answer Figures



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

29. Question Figure

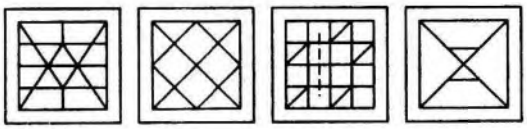
Answer Figures



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

30. Question Figure

Answer Figures

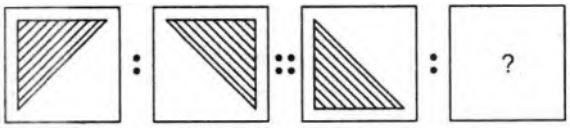


(A) (B) (C) (D)

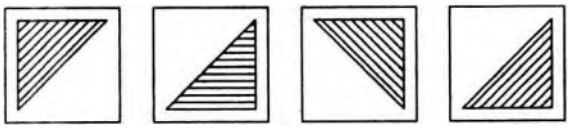
PART-VII

Directions (Qs. 31-35): *There are two sets of figure given. There is a definite relationship between first two. Establish a similar relationship between third and fourth by selecting a suitable figure from answer that would replace the question mark.*

31. Question Figures

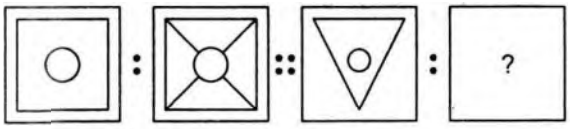


Answer Figures

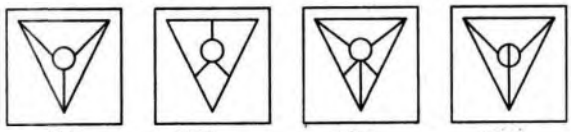


(A) (B) (C) (D)

32. Question Figures

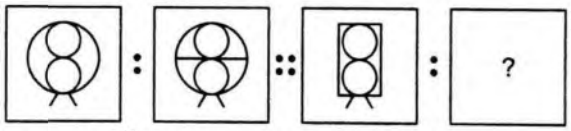


Answer Figures

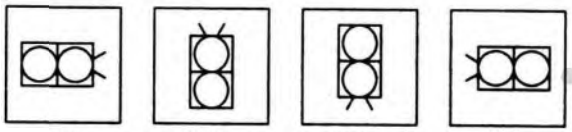


(A) (B) (C) (D)

33. Question Figures

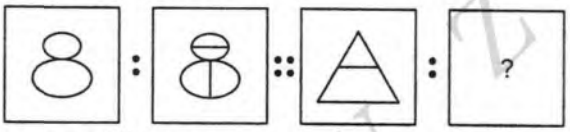


Answer Figures

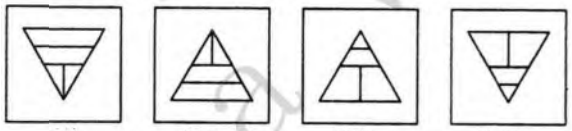


(A) (B) (C) (D)

34. Question Figures

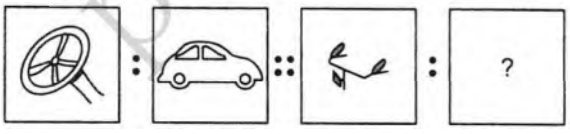


Answer Figures

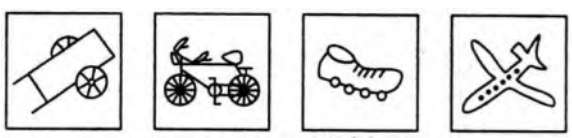


(A) (B) (C) (D)

35. Question Figures



Answer Figures



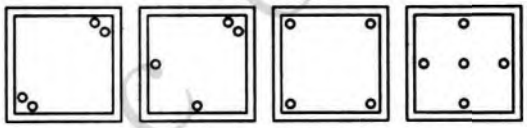
(A) (B) (C) (D)

PART-VIII

Directions (Qs. 36-40): *Consist a set of three figures showing a sequence of folding a piece of paper third question figures shows to manner in which the folded paper has been cut. These three figures are followed by four answer figures from which you have to choose a figure which would most closely resemble the unfolded form of third figure of question.*

