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# DISTANCE LEARNING PROGRAMME

(ACADEMIC SESSION 2020-2021)

## NTSE (STAGE-II) TEST SERIES

### MENTAL ABILITY TEST (MAT)

**MOCK TEST # 1(A)**

**DATE : 21-03-2021**

### PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY

1. Duration of Test is **120 Minutes** and Questions Paper Contains **100 Questions**. Total Marks are **100**.
2. Answers are to be given on a separate OMR sheet.
3. There are 100 questions in this test. All are compulsory.
4. Please follow the instructions given on the OMR sheet for marking the answers.
5. Mark your answers for questions 1–100 on the OMR sheet by darkening the circles.
6. Every correct answer will be awarded one mark. **THERE IS NO NEGATIVE MARKING.**
7. If you do not know the answer to any question, do not waste time on it and pass on to the next one. Time permitting, you can come back to the questions, which you have left in the first instance and attempt them.
8. Since the time allotted for this question paper is very limited you should make the best use of it by not spending too much time on any one question.
9. Rough work can be done anywhere in the booklet but not on the OMR sheet/loose paper.
10. Please return the OMR sheet to the invigilator after the test.

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1. Find the missing term from the given alternative.



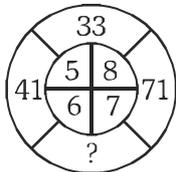
- (1) 27      (2) 35      (3) 54      (4) 64

2. Find the next term from the given series.

15, 35, 77, 143, 221, \_\_\_\_\_

- (1) 321      (2) 323      (3) 437      (4) 187

3. Find the missing character from the given figure.



- (1) 55      (2) 255      (3) 51      (4) 83

4. In a certain code language, if the value of  $38 + 15 = 66$  and  $29 + 36 = 99$ , then what is the value of  $82 + 44$ ?

- (1) 77      (2) 80      (3) 88      (4) 92

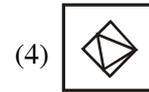
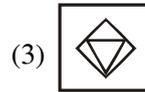
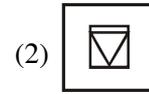
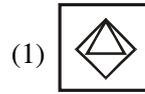
5. What is the least number of coins required to make one rupee from different coins of 1, 5, 10 and 25 paise, so that you have at least one coin of each type?

- (1) 4      (2) 7      (3) 11      (4) 12

6. David sets his watch at 6 : 10 a.m. on Sunday, which gains 12 minutes in a day. On Wednesday if this watch is showing 2 : 50 p.m., what is the correct time?

- (1) 1 : 50 p.m. (Wed.)      (2) 2 : 10 p.m.(Wed.)  
(3) 2 : 30 p.m.(Wed.)      (4) 3 : 30 p.m.(Wed.)

7. There is a definite relationship in the first two figures. Find out the appropriate answer figure to maintain the same type of relationship in the next two figures.



8. If in a coded language the word 'RAMESH' is written as 'AEHMRS' then in the same code language 'POET' will be written as

- (1) EPTO      (2) PEOT      (3) ETOP      (4) EOPT

9. In the question given below, two signs in given equation have been interchanged. Find out these two signs to make the equation correct.

$$3^2 \times 2^2 \div (6^2 - 9) + 1^2 = 33$$

- (1) - and  $\div$       (2) + and  $\times$   
(3)  $\times$  and  $\div$       (4) + and -

10. In the following question, one term in the number series is wrong. Find out the wrong term.

125, 126, 124, 127, 123, 129

- (1) 126      (2) 124      (3) 123      (4) 129

11. In the following question, there is some relationship between the two terms to the left of :: and the same relationship holds between the two terms to its right. Also, in the question, one term either to the right of :: or to the left of it is missing. This term is given as one of the alternatives below the question. Find out this term.

$$583 : 293 :: 488 : ?$$

- (1) 291      (2) 378      (3) 487      (4) 581

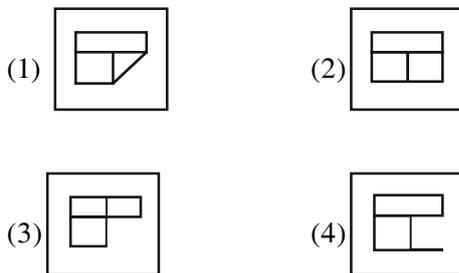
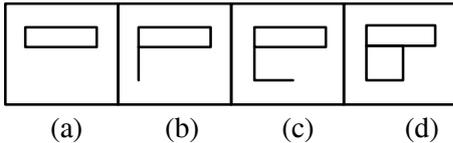
12. Which number will come in place of question mark in the given figure ?

11	7	49
12	8	54
15	4	?

