

## Previous Years' Paper (Solved)

# Jawahar Navodaya Vidyalaya Entrance Exam, 2004

## Section-I

### MENTAL ABILITY

#### Part-I

**Directions (Qs. No. 1 to 10):** In questions, four figures (A), (B), (C) and (D) have been given in each question. Of these four figures, three figures are similar in some way and one figure is different. Select the figure which is different and encircle the letter below it.

- |    |  |  |  |  |
|----|--|--|--|--|
| 1. |  |  |  |  |
| 2. |  |  |  |  |
| 3. |  |  |  |  |
| 4. |  |  |  |  |
| 5. |  |  |  |  |
| 6. |  |  |  |  |

- |     |  |  |  |  |
|-----|--|--|--|--|
| 7.  |  |  |  |  |
| 8.  |  |  |  |  |
| 9.  |  |  |  |  |
| 10. |  |  |  |  |

#### Part-II

**Directions (Qs. No. 11 to 20):** In questions, a problem figure is given on the left hand side and four answer figures marked (A), (B), (C) and (D) are given on the right hand side. Select the answer figure which is exactly the same as the problem figure and encircle the letter below the correct answer figure.

- | Problem Figure | Answer Figures |     |     |     |
|----------------|----------------|-----|-----|-----|
| 11.            | (A)            | (B) | (C) | (D) |
| 12.            | (A)            | (B) | (C) | (D) |

Problem Figure	Answer Figures				Problem Figure	Answer Figures					
13.		(A)	(B)	(C)	(D)	21.		(A)	(B)	(C)	(D)
14.		(A)	(B)	(C)	(D)	22.		(A)	(B)	(C)	(D)
15.		(A)	(B)	(C)	(D)	23.		(A)	(B)	(C)	(D)
16.		(A)	(B)	(C)	(D)	24.		(A)	(B)	(C)	(D)
17.		(A)	(B)	(C)	(D)	25.		(A)	(B)	(C)	(D)
18.		(A)	(B)	(C)	(D)	26.		(A)	(B)	(C)	(D)
19.		(A)	(B)	(C)	(D)	27.		(A)	(B)	(C)	(D)
20.		(A)	(B)	(C)	(D)	28.		(A)	(B)	(C)	(D)

### Part-III

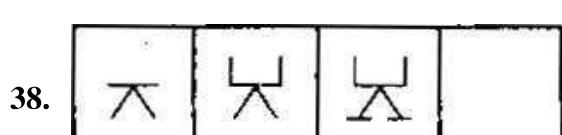
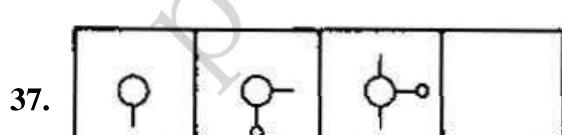
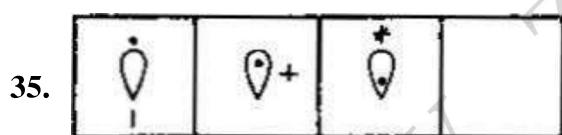
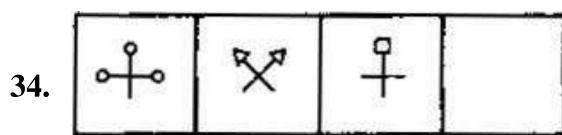
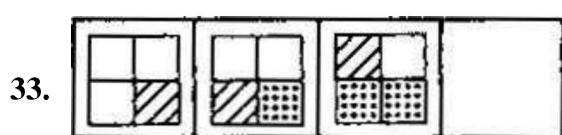
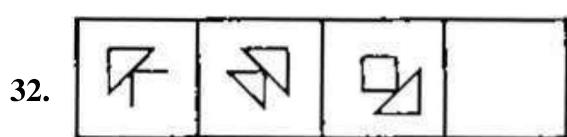
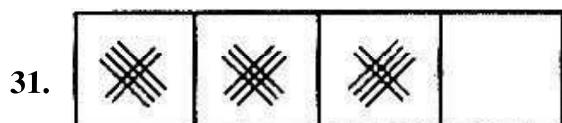
**Directions (Qs. No. 21 to 30):** In the following questions, there is a problem figure on the left-hand side, a part of which is missing. Observe the answer figures marked (A), (B), (C) and (D) on the right-hand side and find at the answer figure which without changing the direction, fits in the missing part of the problem figure in order to complete the pattern in the problem figure. Indicate your answer by encircling the letter of the answer figure chosen by you which are given below the answer figures on the right-hand side.

