

JEE EXPERT

SAMPLE PAPER

MENTAL ABILITY

Going to XI

Time : 2 Hours

Maximum Marks : 300

Please read the instructions carefully. You are allotted 5 minutes specifically for this purpose.

INSTRUCTIONS

- (i) The question paper has 15 printed pages excluding Answer Sheet. Please ensure that the copy of the question paper you have received contains all pages.
- (ii) The question paper contains 100 questions. Each question carry 3 marks and all the questions are compulsory. **There is negative marking. One mark will be deducted for each wrong answer. No mark will be deducted for unattempted question.**
- (iii) Each question contains Four alternatives out of which only **ONE** is correct.
- (iv) Indicate the correct answer for each question by filling appropriate bubble in your answer sheet.
- (v) For rough work, use the space provided in question paper booklet. No extra sheet will be provided for rough work.
- (vi) Use of Calculator, Log Table, Slide Rule and Mobile is not allowed.
- (vii) The answer(s) of the questions must be marked by shading the circles against the question by dark pencil only. For example if only 'B' choice is correct then,

the correct method for filling the bubble is

A	B	C	D
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

the wrong method for filling the bubble are

- | | | | | |
|-----|-----------------------|----------------------------------|-----------------------|-----------------------|
| (a) | A | B | C | D |
| | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| (b) | A | B | C | D |
| | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| (c) | A | B | C | D |
| | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |

The answer of the questions in wrong or any other manner will be treated as wrong.

Name of the candidate

Regn. Number

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I have read all the instructions and shall abide by them.

.....
Signature of the Candidate

I have verified all the information filled in by the candidate.

.....
Signature of the invigilator

DO NOT BREAK THE SEAL WITHOUT BEING INSTRUCTED TO DO SO BY THE INVIGILATOR

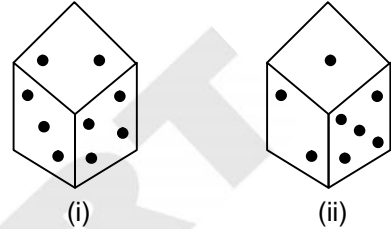
SECTION – I

Straight Objective Type

This Section contains 100 multiple choice questions numbered 1 to 100. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

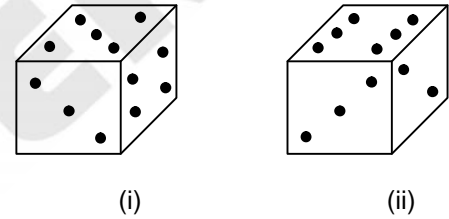
1. A dice is rolled twice and the two positions are shown in the figures below. What is the number of dots at the bottom face when the dice is in position (i)

(A) 1
(B) 5
(C) 6
(D) cannot be determined



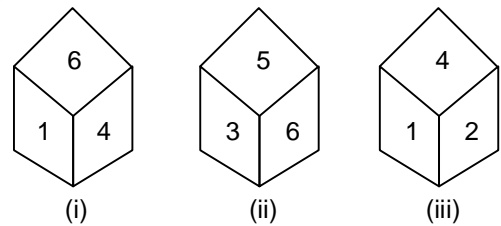
2. Two positions of a dice are shown below. If the face with 1 dot is at the bottom, then the number of dots on the top is

(A) 2
(B) 3
(C) 4
(D) 5



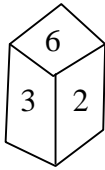
3. Three positions of a dice are given. Based on them, find out which number is found opposite the number 2 in the given cube

(A) 6
(B) 5
(C) 3
(D) 1

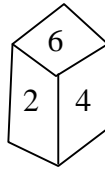


Space for rough work

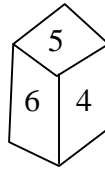
4. A die is thrown four times and the different positions are recorded as shown below, which number is on the face opposite to 2?



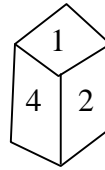
(i)



(ii)



(iii)



(iv)

(A) 5

(B) 4

(C) 6

(D) 1

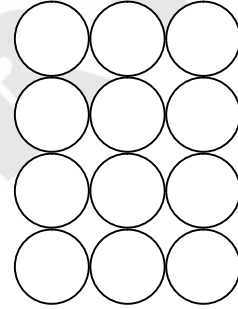
5. In the adjoining figure, if the centres of all the circles are joined by horizontal and vertical lines, then find the number of squares that can be formed?