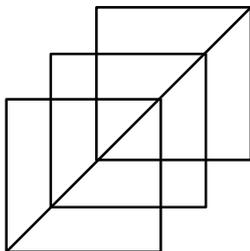
- (1) - 5      (2) 5      (3) 10      (4) 0

13. There are two sets of figures. One set contains problem figures while the other has answer figures. There is a sequence according to which the problem figures are arranged. You have to select and answer figure which can be added in sequence with the problem figures. Choose the correct answer figure.

Problem figures

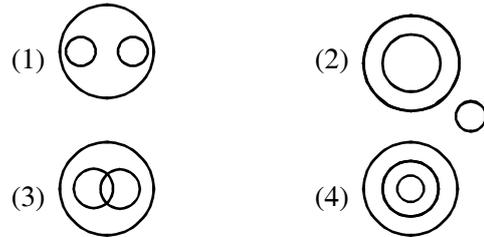


14. How many quadrilaterals are there in the given figure?

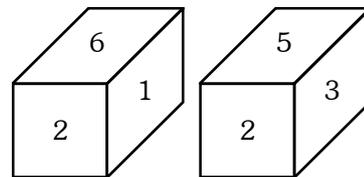


- (1) 21 (2) 20  
(3) 24 (4) More than 24
15. Find the correct alternative  
AEI, EIO, IOU, OUA, \_\_\_\_\_  
(1) UXB (2) UAE  
(3) MRQ (4) QVR
16. If English alphabets are written again and again, what will be 109<sup>th</sup> letter ?  
(1) E (2) D (3) F (4) A
17. Find the correct alternative  
8, 24, 28, 140, 146, 1022, 1030, ?  
(1) 1040 (2) 8240  
(3) 10300 (4) 9270

18. Find the correct alternative  
4, 17, 290, ?  
(1) 84100 (2) 84101  
(3) 84102 (4) 84103
19. Which one of the following Venn-diagrams correctly represents the relation between Herbivorous, Lions and Animals?



20. If  $54 + 43 = 79$ ,  $60 + 51 = 111$ , Then  $62 + 72 = ?$   
(1) 431 (2) 341  
(3) 134 (4) None of these
21. The two positions of a single die are given below. Which digit will be at the face opposite to the face having digit 2 ?



- (1) 3 (2) 4 (3) 5 (4) 6
22. Three alternatives are alike in a certain way but the rest one is different. Select the odd one.  
(1) June (2) August  
(3) April (4) November
23. Three alternatives are alike in a certain way but the rest one is different. Select the odd one.  
(1) Hand (2) Leg  
(3) Ear (4) Neck
24. Identify the missing term (?) in the following table.

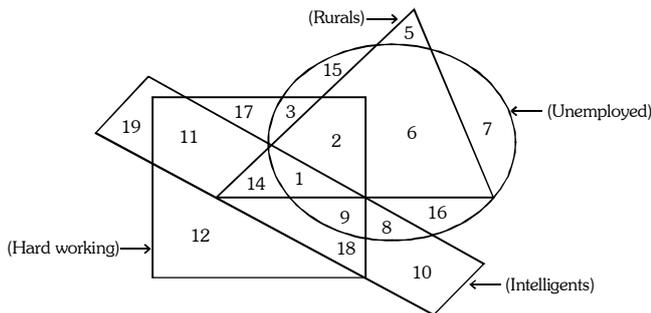
11	12	13
14	15	16
2	3	4
39	57	?

- (1) 87 (2) 85 (3) 77 (4) 76

**Direction (Q.25 & Q.26) :** The following questions are based on the diagram given below, Study the diagram carefully and answer the questions based upon it.

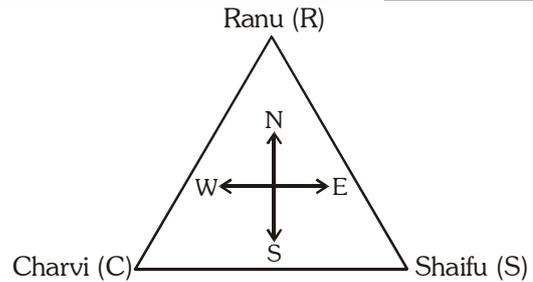
In the diagram

- (i) Circle represent unemployed
- (ii) Square represent Hard working
- (iii) Triangle represent Rurals
- (iv) Rectangle represents intelligents.