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

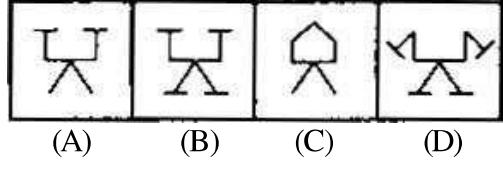
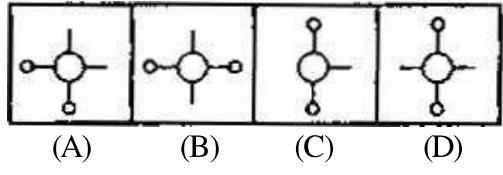
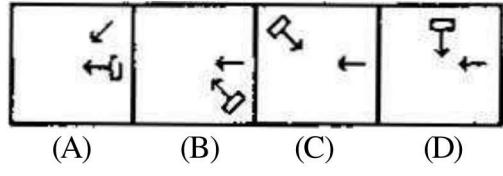
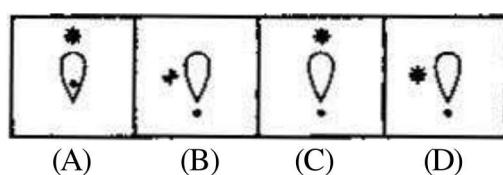
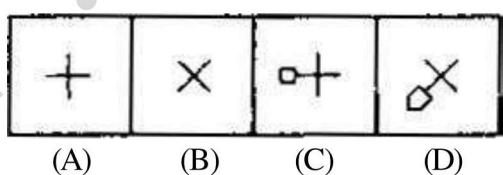
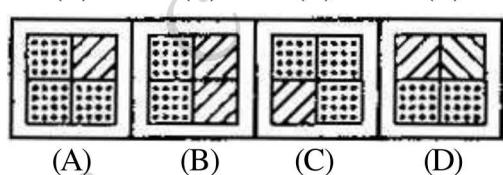
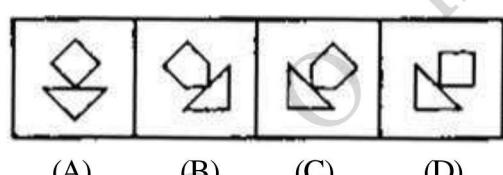
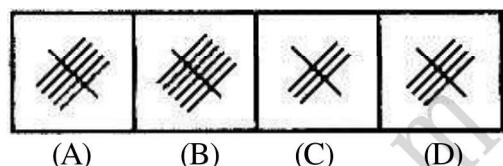
**Part-IV**

**Directions (Qs. No. 31 to 40):** In questions, there are three problem figures on the left-hand side and the space for the fourth figure is left blank. The problem figures are in a series. Find out one figure from among the answer figures given on the right-hand side which occupies the blank space for the fourth figure on the left-hand side and which completes the series. Indicate your answer by encircling the letter of the answer figure chosen by you.

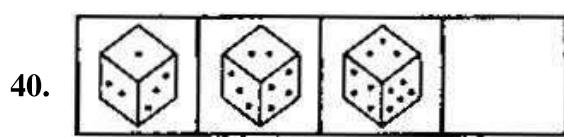
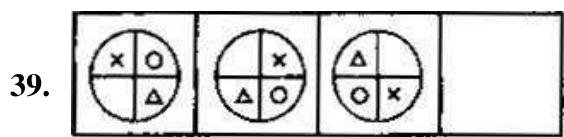
**Problem Figures**



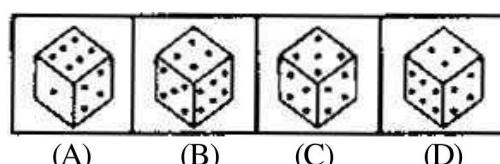
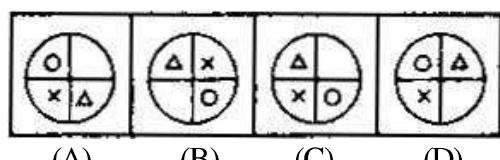
**Answer Figures**