(A) 6

(B) 7

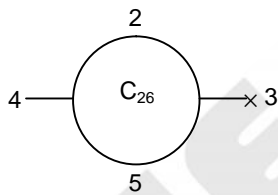
(C) 8

(D) 1

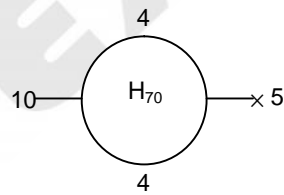


Directions (Q. 6 to 9): In each of the following questions a set of figures carrying certain characters is given, assuming that the characters in each set follow similar pattern, find the missing character/ number in each case.

- 6.

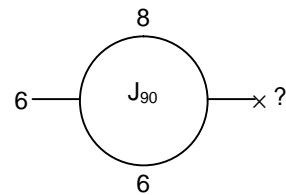


(A) 2



(B) 3

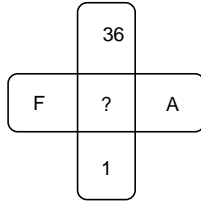
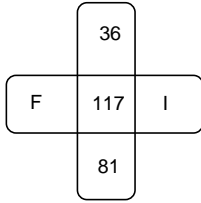
(C) 4



(D) 5

Space for rough work

7.



(A) 6

(B) 8

(C) 10

(D) 37

8.

3C	27D	9E
7I	21K	3M
4D	?	7J

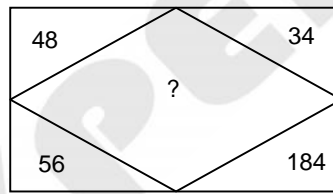
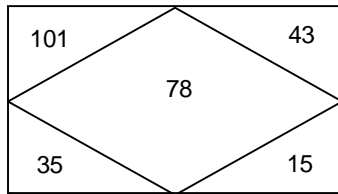
(A) 28H

(B) 28I

(C) 28G

(D) 28K

9.



(A) 127

(B) 142

(C) 158

(D) 198

10. If $1[3]4 = 10$, $3[4]6 = 26$ then $4[5]7 = ?$

(A) 18

(B) 24

(C) 32

(D) 38

11. If in a certain code, MAN = 28, then RAN = _____

(A) 30

(B) 33

(C) 43

(D) 53

12. If FUN is coded as 82, what is the code number for GUN?

(A) 83

(B) 84

(C) 86

(D) 88

13. If "FATHER" is coded as "DYRFCP" then what is the code for "MOTHER"?

(A) KRCFPK

(B) KMRFCP

(C) KFRMKP

(D) KMRCFP

Space for rough work

14. If "CLOUD" is coded as "FORXG", then which word is coded as "UDLQ"?
(A) XGOT (B) RAIN (C) RANI (D) RINA

Directions: (Q.15 to 19) In each of the following questions, four words have been given out of which three are alike and form a group. One is different and does not belong to the group. Find the odd one out.

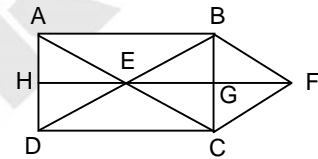
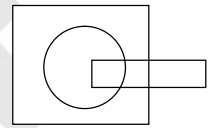
15. (A) Earth (B) Moon (C) Mercury (D) Venus
16. (A) Circle (B) Rectangle (C) Triangle (D) Square
17. (A) 111 (B) 113 (C) 119 (D) 117
18. (A) 8 (B) 63 (C) 216 (D) 512
19. (A) 97 (B) 91 (C) 117 (D) 69

Directions: (Q.20 to 24) In each of the following questions, there is a certain relationship between two given words/numbers on one side of :: and one word is given on another side of :: while another word/number is to be found from the given alternatives, having the same relation with this word as the words of the given pair bear. Choose the correct alternative.