- 25.** The Rurals, which are neither Hard-working nor Intelligent but unemployed are represented by  
 (1) 1      (2) 2      (3) 3      (4) 6
- 26.** Those persons who are neither rurals, nor unemployed and nor intelligent but Hard working, are represented by  
 (1) 5 and 7      (2) 12 and 17  
 (3) 10 and 19      (4) 15 and 16
- 27.** After interchanging the sign + and ÷ and also interchanging the digits 2 and 3, which of the following is given with correct solution?  
 (1)  $4 \times 3 + 8 - 3 \div 2 = 17$   
 (2)  $4 + 3 \times 8 - 3 \div 2 = 17$   
 (3)  $4 + 3 \times 8 \div 2 \times 3 = 17$   
 (4)  $4 \div 3 \times 8 + 2 - 3 = 17$

**Direction (Q.28 & Q.29) :** In an open ground Ranu, Shaifu and Charvi are standing at the corner of an equilateral triangle. Study the questions carefully which are based on the following diagram and select the correct answer.



- 28.** From the positions shown in above figure, Ranu, Shaifu and Charvi run along the sides of equilateral triangle in clockwise direction for  $1\frac{1}{2}$  sides of triangle. Now which of the following statements is true?  
 (1) Charvi is in West of Shaifu.  
 (2) Ranu is in South-West of Charvi.  
 (3) Ranu is in South-West of Shaifu.  
 (4) Shaifu is in North-East of Ranu.
- 29.** From the positions shown in above figure, Ranu, Shaifu and Charvi run along the sides of equilateral triangle in anti-clockwise direction for  $1\frac{1}{2}$  sides of triangle. Now shaifu is in which direction of Ranu?  
 (1) In East      (2) In South  
 (3) In North-West      (4) In North-East

**Direction (Q.30 & Q.31) :** Read the information given below and answer the following questions.

Kriti and Amit are two children of Smt and Shri Mittal. Amit, married to Ananya, who is daughter of Smt. Goyal. Shri Goyal had married to Rita. Sonu and Rakesh are children of Sumer and Rita. Urvi and Poorvi are daughters of Ananya and Amit.

- 30.** What is the surname of Rakesh?  
 (1) Goyal    (2) Mittal    (3) Amit    (4) Kriti
- 31.** What is the relation of Sumer with Poorvi?  
 (1) Brother  
 (2) Uncle  
 (3) Maternal Grand Father  
 (4) Father

32. Ten years ago, the age of mother was three times the age of her son. After ten years, mother's age will be twice that of his son. Find the ratio of their present ages.

- (1) 11 : 7    (2) 9 : 5    (3) 7 : 4    (4) 7 : 3

33. From the following alternatives select the word which can't be formed by using the letters of the word.

ESTRANGEMENT

- (1) TANGENT                      (2) GERMAN  
(3) TREATMENT                (4) ENTREAT

34. Find the missing number from the given alternatives.

6	8	2	20
7	2	4	30
8	7	6	?
5	5	9	50

- (1) 55            (2) 40            (3) 60            (4) 50

35. Select the related letters from the given alternatives.

RGS : NBM :: KUB : ?

- (1) PFW    (2) EPW    (3) EQV    (4) GPV

36. At what time between 7'O clock and 8'O clock are the hands of a clock is 5 minutes apart ?

- (1)  $7:32\frac{8}{11}$                       (2)  $7:43\frac{7}{11}$

- (3) Both (1) and (2)    (4) None of these

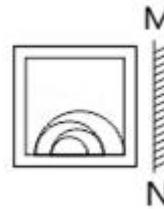
37. How many times does the 29<sup>th</sup> of the month occur in 200 year which includes one leap year century?

- (1) 4497    (2) 2248    (3) 2249    (4) 2250

38. If all the letters of the word 'UNIDENTIFIED' are arranged in the alphabetical order then the position of how many letters will be remain unchanged ?

- (1) None                      (2) One  
(3) Two                      (4) Three

39. Find the mirror image of given figure:



- (1)                      (2)   
 (3)                      (4)

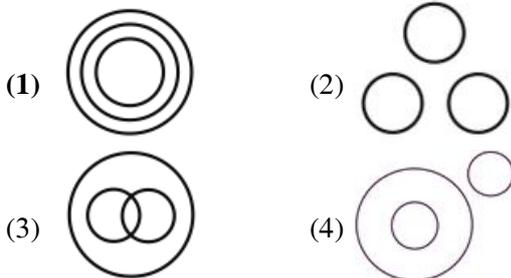
40. Which of the following diagrams best depicts the relationship among Patients, People and Doctors?