36. Question Figures

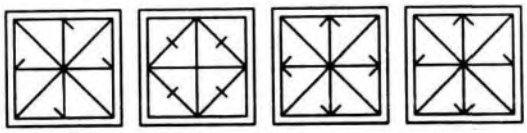
Answer Figures



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

37. Question Figures

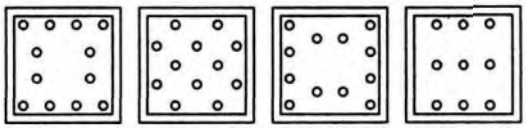
Answer Figures



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

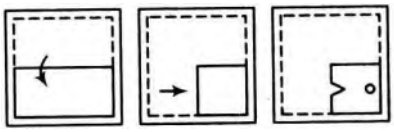
38. Question Figures

Answer Figures

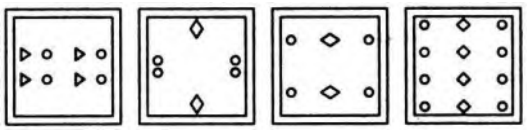


(A) (B) (C) (D)

39. Question Figures



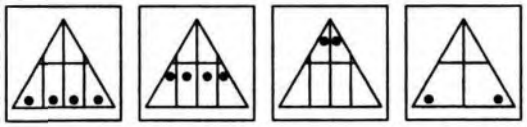
Answer Figures



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

40. Question Figures

Answer Figures

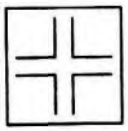


(A) (B) (C) (D)

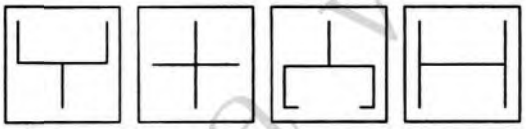
PART-IX

Directions (Qs. 41-45): *Question figure is followed by four alternatives, find out which of the figure from (A), (B), (C) and (D) can be formed from the pieces given in question figure.*

41. Question Figure



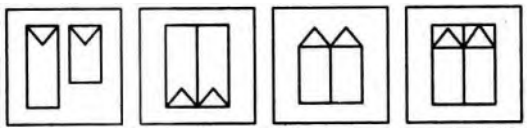
Answer Figures



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

42. Question Figure

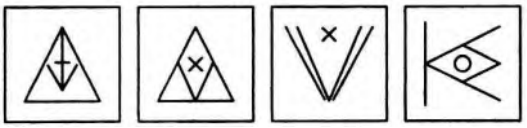
Answer Figures



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

43. Question Figure

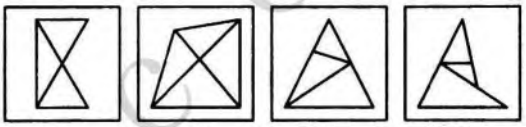
Answer Figures



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

44. Question Figure

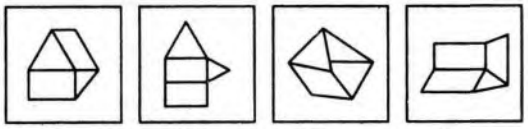
Answer Figures



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

45. Question Figure

Answer Figures

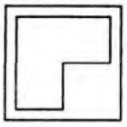


(A) (B) (C) (D)

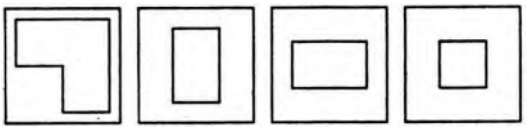
PART-X

Directions (Qs. 46-50): *There are four alternatives (A), (B), (C) and (D) given. You have to select the alternatives which completes squares given in the question figure.*