**Problem Figures**



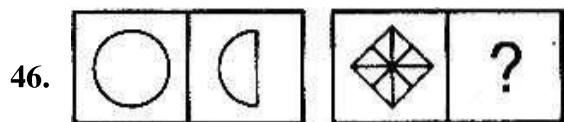
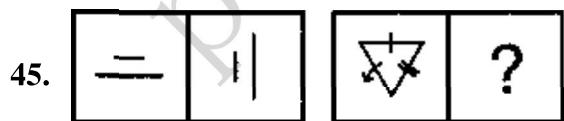
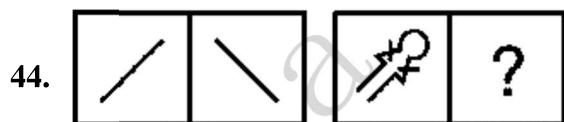
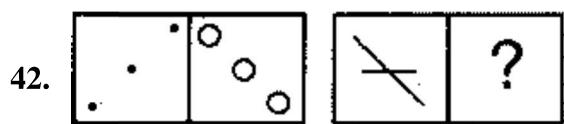
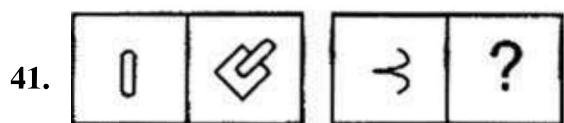
**Answer Figures**



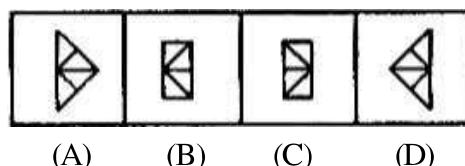
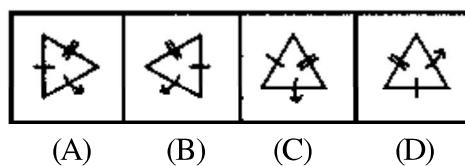
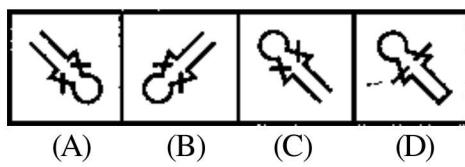
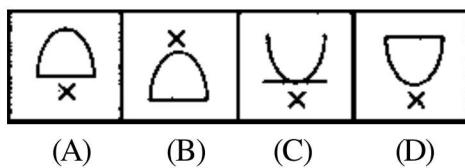
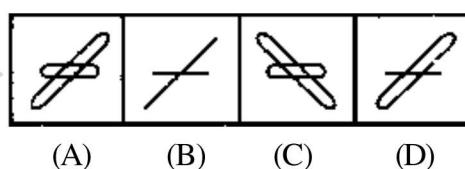
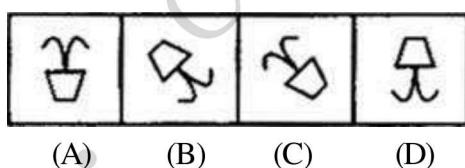
**Part-V**

**Directions (Qs. No. 41 to 50):** In questions, there are three problem figures followed by a mark of interrogation (?) for the fourth one. There exists a relationship between the first two problem figures. A similar relationship should exist between the third and fourth problem figures. Select one figure from the answer figures which replaces the mark of interrogation. Encircle the letter of the answer figure selected by you.

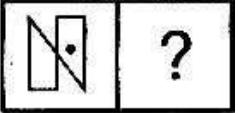
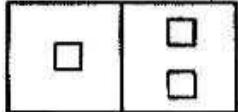
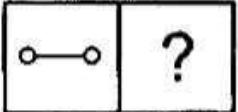
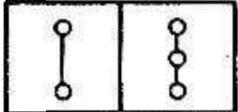
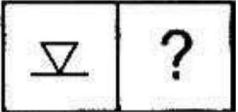
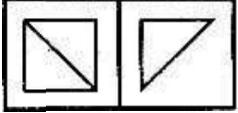
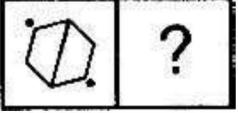
**Problem Figures**



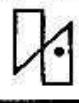
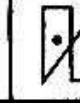
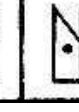
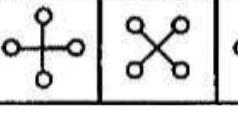
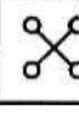
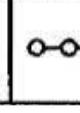
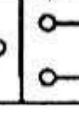
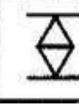
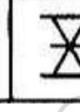
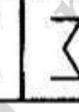
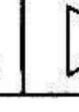
**Answer Figures**



**Problem Figures**

47.   ?
48.   ?
49.   ?
50.   ?