20. Friend : foe :: brave : _____
(A) attack (B) weak (C) coward (D) strong
21. Language : Alphabet :: Number : _____
(A) Figure (B) Decimal (C) Digit (D) Arithmetic
22. Darkness : Light :: Ignorance : _____
(A) Genius (B) Knowledge (C) Intelligence (D) Achievement
23. 5 : 130 :: 8 : _____
(A) 420 (B) 520 (C) 180 (D) 320
24. 6 : 30 :: 10 : _____
(A) 80 (B) 90 (C) 70 (D) 60

Space for rough work

25. A boy starts walking towards south. After walking 200m he turns left and walks 100m straight. Again, he turns left and walks 200m. Next he turns right and walks a distance of 500m. In which direction is he walking now?
 (A) East (B) North (C) West (D) South
26. How far is he from the starting point finally, in the above question?
 (A) 60m (B) 1000m (C) 600m (D) $100\sqrt{37}$ m
27. If the venn diagram shown in the figure given represents doctors, Fathers and men, which figure represents doctors?
 (A) Circle (B) Square
 (C) Rectangle (D) Any of the above
28. The number of triangles in the figure shown are
 (A) 15 (B) 16
 (C) 18 (D) 17
29. In a certain code 'BCG' means "oranges are sweet", 'KUB' means "buy good oranges", and 'BGL' means "red sweet oranges". Which letter in that code means "red"?
 (A) K (B) U (C) G (D) L
30. In a certain code language, 'col tip mot' means 'singing is appreciable', 'mot baj min' means 'dancing is good' and 'tip nop baj' means 'singing and dancing', which of the following means 'good' on that code language?
 (A) not (B) min (C) baj (D) none of these



- Directions: (Q. 31 – 32)** In a certain code, 'il be pee' means 'roses are blue', 'Sik hee' means 'red flowers' and 'pee mit hee' means 'flowers are vegetables'.
31. How is 'red' written in that code?
 (A) hee (B) sik (C) be (D) none of these
32. How is 'vegetables are red flowers' written in this code?
 (A) pee sik mit hee (B) sik pee hee be (C) il sik mi thee (D) none of these

Space for rough work

33. Srikanth is shorter than Anil, Anand is taller than Srikanth, Vishnu is taller than Anil but shorter than Ravi, Anil is taller than Anand. Who will be in the middle if they stand in a row according to height?
 (A) Anand (B) Vishnu (C) Ravi (D) Anil
34. In the above question, who is the tallest person?
 (A) Vishnu (B) Anil (C) Ravi (D) Anand

Directions: (Q.35 TO 37) six students are sitting in a row. K is sitting between V and R. V is sitting next to M. M is sitting next to B, who is sitting on the extreme left and Q is sitting next to R.

35. Who are sitting adjacent to V?
 (A) Q and K (B) R and Q (C) M and K (D) B and M
36. Who are sitting to extremes?
 (A) M and R (B) B and R (C) B and Q (D) Q and R
37. Who are sitting adjacent to K?
 (A) V and R (B) R and Q (C) V and M (D) B and M

Directions: (Q. 38 to 40) Read the series and answer the questions:
Z Y X W V U T S R Q P O N M L K J I H G F E D C B A

38. Which will be the seventh letter to the right of the eleventh letter from the left?
 (A) I (B) H (C) G (D) F
39. Which will be the sixth letter to the left of the tenth letter from the right?
 (A) Q (B) O (C) P (D) R
40. Which letter will be fifth letter to the right of ninth letter from the right?
 (A) C (B) E (C) D (D) B
41. If 'θ' means '+', 'φ' means 'X' and 'β' means \div , Find the value of $119 \beta 17 \theta 7 \phi 4$.
 (A) 33 (B) 35 (C) 63 (D) 36
42. If 'p' stands for 'x', z stands for +, g stands for -, and v stands for \div , the value of $6 z 6 p 6 v 6 =$
 (A) 18 (B) 6 (C) 12 (D) 36

Space for rough work

43. Anil said, "This woman is the wife of the grandson of my mother". How is Anil related to the woman?
 (A) Father (B) Grand Father
 (C) Husband (D) Father-in-law
44. Pointing to a person, a man said to a woman, "His mother is the only daughter of your father". How was the woman related to the person?
 (A) Aunt (B) Mother (C) Wife (D) Daughter
45. If B says that his mother is the only daughter of A's mother, how is A related to B?
 (A) Father (B) Brother (C) Grandfather (D) Uncle
46. Pointing to a boy, Rita says, "He is the son of my grandfather's only son" How is the boy's mother related to Rita?
 (A) Mother (B) Sister (C) Aunt (D) Data inadequate

Directions: (Q.47 to 51)

In a group of five persons A, B, C, D and E

- (i) B and C are intelligent in Maths and Geography.
 (ii) A and C are intelligent in Maths and History.
 (iii) B and D are intelligent in Science and Geography.
 (iv) D and E are intelligent in science and civics.
 (v) E is intelligent in Civics, History and Science.