46. Question Figure



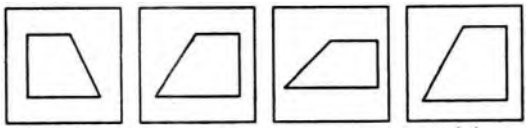
Answer Figures



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

47. **Question Figure**

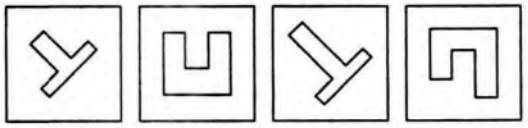
Answer Figures



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

48. **Question Figure**

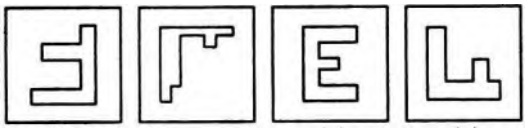
Answer Figures



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

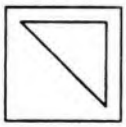
49. **Question Figure**

Answer Figures

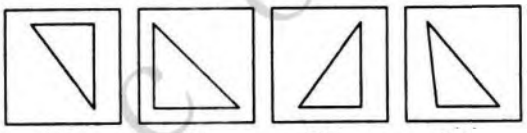


(A) (B) (C) (D)

50. **Question Figure**



Answer Figures



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

SECTION-II: MATHEMATICS

51. Weight of tomato comprises 90% of water. Weight of water in 25 kg of tomato is

A. 24 kg B. 22.5 kg
C. 21 kg D. 19.5 kg

52. 1000000 is obtained, when a number is subtracted from the sum of 893645 and 635489, find that number.

A. 106355 B. 364511
C. 51329 D. 529134

53. What is the maximum difference between the number formed by 7 various numerals and 6 various numerals?

A. 1 B. 35802
C. 38502 D. 999998

54. For a shirt, cloth required must be 2 m 75 cm. Then, how much cloth would be taken to have such 6 shirts?

A. 15 m 50 cm B. 16 m 50 cm
C. 18 m D. 21 m

55. Which of the following is equivalent to 1.01?

A. 101% B. 10.1%
C. 1.01% D. 1010%

56. $\frac{0.1}{.01}+\frac{.01}{.1}$ is equal to

A. $\frac{101}{10}$ B. $\frac{1101}{100}$
C. $\frac{11}{10}$ D. $\frac{1001}{100}$

57. In an examination Karan got 10 marks more than Bhavna. Isha got 5 marks less than Bhavna. If Trio get a total of 170, then what is the marks obtained by Isha?

A. 65 B. 55
C. 50 D. 45

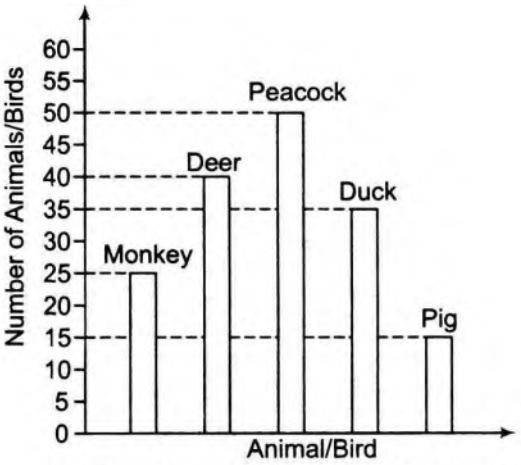
58. In a musical concert, 15% of the total is reserve for first class. If all the tickets were sold except 171 ticket of first class, then how many tickets were sold?

A. 1710 B. 1600
C. 1140 D. 180

59. A shopkeeper charges ₹ 10 for every bottle of coke or ₹ 240 for every carat of 30 bottles. If Vandana wants to buy 185 bottle of coke, what amount she will have to pay?

A. ₹ 1480 B. ₹ 1490
C. ₹ 1600 D. ₹ 1850

60. A class visit a park and there they saw some animals and birds. They plot a graph by placing the number of animals and birds.



Sum of number of Deer and Monkey is more than the number of Peacock is

A. 25 B. 15
C. 10 D. 5

61. Five-digits greatest odd number to be formed with the help of 3, 5, 7, 9 and 0 is

A. 90573 B. 97530
C. 97503 D. 97053

62. Five-digits smallest number, which is completely divisible by 75 is

A. 10025 B. 10050
C. 10075 D. 9975

63. Following graph represents the number of carton filled with oranges in 4 days of a week sold by a vendor.

Day	Number of Oranges Sold
Monday	● ●
Wednesday	● ● ●
Friday	● ● ● ● ● ●
Sunday	● ● ● ●

● represents 15 oranges

If vendor still remain with 25 oranges in a carton, then what was the number of oranges at the beginning?