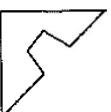
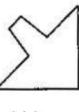
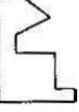
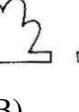
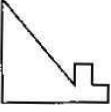
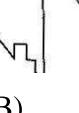
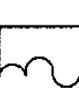
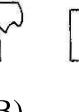
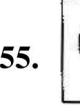
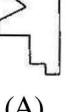
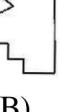
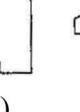
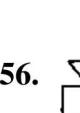
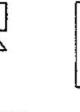
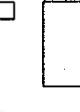
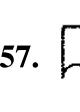
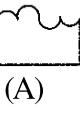
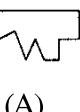
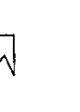
**Answer Figures**

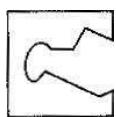
- (A)  (B)  (C)  (D) 
- (A)  (B)  (C)  (D) 
- (A)  (B)  (C)  (D) 
- (A)  (B)  (C)  (D) 

**Part-VI**

**Directions (Qs. No. 51 to 60):** In questions, one part of a square is on the left hand side and the other one is among the four figures (A), (B), (C) and (D) on the right-hand side. Find the figure on the right-hand side that completes the square. Encircle the letter given below that figure.

**Problem Figure**

51.  (A)  (B)  (C)  (D) 
52.  (A)  (B)  (C)  (D) 
53.  (A)  (B)  (C)  (D) 
54.  (A)  (B)  (C)  (D) 
55.  (A)  (B)  (C)  (D) 
56.  (A)  (B)  (C)  (D) 
57.  (A)  (B)  (C)  (D) 
58.  (A)  (B)  (C)  (D) 

**Problem Figure**

59.

**Answer Figures**

(A)



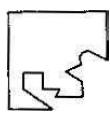
(B)



(C)



(D)

**Problem Figure**

60.

**Answer Figures**

(A)



(B)



(C)



(D)

**Section-II : Arithmetic**

**Directions (Qs. No. 61 to 80):** For every question, four probable answers bearing letters (A), (B), (C) and (D) are given. Only one out of these is correct. You have to choose the correct answer and encircle the letter given by its side.

61. The simplification of  $1 + \frac{1}{10} + \frac{1}{100} + \frac{1}{1000}$  in decimal form is—  
 A. 1.0001      B. 1.111  
 C. 1.001      D. 0.111
62. The sum of the greatest and the smallest numbers of four digit is—  
 A. 8999      B. 10999  
 C. 11110      D. 11111
63. How many times will the digit 9 occur in writing numbers from 1 to 100?  
 A. 9      B. 10  
 C. 20      D. 21
64. Three bells ring at intervals of 12, 15 and 18 seconds respectively. If they starts ringing together at 8:35 a.m., at what time will they ring together again at the earliest?  
 A. 8:38 a.m.      B. 8:40 a.m.  
 C. 8:41 a.m.      D. 8:45 a.m.
65. Which of the following numbers are arranged in ascending order?  
 A.  $\frac{1}{3}, \frac{1}{2}, 0.25$       B.  $0.25, \frac{1}{2}, \frac{1}{3}$   
 C.  $0.25, \frac{1}{3}, \frac{1}{2}$       D.  $\frac{1}{2}, \frac{1}{3}, 0.25$
66. The LCM of 30, 36 and 90 is greater than their HCF by—  
 A. 366      B. 354  
 C. 186      D. 174
67. The area of a square, whose perimeter is 48 m, is—

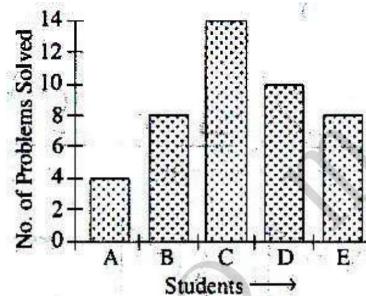
- A.  $48 \text{ m}^2$       B.  $144 \text{ m}^2$   
 C.  $1152 \text{ m}^2$       D.  $2304 \text{ m}^2$
68. The simplification of  $10 + 4 \div 2 - 3 \times 2 + 4 \div 2 \times 2 - 4$  gives—  
 A. 0      B. 1  
 C. 6      D. 8
69. 80% can be written in fraction form as—  
 A.  $\frac{8}{10}$       B.  $\frac{8}{100}$   
 C.  $\frac{100}{8}$       D.  $\frac{10}{8}$
70. 80% of Rs. 240 is how much more than 35% of Rs. 400?  
 A. Rs. 52      B. Rs. 42  
 C. Rs. 192      D. Rs. 140
71. In a division sum, if the divisor is 51 quotient is 16 and the remainder is 27, the dividend is—  
 A. 843      B. 483  
 C. 94      D. 1393
72. The factor of 30 are—  
 A. 2, 3, 5  
 B. 1, 2, 3, 5, 10  
 C. 1, 2, 3, 10, 15  
 D. 1, 2, 3, 5, 6, 10, 15, 30
73. The next two terms of the number pattern 123, 234, 345, ..., ... are—  
 A. 456, 457      B. 346, 347  
 C. 456, 567      D. 456, 678
74. The product of two number is 8192. If one number is double the other, the smaller number is—  
 A. 8      B. 16  
 C. 32      D. 64
75. The smallest odd number formed by using the digit 1, 0, 3, 4 and 5 is—  
 A. 10345      B. 10453  
 C. 10543      D. 10534