- (1)                      (2)   
 (3)                      (4)

41. Which of the following diagrams best depicts the relationship among Cap, Tie and Shirt ?

- (1)                      (2)   
 (3)                      (4)

42. Which of the following diagrams best depicts the relationship among **Lethargy, Anxiety, Power**



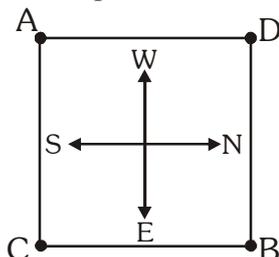
43. At what time between 12 and 1 will the hands of a clock be in the same straight line, but not together?  
 (1) 35 minutes past 12 (2) 54 minutes past 12  
 (3) 31 minutes past 12 (4) None of these
44. Find the calendar year which is going to repeat the calendar of year 2001?  
 (1) 2004 (2) 2013 (3) 2007 (4) 2012
45. In the following question, statements are given followed by conclusions. You have to take the given statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusion logically follows from the given statements disregarding commonly known facts.

**Statement :** Some keys are staplers.  
 Some staplers are stickers.  
 All the stickers are pens.

**Conclusions :** (I) Some pens are staplers  
 (II) Some stickers are keys  
 (III) No sticker is key  
 (IV) Some staplers are keys.

- (1) Only I and II  
 (2) Only II and IV  
 (3) Only II and III  
 (4) Only I and IV and either II or III

**Directions (Q.46 & Q.47) :** These questions are based on the following diagrams showing four persons stationed at the four corners of a square piece of plot as shown therein :



46. 'A' starts crossing the field diagonally. After walking some distance and turns to his left. Which direction is 'A' facing now ?

- (1) North-East (2) North-West  
 (3) South-East (4) South-West

47. From the original position given in the figure above 'A' and 'B' moves one arm length clockwise and cross over to the diagonally opposite corners. 'C' and 'D' move one arm length anticlockwise and cross over the diagonally opposite corners. The original configuration A,D,B,C has now changed to

- (1) CBDA (2) BDAC  
 (3) DACB (4) BCAD

**Direction (Q.48 to Q.52)** In each of the question given below are given two statements followed by two conclusions numbered I and II. You have to take the given two statements to be true even if they seem to be at variance from commonly known facts. Read the conclusion and then decide which of the given conclusions logically follows from the two given statements disregarding the commonly known facts.

**Give answer :**

- (1) If only I or only II follows  
 (2) If either I or II follows  
 (3) If neither conclusions I nor II follows  
 (4) If both the conclusion I and II follows

48. **Statements I :** All jungles are tigers  
**Statements II :** Some tigers are horse  
**Conclusion I :** Some horses are jungles  
**Conclusion II :** No horse is jungle
49. **Statements I :** All roads are pole  
**Statements II :** No pole is house  
**Conclusion I :** Some roads are houses  
**Conclusion II :** Some houses are poles
50. **Statements I :** No women teacher can play.  
**Statements II :** Some women teachers are athletes  
**Conclusion I :** Male Athletes can play.  
**Conclusion II :** Some athletes can play.

51. **Statements I** : Bureaucrats marry only intelligent girls.

**Statements II** : Tanya is very intelligent.

**Conclusion I** : Tanya will marry bureaucrats.

**Conclusion II** : Tanya will not marry a bureaucrat.

52. **Statements I** : All fishes are grey in colour.

**Statements II** : Some fishes are heavy

**Conclusion I** : All heavy fishes are grey in colour

**Conclusion II** : All light fishes are not grey in colour.

53. Read the following information and answer the question based on it.

(i) The length, breadth and height of a rectangular piece of wood are 4 cm, 3 cm, and 5 cm. respectively.

(ii) Opposite sides of 5 cm. × 4 cm. piece are coloured in red colour.

(iii) Opposite sides of 4 cm. × 3 cm. are coloured in blue.

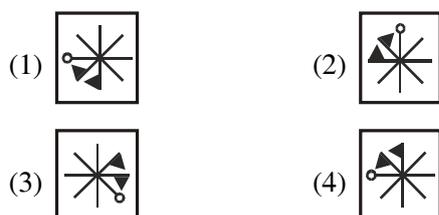
(iv) Rest 5 cm. × 3 cm. are coloured in green in both sides.

(v) Now the piece is cut in such way that a cuboid of 1 cm. × 1cm. × 1cm. will be made.

How many cuboids shall have not any colour ?

- (1) 0      (2) 2      (3) 4      (4) 6

54. Out of the four given figures, three are similar in a certain way. One figure is not like the other three. That means three figures form a group based on some common characteristics. Find out the figures which does not belong to the group.



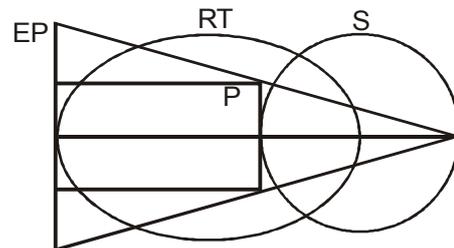
55. Deepa, who is Madan's daughter, says to Priyanka." your mother Sarita is the younger sister of my father who is the third child of Surendra. "How is Surendra related to Priyanka?"