47. Who is intelligent in Science, Geography and Civics?
 (A) E (B) B (C) D (D) A
48. Who is intelligent in maths, science, geography?
 (A) A (B) B (C) D (D) E
49. Who is intelligent in maths and history but not in geography?
 (A) A (B) B (C) C (D) D
50. Who is intelligent in maths, geography and history?
 (A) A (B) B (C) C (D) D
51. Who is intelligent in science, history and civics?
 (A) A (B) B (C) C (D) E

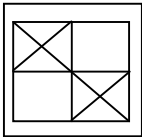
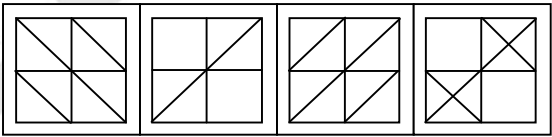
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Directions: (Q. 52 to 55)

K is the brother of X. Z is the son of x. P, the daughter of K, is married to N. G and X are sisters.

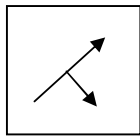
52. How is P related to G?
(A) Niece (B) Sister (C) Daughter-in-law (D) Daughter
53. How is z related to P?
(A) cousin (B) uncle (C) brother-in-law (D) maternal uncle
54. How is N related to K?
(A) son (B) son-in-law (C) nephew (D) father-in-law
55. How is G related to Z?
(A) Aunt (B) Sister (C) Wife (D) Mother-in-law
56. In a certain code language 'Pic vic nic' means 'winter is cold', 'to nic re' means 'summer is hot'. 're pic boo' means 'nights are cold', which word represents 'summer'?
(A) re (B) nic (C) pic (D) vic

Directions: (Q. 57 – 60) In each of following questions, you are given a combination of alphabets and/or numbers a fig(x) followed by four alternatives (A), (B), (C) and (D). Choose the alternative which most closely resembles the mirror-image of the given combination.

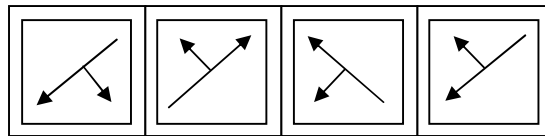
57. WHITE
(A) Э 1 I H W (B) Э T I H W (C) Э T I H W (D) E T I H W
58. MALAYALAM
(A) MALAYALAM (B) MAJAYAJAM (C) МАГ А YA Г AM (D) none of these
59.  (x) 

Space for rough work

60.



(x)



A

B

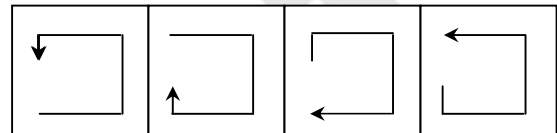
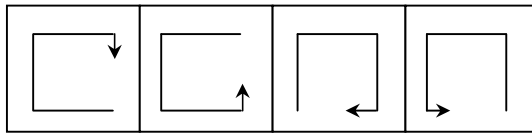
C

D

Directions: (Q. 61 to 65)

In each of the questions given below which of the answer figures should come after the four problems, if the square were continued.

61.



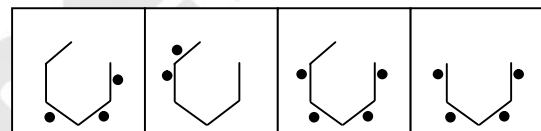
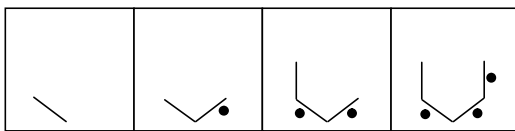
A

B

C

D

62.