A. 200 B. 225
C. 250 D. 300

64. Greatest number, which is to be divided by 280 and 1245 leaves the remainder 4 and 3 respectively, is

A. 138 B. 148
C. 145 D. 178

65. Three bells ring at intervals of 12, 15 and 18 min respectively. They started ringing simultaneously at 9 : 00 am. What will be the next time when they all ring simultaneously?

A. 10 : 00 am B. 11 : 00 am
C. 12 : 00 pm D. 1 : 00 pm

66. In what time ₹ 4250 amounts to ₹ 5610 at the rate 8% per annum?

A. 8 yr B. 5 yr
C. 6 yr D. 4 yr

67. If 4015 ÷ 11 = 365, 40.15 ÷ 1.1 is equal to

A. 36.5 B. 3.65
C. 0.365 D. 0.0365

68. 00.0675 is divided by 15; quotient is

A. 0.0045 B. 6.0450
C. 60.0450 D. 0.6045

69. Next term of 80, 10, 70, 15, 60, ... is

A. 20 B. 25
C. 30 D. 50

70. Unit digit of product of first ten prime number is

A. 6 B. 4
C. 2 D. 0

71. If each side of square will be doubled, then its perimeter will be

A. 2 times B. 3 times
C. 4 times D. 8 times

72. If sum of each row, column and diagonals are equal, then the value of x, y, z and w respectively, is

8	y	z
y	5	w
4	9	2

A. 4, 6, 8, 7 B. 1, 3, 6, 7
C. 1, 6, 3, 7 D. 3, 6, 7, 1

73. A man crosses a 600 m long bridge in 5 min. Speed of man in km/h will be
A. 3.6 B. 7.2
C. 8.4 D. 9.6

74. A man do a work in 12 days working 8 h per day. If he does 6 h per day, what would be the number of days taken by him?
A. 12 days B. 14 days
C. 16 days D. 18 days

75. 1/5 part of a drum is filled with milk. What is the capacity of drum if it require 28 L more to fall the drum completely?
A. 30 L B. 32 L
C. 35 L D. 140 L

SECTION-III: LANGUAGE

Directions (Qs. 76-100): *There are five passages. Each passage has 5 questions. Read the following passage carefully and answer the questions that follow.*

PASSAGE-1

Simi was a puppy. She was very cute. Asha found her crying in a park. When she picked her up, the puppy stopped crying and looked at her. Asha liked that glance of her and she decided to take her home. Her mother approved the idea. They together gave her the name 'Simi', and happily brought her home.

So far nobody had trained the puppy, so Asha thought she should train her. Next morning she took Simi out and gave her some lessons. A trainer has to be a bit strict. So she punished her when she disobeyed and rewarded her when she did what Asha wanted her to do. On the whole, the training was not so difficult. In a week's time Simi became a good cultured puppy.

76. Asha took the puppy home because she
A. pitied her B. liked her glance
C. liked dogs D. needed a puppy

77. 'She disobeyed...' 'She' here refers to
A. Asha B. Asha's mother
C. the puppy D. the storyteller

78. What is the opposite of 'reward'?
A. Encouragement B. Punishment
C. Gift D. Scolding

79. The puppy was named Simi by
A. Asha
B. Her mother
C. Asha and her mother
D. A friend of Asha

80. Which of the following words does mean "...did what she wanted her to do"?
A. Obeyed B. Performed
C. Followed D. Picked

PASSAGE-2

Arjuna went to Dwarka to ask support from Krishna. The same day Duryodhana also reached there to seek Krishna's help. Duryodhana reached first, but seeing Krishna asleep; he sat down on a cushion at the side of his head and waited. Then, reached Arjuna and waited standing near Krishna's feet. When Krishna awoke, Duryodhana requested him to be on his side in the war. "But I will bear no weapon," said Krishna. "Both of you have to choose between myself and my vast army. Arjuna has the first choice, for I saw him first." Arjuna choose Krishna without arms and Duryodhana had the army of eleven hundred million soldiers, well tried and tested in several wars.