- (1) Maternal uncle      (2) Grand father  
(3) Father      (4) Uncle

56. A boy goes to see a movie and finds a man who is his relative. The man is the husband of the sister of his mother. How is the man related to the boy ?

- (1) Nephew      (2) Uncle  
(3) Brother      (4) None of these

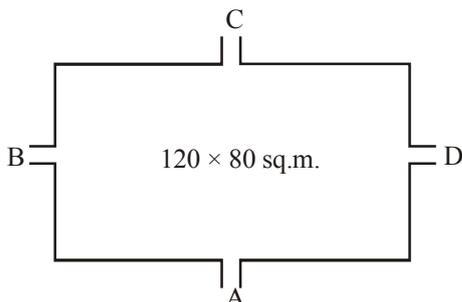
**Directions (Q.57 & Q.58)** : The following figure represents a set of persons– the triangle represents educated persons, the rectangle represents policemen, the ellipse represents road tax payers and circle represents shopkeepers.



The following questions are based on the above diagram.

57. Looking at the given figure, it can be said that–
- (1) Some persons who are neither shopkeepers nor policemen are educated
- (2) Some persons who are either shopkeepers or policemen pay road tax.
- (3) Some persons who are either shopkeepers or policemen pay road tax and are also educated
- (4) All the above statements are correct
58. According to this figure, it follows that –
- (1) Policemen do not pay road tax
- (2) Shopkeepers do not pay road tax
- (3) Some shopkeepers are educated
- (4) Some policemen are shopkeepers

59. A rectangular park area  $120 \times 80$  sq.m. has four gates A, B, C and D as shown in the figure.



Anil and Kiran enter the park together from gate C and start walking in the anticlockwise direction.

- (a) Anil completes 3 rounds and in the fourth round he exits from the gate A.  
(b) Kiran completes 4 rounds and in the fifth round he exits from the gate D.

Find the difference between the distance covered by them.

- (1) 340 m                      (2) 400 m  
(3) 500 m                      (4) 560 m
60. Two clocks are set correctly at 9 a.m. on Monday. Both the clocks gain 3 minutes and 5 minutes respectively in an hour. What time will the second clock register if the first clock which gains 3 minutes in an hour shows the time as 27 minutes past 6 p.m. on the same day ?
- (1) 6 : 27 pm                      (2) 6 : 45 pm  
(3) 6 : 25 pm                      (4) None of these
61. Sonam correctly remembers that last time when she travelled in the bus, she paid less than Rs. 10 but more than Rs. 4. for the ticket. Rachna correctly remembers that she paid more than Rs. 6 but less than Rs. 14 for the same distance. The conductor of the bus correctly mentions that the fare for that distance is not an odd number. Which of the following is definitely the fare for that particular distance?

- (1) Rs. 2    (2) Rs. 9    (3) Rs. 6    (4) Rs. 8

**Directions : (Q.62 & Q.63)** Read the following information and then find out the answers to the questions that follow.

A word and number arrangement machine when given an input line of words and numbers, rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

- Input** : by now 25 72 sight 37 15 home  
**Step I** : sight by now 25 72 37 15 home  
**Step II** : sight 15 by now 25 72 37 home  
**Step III** : sight 15 now by 25 72 37 home  
**Step IV** : sight 15 now 25 by 72 37 home  
**Step V** : sight 15 now 25 home by 72 37  
**Step VI** : sight 15 now 25 home 37 by 72

And Step VI is the last step of the rearrangement.

As per the rules followed in the above steps, find out in each of the following questions the appropriate step for the given input.

62. **Input:** ask for me 49 3264 and 24  
Which of the following will be Step III for the above input ?
- (1) me 24 ask for 49 32 64 and  
(2) me 24 for ask 49 32 64 and  
(3) me 24 for 32 ask 49 64 and  
(4) me 24 for 32 ask 49 and 64
63. **Input :** go now and come 72 34 57 25

How many steps will be required to complete the rearrangement ?