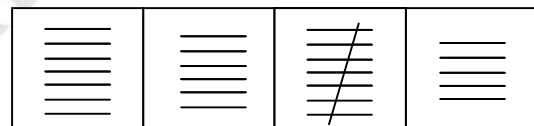
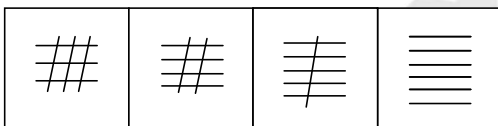
A

B

C

D

63.



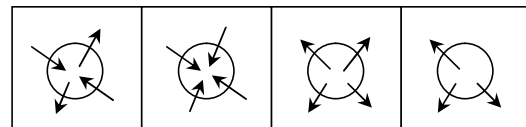
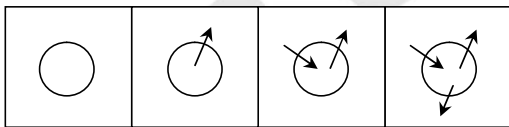
A

B

C

D

64.



A

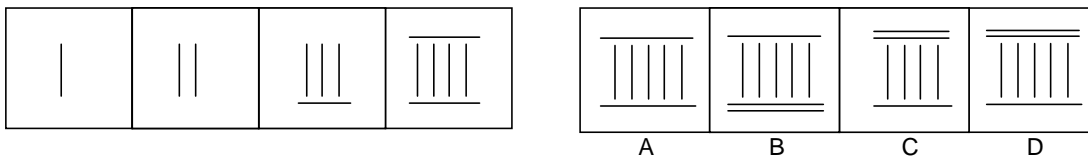
B

C

D

Space for rough work

65.



Directions: (Q. 66 – 67) In each of following questions, arranges the given words in a meaningful sequence and then choose the most appropriate sequence from amongst the alternatives provided below each question:

66. (i) Honey, (ii) Flower, (iii) Bee, (iv) Wax
 (A) I, III, IV, II (B) II, I, IV, III (C) II, III, I, IV (D) IV, III, II, I
67. (i) Mother, (ii) Child, (iii) Milk, (iv) Cry, (v) Smile
 (A) I, V, II, IV, III (B) II, IV, I, III, V (C) II, IV, III, I, V (D) III, II, I, V, IV

Directions (Q. 68–70): Read the following information carefully and answer the questions given below:–
 Ravi and Kunal are good in Hockey and Volleyball. Sachin and Ravi are good in Hockey and Baseball. Gaurav and Kunal are good in cricket and Volley ball. Sachin, Gaurav and Michael are good in football and Baseball.

68. Who is good in Hockey, cricket and volleyball?
 (A) Sachin (B) Kunal (C) Ravi (D) Gaurav
69. Who is good in Baseball, cricket, volleyball and football?
 (A) Sachin (B) Kunal (C) Gaurav (D) Ravi
70. Who is good in Baseball, Volleyball and Hockey?
 (A) Sachin (B) Kunal (C) Ravi (D) Gaurav

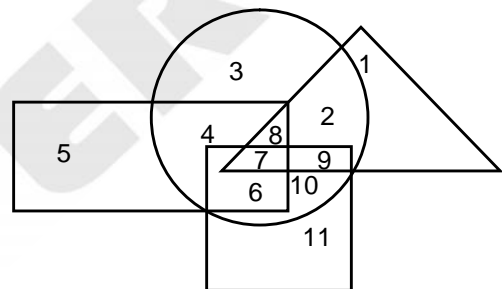
Directions (71>74): Six friends are sitting around a circular table at equal distance from each other. Sita is sitting two places right of Gita who is exactly opposite to Nita. Nita is on immediate left of Lata, who is exactly opposite to Rita. Mita is also sitting at the table.

71. Who is the only person sitting between Gita and Sita ?
 (A) Rita (B) Mita (C) Lata (D) Nita

Space for rough work

72. Sita is not sitting at equal distance from
 (A) Rita and Nita (B) Lata and Gita (C) Mita and Lata (D) all of these
73. Gita is sitting to the
 (A) left of Mita (B) right of Rita (C) left of Rita (D) right of Nita
74. The angle subtended by Mita and Nita at the centre of the table is
 (A) 60° (B) 120° (C) 90° (D) 180°
75. A rat runs 20m towards east and turns to right, runs 10m and turns to right, runs 9m and again turns to left, runs 5m and turns to left, runs 12m and finally turns to left and runs 6m. Now which direction is the rat facing ?
 (A) east (B) west (C) north (D) north-east

Directions: (76-79): In the following figure, rectangle, square, circle and triangle represent the region of wheat, gram, maize and rice cultivation respectively. On the basis of the given figure, answer the following questions.