76. A person earns Rs. 15 per hour for his work. If he works for 8 hours a day for five days, his total earning is—  
 A. Rs. 75      B. Rs. 120  
 C. Rs. 500      D. Rs. 600
77. The simple interest on Rs. 300 at 6% per annum for  $2\frac{1}{2}$  years is equal to—  
 A. Rs. 18      B. Rs. 36  
 C. Rs. 40      D. Rs. 45
78. The number of square tiles, of side 15 cm required for flooring a room of size 3.6 m  $\times$  4.5 m, will be—  
 A. 720      B. 360  
 C. 10800      D. 5400
79. A bus starts from Delhi to Amritsar at 5:30 p.m. on a day and reaches Amritsar at

7:36 a.m. the next day. The time taken by bus to reach Amritsar is—

- A. 2 hrs 6 min      B. 14 hrs 6 min  
 C. 13 hrs 6 min      D. 12 hrs 6 min

80. From the graph, find the difference of number of questions solved by students C and D together and by students A, B and E.



- A. 3      B. 4  
 C. 10      D. 14

### Section-III : Language

**Directions (Qs. No. 81 to 100:** There are four passage in this Section. Each passage is followed by five questions. Read each passage carefully and answer the questions that follow. For each question four probable answers bearing letters (A), (B), (C) and (D) are given. Only one out of these is correct. You have to choose the correct answer and encircle the letter given by its side.

#### Passage-1

It was a cold and dark night. Passing through the street. I heard a woman scream—"Help! Help!". I stopped and looked around. There was no light in most of the houses. Everyone seemed to be asleep. It could be my imagination—I thought and continued walking homewards. Suddenly I heard the same voice again, "Please, do not kill me! Take my money...my ornaments, but leave me..." So, it was not my imagination. Some woman was in distress in the house nearby. I must save her. I rushed to the door of the house and with all my strength, pushed it open.

"Who are you? What do you want?" a tall man came towards me.

"Where is the woman?" I shouted.

"Which woman? Are you mad?"

I could still hear some sobs coming from the bedroom. So I ran into his bedroom, searched but

could find no woman there. The radio was on. I heard the announcer saying, "You had just heard a radio play 'Strange Murder'. Now, please standby for the news that follows."

81. Why did the narrator enter the bedroom?  
 A. To look for the murderer of some woman  
 B. To save the woman from being killed  
 C. To pick up a fight with the murderer  
 D. To listen to the radio play
82. What compelled the narrator to enter the house?  
 A. His sense of bravery  
 B. Fellow feeling  
 C. His desire to help someone in distress  
 D. His need of some mysterious story
83. He thought everyone was asleep, because—  
 A. it was a cold night  
 B. there was no light in the houses  
 C. no one responded to the screams  
 D. there was darkness everywhere
84. Who solved the mystery of the story?  
 A. The narrator  
 B. The tall man  
 C. The sobbing woman  
 D. The radio announcer
85. "You had just heard a radio play..." here 'you' refers to—

- A. The narrator
- B. The tall man
- C. The woman
- D. The listener

### Passage-2

The boys and girls divided the work among themselves. Anil and Zeenat fetched two big baskets from their homes. The children picked up the piece of paper, empty bottles and plastic bags that lay about. They put them into the baskets and emptied them into the garbage bin nearby. They knew a garbage truck come daily to clean out the bin. By the end of the morning, the park looked much cleaner and tidier.

From that day onwards, the children made sure that their park looked clean and litter-free. Anil's father helped them to make flower beds. The children took turns to water the seeds. When the flowers bloomed, everyone in the neighbourhood was happy.