- (1) Four    (2) Five    (3) Six    (4) Seven

**Directions (Q.64 & Q.65) :** Answer the questions on the basis of the information given below.

- (i) There are three houses on each side of the road  
(ii) These six houses are labeled as P, Q, R, S, T and U  
(iii) The houses are of different colours, namely, Red, Blue, Green, Orange, Yellow and White  
(iv) The houses are of different heights

- (v) T, the tallest house, is exactly opposite to the Red coloured house
- (vi) The shortest house is exactly opposite to the Green coloured house.
- (vii) U, the Orange coloured house, is located between P and S.
- (viii) R, the Yellow coloured house, is exactly opposite to P.
- (ix) Q, the Green coloured house, is exactly opposite to U.
- (x) P, the White coloured house, is taller than R, but shorter than S and Q

**64.** Which is the second tallest house ?

- (1) P
- (2) S
- (3) R
- (4) Can't be determined

**65.** What is the colour of the house diagonally opposite to the Yellow coloured house ?

- (1) White                      (2) Blue
- (3) Green                      (4) Red

**Directions (Q.66 to Q.68) :** Study the following information carefully and answer the questions given below :

- (i) P, Q, R, S, T, V, W and Z are eight students in a class. Three of them play cricket and badminton each and two of them play hockey. Each one of them has a different height.
- (ii) The tallest does not play hockey and the shortest does not play cricket
- (iii) V is taller than P and S but shorter than Z and Q. T, who does not play cricket, is taller than Q and is second to the tallest. W is shorter than S but taller than P.
- (iv) Z, who is the fourth from the top, plays badminton with S.
- (v) W does not play either cricket or hockey. Q does not play hockey.

**66.** Who is the tallest ?

- (1) Q                                      (2) Z
- (3) R                                      (4) None of these

**67.** Which of the following pairs of students plays hockey ?

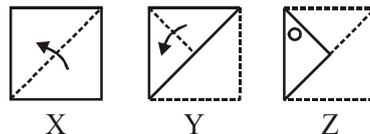
- (1) TV                                      (2) ZT
- (3) ZV                                      (4) None of these

**68.** Which of the following groups of students plays cricket ?

- (1) RPT                                      (2) RQV
- (3) RPQ                                      (4) PQR or QRV

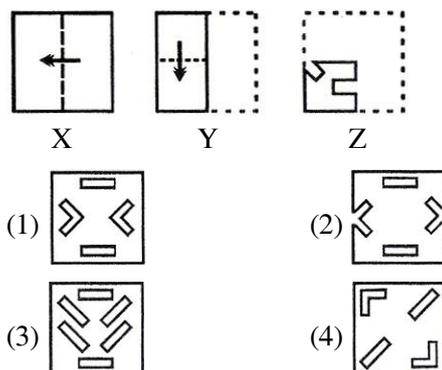
**Directions : (Q.69 & Q.70)** A sheet has been folded in the manner as shown in X, Y, and Z respectively and punched. You have to choose from the alternatives how it will look when unfolded.

**69.**



- (1)
- (2)
- (3)
- (4)

**70.**



**Directions (Q.71 & Q.72) :** The given questions are based on the following alphabet series.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

**71.** Which letter is the seventh to the right of the thirteenth letter from the left end ?

- (1) S                      (2) T                      (3) U                      (4) V

72. Which letter is seventh to the right of the eighteenth letter from the right end of the alphabet ?

- (1) K      (2) O      (3) P      (4) R

73. If the day, two days after tomorrow be Thursday, what day would have been two days before yesterday?

- (1) Friday                      (2) Tuesday  
 (3) Monday                      (4) Saturday

74. Manish was born on 3<sup>rd</sup> March 1980. Sanjiv was born 4 days before Manish. The Republic Day of that year fell on Saturday. Which day was Sanjiv's birthday?

- (1) Wednesday              (2) Friday  
 (3) Thursday                  (4) Tuesday

75. At what time between 5 and 6 O' clock the hands of a clock will make an angle of 40° ?

- (1) 40 minute past 5      (2) 30 minute past 5  
 (3) 20 minute past 5      (4) 50 minute past 5

76. Mukesh left home for the bus stop 20 minutes earlier than usual. It takes 15 minutes to reach the stop. He reached the stop at 1.45 a.m. What time does he usually leave home for the bus stop ?

- (1) 1.40 a.m.  
 (2) 1.45 a.m.  
 (3) 1.50 a.m.  
 (4) Data inadequate

77. How many times from 4 p.m. to 10 p.m. the hands are at right angles?

- (1) 9      (2) 11      (3) 10      (4) 6

78. In 1/2 hour, the long hand of a clock will rotate through an angle of

- (1) 90°      (2) 120°      (3) 180°      (4) 60°

79. In a certain code languages If :

- (a) Mum Sum Dum means Water is pure ;  
 (b) Lao Chin Mum means Water has taste;  
 (c) Dum Phu Phin means He is honest;  
 (d) Khu Sing Chin means Never taste it;  
 then which letter code stands for **has** ?