81. Who went to Dwarka to ask support from Krishna?
A. Arjuna
B. Duryodhana
C. Arjuna and Duryodhana both
D. Karna

82. Who kept standing towards Krishna's feet?
A. Bhima
B. Duryodhana
C. Arjuna
D. None of the above

83. Who preferred Krishna's army in place of Krishna?
A. Duryodhana B. Bhima
C. Arjuna D. Karna

84. How many soldiers were there in Krishna's army?
A. One hundred million soldiers
B. Five hundred million soldiers
C. Eleven hundred million soldiers
D. Twenty hundred million soldiers

85. Where did Arjuna go to ask support from Krishna?
A. Mathura B. Agra
C. Dwarka D. Ayodhya

PASSAGE-3

The train was moving very fast. But the engine driver noticed the boy, waving his red shirt, running towards the engine. The driver was surprised and angry. He blew the whistle. The boy did not stop. So the driver slowed the train down. The boy ran faster towards it. "Stop stop" he shouted. The driver stopped the train, he got down from the engine. Ramu came running to the driver. He was panting for breath. He was pointing towards the bridge. "What is the matter", asked the driver angrily. 'Oh; the bridge is broken", said Ramu, "You can not take the train over". All the passengers came down the train. They saw that the bridge was really broken. They were very happy and thankful. The driver thanked Ramu and said. "You are really a brave boy, you have done a brave deed."

86. Spot the correct statement.
A. The engine driver was panting for breath
B. The passengers gave a good beating to Ramu
C. Ramu was waving his red shirt running towards the engine
D. Ramu was running away from the engine

87. Ramu was pointing
A. towards the river
B. towards the broken bridge
C. towards the broken rails
D. towards his village

88. Why did the driver blow the whistle?
A. The driver blew the whistle angrily to stop the boy
B. The driver blew the whistle to stop the train
C. The driver blew the whistle to warn the passengers
D. The driver blew the whistle to step up the speed of the train

89. Ramu was
A. not a brave boy B. a naughty boy
C. a coward boy D. a brave boy

90. The colour of Ramu's shirt was
A. green B. red
C. yellow D. white

PASSAGE-4

Once upon a time, there lived a Rajput king at Malwa. His kingdom was small, quiet and peaceful. There were no major battles on political problems. So his one aim in life was to make his people happy.

One year there was a severe drought. The fields were dry and cracked, and the trees were bare. There were no flowers and fruits in the land or crops of any kind. The king was worried. How was he to save the people from famine?

He walked to the river Narmada, knelt down and prayed. "O Sacred Narmada, bless us with rain. Save my people from famine, and I shall offer you my first born child."

Before long, the sky was overcast with clouds and it rained heavily. The wet Earth was ploughed, seeds were sown and a few months later a bumper crop was harvested. The people rejoiced.

91. What was the king's problem?
A. Wars B. Politics
C. Famine D. Flood

92. Which statement does show that the Rajput king loved his people?
A. The king offered his first-born child to river Narmada
B. He opened the gates of the state granary for his people
C. He forced his neighbouring states to contribute food
D. He set up relief camps to feed the hungry

93. When there is drought
A. there is lot of rain
B. the Earth is dry and cracked
C. people are very happy
D. people sow the seeds

94. The king prayed Narmada for
A. grains B. famine
C. a child D. rain

95. 'Before long' means
A. a long time ago B. for a longtime
C. very soon D. in the past

PASSAGE-5

Issac Newton was a great scientist. He was born in 1642 and died in 1727. He discovered the law of gravitation. It was the falling of an apple in the garden that set him thinking. He was trying to find why the Earth went round the Sun and the Moon round the Earth. He asked himself, "Why does an apple fall to the Earth?" This led him to his discovery. Newton also found out that white light is made up of seven colours. We see these colours in the rainbow. He also made many other discoveries. Newton was a very learned man. But he was very humble. Shortly before his death, he said, "I seem to have been only like a boy playing on the sea-shore while the great ocean of truth lay undiscovered before me."