86. People in the neighbourhood were happy, because—
- A. they could walk in the park
  - B. the park has been make litter-free
  - C. the flower in the park had bloomed
  - D. the children helped themselves
87. The children did not pick up—
- A. pieces of paper      B. plastic bags
  - C. empty bottles      D. the garbage bin
88. They fetched the baskets to—
- A. collect the flowers
  - B. collect the litter
  - C. carry manure
  - D. carry seeds
89. 'Picked up' means—
- A. collected      B. sought
  - C. carried      D. cleaned
90. The opposite word for 'sad' used in the passage above is—
- A. neat      B. happy
  - C. tidy      D. wise

### Passage-3

I felt lonely in a classroom full of boys and girls and a teacher. The teacher walked up to me smiling. She put her hand tenderly on my shoulder and asked—"What is your name?" Abhayankar..."—

I whispered.

"Say loudly, so I can hear it," she said. I tried, but I could not. My lips were dry, perhaps sealed. I could not open my mouth. Then the teacher asked me to write my name on the blackboard. I went up to the blackboard, lifted the white chalk and as I was about to write, my mind went blank. I knew my name, I knew how to write it, but standing in front of so many boys and girls and the teacher made me uncomfortable.

91. The boy could not write his name, because he was—
- A. lonely      B. afraid
  - C. sick      D. nervous
92. Which of the following words does not describe the narrator?
- A. Nervous      B. Uncomfortable
  - C. Confident      D. Timid
93. The teacher was.....towards the boy.
- A. sympathetic      B. rude
  - C. unhelpful      D. indifferent
94. The most appropriate heading for this passage would be—
- A. How to write ones name
  - B. First day in the class
  - C. A rude teacher
  - D. A shy boy
95. The word 'whispered' means—
- A. said slowly      B. told loudly
  - C. kept quite      D. did not speak

### Passage-4

India is very hot, especially in summer. It is easy to grow cotton and produce silk here. Cotton and silk can be made into thin clothes. People who live in hot countries often wear white clothes because white does not absorb heat as quickly as other colours do. Saris are also comfortable to wear because they do not cling to the body.

We can often tell about the jobs of the people by looking at their clothes. Cooks usually wear white aprons so that they can see when their clothes are dirty. Policemen, firemen and soldiers have special uniforms. Students too wear uniforms to show which school they belong to.

96. Cooks wear white aprons, because—  
A. they want to look smart  
B. it helps them cook fast  
C. white is a cool colour  
D. they can see when it is dirty

97. Saris are comfortable to wear, because—  
A. they are made of one piece  
B. they do not cling to the body  
C. they are not very costly  
D. they help one look beautiful

98. Who of the following needs not wear a uniform?  
A. A school student

B. A policeman  
C. An army man  
D. A minister

99. Indians wear white cotton clothes in summer, because cotton—  
A. keeps their body cool  
B. is cheaper than wool and silk  
C. is easy to wash  
D. is available in attractive colours

100. If 'cold' is an opposite word for 'hot', what will be opposite for 'summer'?  
A. Rains                      B. Spring  
C. Winter                      D. Snowfall

## ANSWERS

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

## **SOME SELECTED EXPLANATORY ANSWERS**

1. In all the rest figures, there are two lines in the inside of the design while in fig.(C) there are three lines.
  2. In all the rest figures, the two designs are same in the shape and size and overlap one of the other while in figure (A) the both designs are same in the shape only but not in size.
  3. In all the rest figures, these lines inside the triangle meet on the common point of base of the triangle.
  4. In all the rest figures, the lines out of the circle are even in numbers.
  5. In all the rest figures, the designs on the periphery of the main design either outside or inside while in figure (D), the same designs are inside and outside on the similar main design periphery.