- (1) Sum      (2) Chin      (3) Lao      (4) Mum

80. If 'WORD' is coded as 48 & "LETTER" is coded as 82 in a certain code language, then how will "SENTENCE" be coded in that language :

- (1) 85      (2) 131      (3) 216      (4) 127

**Directions (Q.81 & Q.82) :** Words in capital letters in column-I are written in small letters according to a code language in column- II, Decode the language and find out the correct alternative for the given word in each question.

**Column I**

**Column II**

PORK	oxtj
BAD	dzg
WAVE	sgmp
BID	dzw
VAGI	gswb
BAT	vgd
VEX	smk
ROSE	yomt

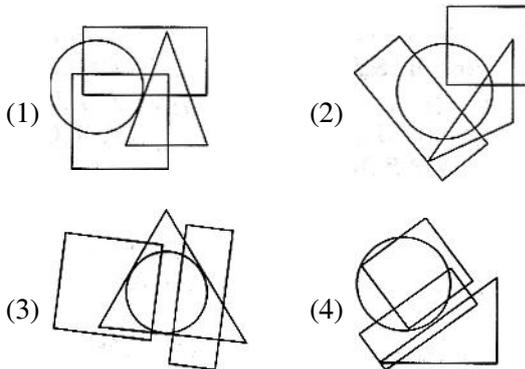
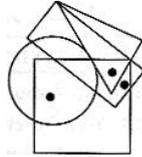
81. Code for **B** is –

- (1) v      (2) d      (3) g      (4) y

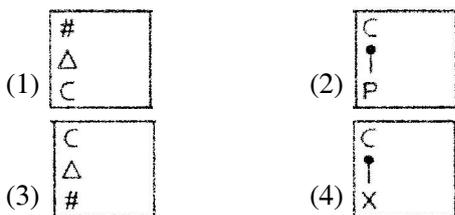
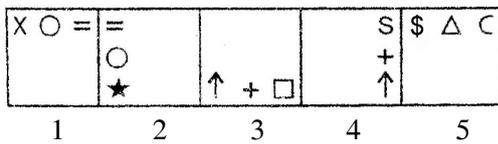
82. Code for **G** is–

- (1) b      (2) z      (3) y      (4) s

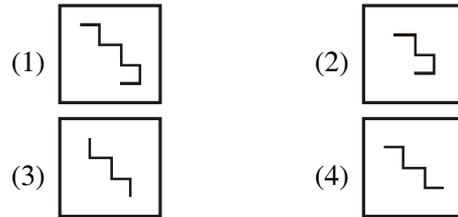
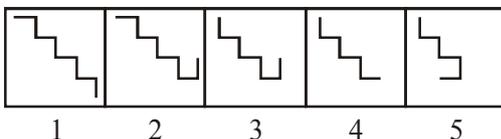
83. In the following question, select the figure amongst (1), (2), (3), (4) which satisfies the same conditions of placement of dots as in the figure.



84. There are two sets of figures namely the Problem figures containing five figures 1, 2, 3, 4, 5 and the Answer figures (1), (2), (3), (4). You have to select one figure from the Answer figures which will continue the same series as given in the Problem figures.



85. There are two sets of figures namely the Problem figures containing five figures 1, 2, 3, 4, 5 and the Answer figures (1), (2), (3), (4). You have to select one figure from the Answer figures which will continue the same series as given in the Problem figures.

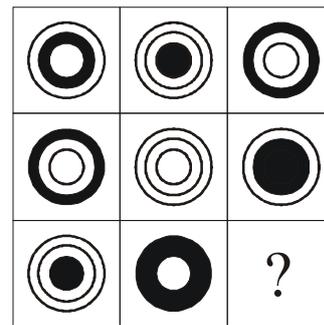


86. Which letter is 2<sup>nd</sup> letter to the right of the 2<sup>nd</sup> letter above the fourth letter to the left of the letter Z ?

A	B	C	D	E	
F	G	H	I	J	
K	L	M	N	O	
P	Q	R	S	T	
U	V	W	X	Y	Z

(1) P (2) S (3) N (4) R

87. Which is the missing tile from alternative ?



88. In a certain code language, if the word LOYALTY is coded as B6 M2 E5 A0 D3 C6 J2 S6, then how will you code the word BOKARO ?