96. Issac Newton was a great
A. doctor B. teacher
C. leader D. scientist

97. When was he born?
A. In 1727 B. In 1627
C. In 1642 D. In 1742

98. What did set him thinking?
A. The falling of a fig
B. The falling of an apple
C. The falling of a coconut
D. The falling of a man

99. How many colours do make the white light?
A. Five B. Ten
C. Three D. Seven

100. The Earth moves around the
A. Moon B. Sun
C. Mars D. Stars

ANSWERS

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

SOME SELECTED EXPLANATORY ANSWERS

5. '+' sign is above the diagonal line and three touching circles are below the diagonal.

6. Mirror image of word KOON along XY line of reflection is NOOK

8. Mirror image of word BR4 along XY line of reflection is 4RB

16. In figure (C), cross sign '×' is missing.

17. Arrow sign is at a distance of one side length from parallel side.

18. All figures contain smaller angle except first one.

19. There are five circle around a centre circle.

20. Circle is placed on corner instead of middle position.

21. Number of chords, drawn inside the inner circle increases by one in every next figure.

22. Figure is rotating by 90° in clockwise direction.

23. In every next figure, number of triangle increases by three.

25. Figure is rotating by 45° in clockwise.

26. Figure (B) is embedded by question figure.

27. Only figure (D) contains a diameter inside a circle.

31. Second image is the mirror image of (vertically placed mirror along y-axis) first image.

32. Centre figure is get connected to vertices in next image.

33. A common tangent line passes through the intersection point of two circles.

34. A horizontal line and vertical line comes in picture in upper and lower portion of the figure respectively.

36. When the page is unfolded the punch mark will be appeared at only two corners.

41. When we close the four angles along the sides, we will get figure (B).

44. On arranging the three figures in triangular form, we will get triangle.

51. Weight of water in 25 kg of tomato

$= 90\%$ of 25 kg

$= \frac{90}{100} \times 25$

$= \frac{90}{4} = \frac{45}{2}$ kg

$= 22.5$ kg.

52. Let the number be x

$1000000 = (893645 + 635489) - x$

$\Rightarrow x = 1529134 - 1000000$

$= 529134.$

53. Smallest number of 7 digits = 1000000

Greatest number of 6 digits = 999999

Difference = 1000000 – 999999 = 1.

54. Cloth required for a shirt = 2.75 m

cloth required for 6 shirts = 2.75 × 6 m

= 16.50 m

Hence, required length of clothes = 16 m 50 cm.

55. $1.01 = \frac{101}{100} \times 100 = 101\%.$

56. $\frac{0.1}{.01} + \frac{.01}{.1} = \frac{\frac{1}{10}}{\frac{1}{100}} + \frac{\frac{1}{100}}{\frac{1}{10}}$

$= \frac{1}{10} \times \frac{100}{1} + \frac{1}{100} \times \frac{10}{1}$

$= 10 + \frac{1}{10} = \frac{100+1}{10} = \frac{101}{10}.$

57. Let Bhavna got x marks.

$\therefore$ Karan got $x + 10$ marks

Isha got $x - 5$ marks

$x + x + 10 + x - 5 = 170$

$3x = 170 - 5 = 165$

$\Rightarrow x = 55$

$\therefore$ Isha got $55 - 5 = 50$ marks.

58. Let total no. of tickets = x

$$15\% \text{ of } x = 171$$

$$\Rightarrow \quad \frac{15}{100} \times x = 171$$

$$\Rightarrow \quad x = \frac{171 \times 100}{15} = 57 \times 20$$

$$= 1140$$

59. Vandana wants to buy 185 bottles.
She will have to pay ₹ 240 for 6 carat
$= 6 \times 30 = 180$ bottles
and ₹ 10 for each bottle
$\therefore$ Total amount paid by Vandana
$= 6 \times 240 + 5 \times 10$
$= 1440 + 50$
= ₹ 1490.

60. Number of Monkey = 25
Number of Deer = 40
Number of Peacock = 50
No. of Monkey + No. of Deer = 65
Difference = 65 – 50 = 15.

61. A number which is not divided by 2 is called odd number. The greatest odd number formed by the digits 3, 5, 7, 9 and 0 is 97503.

62. The smallest number of 5 digits = 10000

$$\begin{array}{r} 75 \overline{)\,10000\,(133} \\ 75 \\ \hline 250 \\ 225 \\ \hline 250 \\ 225 \\ \hline 25 \end{array}$$

75 – 25 = 50
If we add 50 in the 10000 it becomes 10050 which is divided by 75 completely.
Hence, required number = 10050.