6. In all the rest figures, the lines at the end of '+' are in one direction i.e., either clockwise or anticlockwise. But in fig. (D) three lines are clockwise while one is anticlockwise.
7. In all the rest figures, there are three lines in same direction in one out of the four equal parts of the main design, while in figure (a), three lines are perpendicular to the rest of the lines in the other figures.
8. In all the rest figures, the main design has two perpendicular lines inside while in figure (D), these two lines are not like this.
9. In all the rest figures, the design 'x' is in between of the designs ' $\Delta$ ' and 'O'.
10. In all the other figures, the innermost design does not touch the next outer side design while in fig. (D) it touches the next outer side design.
31. In each subsequent figure one line is decreasing in one group of lines while one line is increasing on other group of lines.
32. In each subsequent figure triangle shifts one side clockwise after moving through  $90^\circ$  in the same direction and one line is increased in the other design.
33. In each subsequent figure the inner design are shifting by one side clockwise direction and at the place of previous design a new design of 16 points is increasing.
34. In each subsequent figure '+' is converting into 'X' and vice versa. The designs at the end on this design are decreasing by one.
35. In each subsequent figure black dot is shifting downwards while the outer design takes a new shape with one more line after shifting one place anti clockwise.
36. In each subsequent figure, design ' $\uparrow$ ' shifts one arm anticlockwise after rotating through  $90^\circ$  in the same direction and the design ' $\square$ ' shifts half arm clockwise after rotating through  $45^\circ$  in the same direction.
37. In each subsequent figure the design moves through  $90^\circ$  anticlockwise and the design ' $\bigcirc$ ' and ' | ' take place alternately in place of previous design.
38. In each subsequent figure design two lines are increasing.
39. In each subsequent figure each of the designs inside the circle shifts one place clockwise direction.
40. In each subsequent figure one black dot increases on the corresponding face.
41. From P.F. (1) to (2) the design moves through  $45^\circ$  clockwise and then one more design is adding to it.
42. From P.F. (1) to (2) each of the upper and lower black circles shift one place anticlockwise and all the three black circles are converted into white circles.
43. From P.F. (1) to (2) the line shifts downward on the other design. The other design reverse.
44. From P.F. (1) to (2) the design moves through  $90^\circ$  anticlockwise direction.
45. From P.F. (1) to (2) the whole design moves through  $90^\circ$  anticlockwise direction.
61. 
$$1 + \frac{1}{10} + \frac{1}{100} + \frac{1}{1000} = 1 + 0.1 + 0.01 + 0.001 \\ = 1.111$$
- Answer B is correct.
62. The smallest number of four digits = 1000  
The greatest number of four digits = 9999  
 $\therefore$  Sum =  $1000 + 9999 = 10999$   
B is correct.
63. 9 will occur 1 time from 1 to 9  
9 will occur 1 time from 10 to 19  
9 will occur 1 time from 20 to 29  
9 will occur 1 time from 30 to 39  
9 will occur 5 times from 40 to 89  
9 will occur 11 times from 90 to 99  
 $\therefore$  9 will occur  $1 + 1 + 1 + 1 + 5 + 11 = 20$  times from 1 to 100.  
 $\therefore$  Answer C is correct.
64. The L.C.M. of 12, 15 and 18 is
- |   |            |
|---|------------|
| 2 | 12, 15, 18 |
| 3 | 6, 15, 9   |
| 2 | 2, 5, 3    |

- ∴ L.C.M. =  $2 \times 3 \times 2 \times 5 \times 3 = 180$   
 ∴ 180 seconds = 3 minutes  
 ∴ Three bells will ring together 8 : 35 + 0 : 03 = 8 : 38 a.m.  
 ∴ Answer A is correct.

65.  $\frac{1}{3}, \frac{1}{2}, \frac{25}{100}$   
 ∴  $\frac{1}{3}, \frac{1}{2}, \frac{1}{4}$  this is not in ascending order  
 See B  $\frac{25}{100}$  or  $\frac{1}{4}, \frac{1}{2}, \frac{1}{3}$  this is not in as-  
 cending order  
 See C  $\frac{25}{100}$  or  $\frac{1}{4}, \frac{1}{3}, \frac{1}{2}$  this is in ascending order  
 ∴ Answer C is correct.

66. The LCM of 30, 36 and 90 is.

2	30, 36, 90
3	15, 18, 45
3	5, 6, 15
5	5, 2, 5
	1, 2, 1

$$\therefore \text{LCM} = 2 \times 3 \times 3 \times 5 \times 2 = 180$$

The HCF of 30, 36 and 90 is

$$\begin{array}{r} 36 \sqrt{90} (2 \\ \underline{72} \\ 18 ) \end{array} \begin{array}{r} 36 \sqrt{36} (2 \\ \underline{36} \\ 0 \end{array}$$

$$\therefore \text{H.C.F.} = 18$$

other step

$$\begin{array}{r} 18 \sqrt{30} (1 \\ \underline{18} \\ 12 ) \end{array} \begin{array}{r} 18 \sqrt{18} (1 \\ \underline{12} \\ 6 ) \end{array} \begin{array}{r} 12 \sqrt{12} (2 \\ \underline{12} \\ 0 \end{array}$$

$$\therefore \text{H.C.F.} = 6$$

$$\therefore \text{Difference} = 180 - 6 = 174$$

$$\therefore \text{Answer D is correct.}$$

67. The perimeter of square = 48 m  
 $4 \times \text{side} = 48$   
 $\therefore \text{side} = \frac{48}{4} = 12 \text{ m}$   
 $\therefore \text{Area} = (\text{side})^2 = 12^2 \text{m}^2 = 144 \text{m}^2$   
 Answer B is correct.