(1) A2 G8 K1 A0 I2 K5  
(2) A2 F9 K1 A0 B9 K4  
(3) A2 L3 K1 A0 I9 K4  
(4) A2 H7 K1 A0 D4 K4

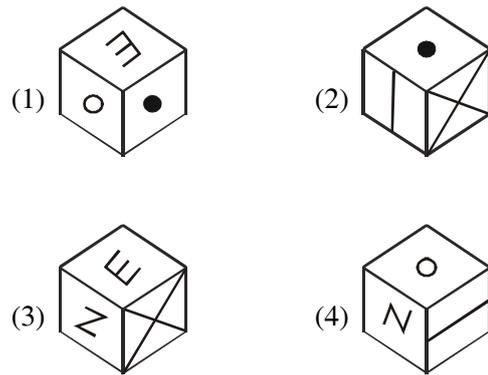
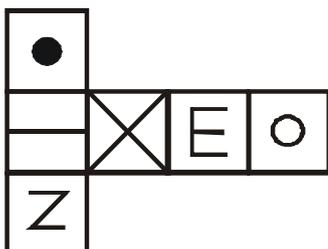
89. In a certain code, A is written as 1, B is 10, C is 11, D is 100, E is 101 and so on. Than how is TRY code in that language ?

(1) 10100 10010 11110  
(2) 10100 10010 10110  
(3) 10100 10010 11001  
(4) 10100 10010 10000

**Directions (Q.90 to Q.92) :** In each of the following questions, a word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as in the two given matrices. The columns and rows of Matrix I are numbered from 0 to 4 and those of Matrix II from 5 to 9. A letter from these matrices can be represented first by its row and then the column number e.g., in the matrices for questions, S can be represented by 21, 14, etc; O can be represented by 75, 68, etc. Similarly you have to identify the correct set for the word given in each question.

Matrix I					Matrix II						
	0	1	2	3	4		5	6	7	8	9
0	A	E	S	T	H	5	P	O	R	K	L
1	T	H	A	E	S	6	K	L	P	O	R
2	E	S	T	H	A	7	O	R	K	L	P
3	H	A	E	S	T	8	L	P	O	R	K
4	S	T	H	A	E	9	R	K	L	P	O

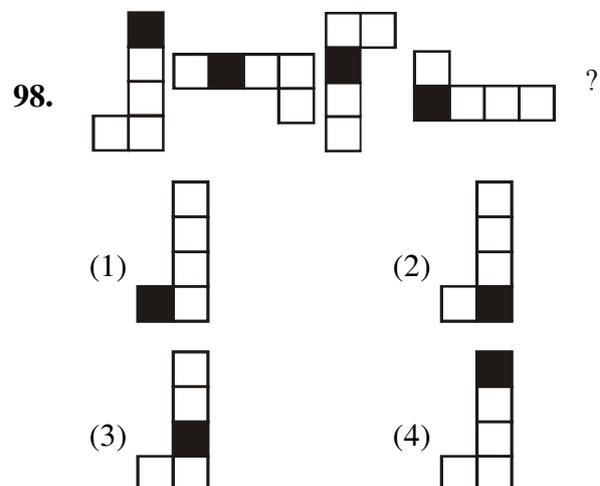
90. EAST  
 (1) 44, 32, 21, 03      (2) 32, 31, 02, 04  
 (3) 20, 43, 33, 11      (4) 13, 12, 14, 10
91. LEST  
 (1) 97, 32, 21, 34      (2) 87, 32, 21, 31  
 (3) 85, 02, 04, 22      (4) 66, 00, 20, 34
92. SOLE  
 (1) 41, 57, 87, 31      (2) 33, 99, 66, 44  
 (3) 21, 75, 44, 02      (4) 02, 78, 87, 13
93. When the above is folded to form a cube, which is the only one of the following that can be produced ?



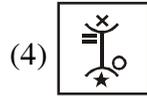
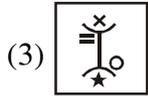
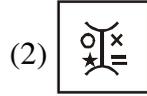
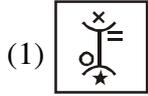
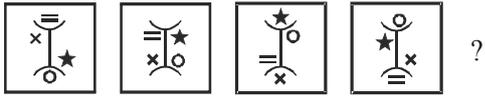
**Direction (Q.94 to Q.97) :** A cube is painted red on two adjacent surfaces and black on the surfaces opposite to red surfaces and green on the remaining faces. Now the cube is cut into sixty four smaller cubes of equal size.

94. How many smaller cubes have only one surface painted ?  
 (1) 8      (2) 16      (3) 24      (4) 32
95. How many smaller cubes will have no surface painted ?  
 (1) 0      (2) 4      (3) 8      (4) 16
96. How many smaller cubes have less than three surfaces painted ?  
 (1) 8      (2) 24      (3) 28      (4) 48
97. How many smaller cubes have three surfaces painted ?  
 (1) 4      (2) 8      (3) 16      (4) 24

**Directions (Q.98 to Q.100) :** In each of the following, there are some figure which have some particular series. Find out the next figure?



99.



100.