63. Oranges sold on Monday = 15 + 15 = 30
Oranges sold on Wednesday = 15 × 3 = 45
Oranges sold on Friday = 15 × 6 = 90
Oranges sold on Sunday = 15 × 4 = 60
Total oranges sold in 4 days
= 30 + 45 + 90 + 60 = 225
No. of remaining oranges = 25
Hence, required no. of oranges
= 225 + 25 = 250.

64. $280 - 4 = 276$
$1245 - 3 = 1242$
HCF of 276 and 1242

$$\begin{array}{r} 276 \overline{)\,1242\,(4} \\ 1104 \\ \hline 138 \overline{)\,276\,(2} \\ 276 \\ \hline \times \end{array}$$

Hence, required number = 138

65. L.C.M. of 12, 15 and 18

2	12, 15, 18,
3	6, 15, 9
	2, 5, 3

LCM = $2 \times 3 \times 2 \times 5 \times 3 = 180$

$$180 \text{ min} = \frac{180}{60} \text{ hrs} = 3 \text{ hrs.}$$

Required time = 9 : 00 AM + 3 hrs = 12 : 00 PM.

66. Principal = ₹ 4250
Amount = ₹ 5610
Simple interest = A – P = 5610 – 4250 = 1360

$$\text{Time} = \frac{\text{SI} \times 100}{p \times r}$$

$$= \frac{1360 \times 100}{4250 \times 8} = 4 \text{ years.}$$

67. $\because \quad 4015 \div 11 = 365$

$$40.15 \div 1.1 = \frac{4015}{100} \div \frac{11}{10}$$

$$= \frac{4015}{100} \times \frac{10}{11}$$

$$= \frac{4015}{11} \times \frac{1}{10}$$

$$= \frac{365}{10} = 36.5.$$

68. $00.0675 \div 15 = \frac{675}{10000} \times \frac{1}{15}$

$= \frac{45}{10000} = 0.0045.$

69. 80 10 70 15 60 .....

Here there are two types of series

(*i*) 80 70 60 50 .....

(*ii*) 10 15 20 25 .....

Hence, the next term is 20.

70. First ten prime numbers are

2, 3, 5, 9, 11, 13, 17, 19, 23, 29

$\because 2 \times 3 \times 5 = 30$

$\therefore 2 \times 3 \times 5 \times 7 \times 11 \times 13 \times 17 \times 19 \times 23 \times 29$

The last digit no. = 0

Hence, required unit digit = 0.

71. $\square_x$

Let length of each side of square = x unit

Perimeter of square = $4x$ unit

Now length of each side = $2x$ unit

Perimeter of square = $4(2x) = 8x$ unit

Hence, if side of square doubles, perimeter increases by 2 times.

72.

8	x	z
y	5	w
4	9	2

8	1	6
3	5	7
4	9	2

Hence, $x = 1$

$y = 3$

$z = 6$

$w = 7$

73. Distance = 600 m = $\frac{600}{1000}$ km

Time = 5 minutes = $\frac{5}{60}$ hrs.

$$\text{Speed} = \frac{\text{distance}}{\text{time}} = \frac{\frac{600}{1000}}{\frac{5}{60}} = \frac{600}{1000} \times \frac{60}{5} = \frac{36}{5}$$

$= 7\frac{1}{5}$ km/hr = 7.2 km/hr.

74. Working 8 hrs per day, required days = 12

Working 1 hr per day, required days = 12×8

Working 6 hrs per day, required days = $\frac{12 \times 8}{6}$

= 16 days.

75. Let the capacity of the drum = xl

According to the question,

$$\frac{1}{5} \times x + 28 = x$$

$$\Rightarrow \quad \frac{x + 140}{5} = x$$

$$\Rightarrow \quad 5x = x + 140$$

$$\Rightarrow \quad 4x = 140$$

$$\Rightarrow \quad x = \frac{140}{4} = 35 \text{ litre}$$

$\therefore$ Capacity of the drum = 35 litre.

*Based on memory