68.  $10 + 4 \div 2 - 3 \times 2 + 4 \div 2 \times 2 - 4$   
 Let us use BODMAS Rule

$$\begin{aligned} &= 10 + 4 \times \frac{1}{2} - 3 \times 2 + 4 \times \frac{1}{2} \times 2 - 4 \\ &= 10 + 2 - 3 \times 2 + 2 \times 2 - 4 \\ &= 10 + 2 - 6 + 4 - 4 \\ &= 16 - 10 = 6 \end{aligned}$$

Answer C is correct.

69.  $80\% = \frac{80}{100} = \frac{8}{10}$   
 $\therefore \text{Answer A is correct.}$

70.  $80\% \text{ of Rs. } 240 = \frac{80}{100} \times \text{Rs. } 240 = \text{Rs. } 192$   
 $35\% \text{ of Rs. } 400 = \frac{35}{100} \times \text{Rs. } 400 = \text{Rs. } 140$   
 $\therefore \text{difference} = \text{Rs. } (192 - 140) = \text{Rs. } 52$   
 Answer A is correct.

71. divisor = 51, quotient = 16, remainder = 27  
 $\therefore \text{dividend} = \text{divisor} \times \text{quotient} + \text{remainder}$   
 $= 51 \times 16 + 27 = 816 + 27 = 843$   
 $\therefore \text{A is correct.}$

72.  $30 = 1 \times 30 = 2 \times 15 = 3 \times 10 = 5 \times 6$   
 $\therefore \text{The factor of 30 are } 1, 2, 3, 5, 6, 10, 15 \text{ and } 30.$   
 $\therefore \text{D is correct.}$

73. Let us see hundred places of the numbers are 1, 2, 3  
 $\therefore \text{The next two digits will be 4, 5.}$   
 Now, we consider tens places of the numbers 2, 3, 4.  
 $\therefore \text{The next two digits will be 5, 6}$   
 Now, see the one's places of the numbers 3, 4, 5  
 The next two digits will be 6, 7  
 $\therefore \text{Two numbers will be } 456 \text{ and } 567$   
 $\therefore \text{C is correct.}$

74. Let the smaller number =  $x$

$\therefore$  The greater number =  $2x$

Given  $2x \times x = 8192$

$$\Rightarrow 2x^2 = 8192$$

$$\Rightarrow x^2 = \frac{8192}{2} = 4096 = 64^2$$

$$\therefore x = 64$$

$\therefore$  Answer D is correct.

75. The digits is in increasing order.

Answer A is correct.

76. In 1 hour a person earns Rs. 15.

In 8 hours a person earns Rs.  $15 \times 8 =$  Rs. 120

$\therefore$  In a day a person earns Rs. 120

$\therefore$  In 5 days a person earns Rs.  $120 \times 5 =$  Rs. 600

Therefore Answer (D) is correct.

77. Principal = Rs. 300

rate = 6% per annum

$$\text{time} = 2\frac{1}{2} \text{ years} = \frac{5}{2} \text{ years}$$

$$\therefore \text{S.I.} = \frac{\text{p. r. t.}}{100} = \frac{300 \times 6 \times 5}{100 \times 2} = \text{Rs. } 45$$

Therefore Answer D is correct.

78. The side of a square file = 15 cm

$\therefore$  Area of a square file =  $15^2 = 225 \text{ cm}^2$

The Area of room =  $3.6 \times 100 \times 4.5 \times 100 \text{ cm}^2$   
 $= 360 \times 450 \text{ cm}^2$

$$\text{Number of tiles} = \frac{\text{Area of room}}{\text{Area of a square tile}}$$

$$= \frac{360 \times 450}{225} = 720$$

$\therefore$  Answer A is correct.

79. A bus starts 5 : 30 p.m.

$$\therefore 12 + 7 : 36 = 19 : 36$$

The bus reaches Amritsar at 7 : 36 a.m.

$$\therefore \text{required time} = 19 : 36 - 5 : 30  
= 14 : 06$$

= 14 hrs 6 min

$\therefore$  Answer B is correct.

80. Required number of questions

$$= (14 + 10) - (4 + 8 + 8)  
= 24 - 20 = 4$$

Answer B is correct.