76. Which area is cultivated by all the four commodities?
 (A) 7 (B) 8 (C) 9 (D) 2
77. Which area is cultivated by wheat and maize only?
 (A) 8 (B) 6 (C) 5 (D) 4
78. Which area is cultivated by maize only?
 (A) 10 (B) 2 (C) 3 (D) 4
79. Which area is cultivated by rice and maize and nothing else?
 (A) 9 (B) 8 (C) 2 (D) 7

Space for rough work

80. A 4 digit number is formed by repeating a 2-digit number such as 2525,3232, etc. Any number of this form is always exactly divisible by:
(A) 7 (B) 11
(C) 13 (D) smallest 3-digit prime number
81. In a row of trees, one tree is the fifth from either end of the row. How many trees are there in the row?
(A) 11 (B) 8 (C) 10 (D) 9
82. Find the related word/number:
Suggest : Demand :: Take : ?
(A) Give (B) Grab (C) Receive (D) Gift
83. 0, 4, 18, 48, _____
(A) 80 (B) 100 (C) 90 (D) 120

Directions: (84>87) In a certain code 'I received a letter', means 'we saw an aircraft'. 'Shyam received one too' means 'the aircraft is blue', 'Shyam loves long letters' means 'captain saw blue flag' and 'I like long one' means 'we believe the captain'.

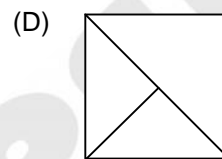
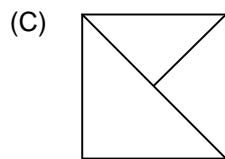
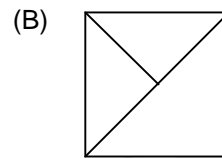
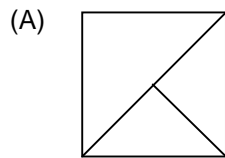
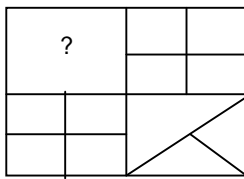
The questions are based on the above information.

84. What does the word 'received' in the code mean?
(A) we (B) saw (C) blue (D) aircraft
85. Which word is coded as 'believe'?
(A) received (B) saw (C) loves (D) like
86. What is the code for 'long letter'?
(A) Shyam loves (B) captain saw (C) I like (D) we believe
87. What is the code for 'the captain'?
(A) long one (B) long letter (C) received one (D) saw flag
88. A person goes 2 kms towards East. He then turns right and goes 1 km. He turns again right and goes 3 kms straight. In which direction is he now from his starting place?
(A) North-East (B) North-West (C) South-East (D) South-West

Space for rough work

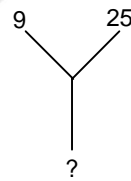
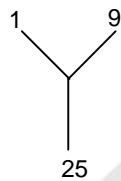
Directions (Q. 89): In the following question a figure is given with a part missing. Find out the part which will complete the figure.

89.



Directions (Q. 90): In the following question a set of figures carrying some numbers is given. The numbers in each figure follow some specific principle. Study the figures to find out the principle on the basis of which the missing number can be derived. Then choose the correct alternative which contains the missing number.

90.



(A) 47

(B) 81

(C) 50

(D) 57

Space for rough work

Directions: (Q. 91 to 98) In each of the following questions, a series is given with one term missing. Choose the correct alternative that will continue the same pattern and replace the question mark in the given series:

91. 14, 916, 2536, 4964, _____
 (A) 100121 (B) 81100 (C) 121144 (D) 144169
92. 71, 73, 79, 83, 89, _____
 (A) 91 (B) 93 (C) 99 (D) 97
93. 2, 10, 30, 68, _____
 (A) 125 (B) 130 (C) 222 (D) 350
94. 1, 2, 3, 5, 8, 13 _____
 (A) 15 (B) 20 (C) 22 (D) 21
95. 1, 2, 2, 4, 8, 32, _____
 (A) 64 (B) 128 (C) 256 (D) 512
96. POQ, SRT, VUW, _____
 (A) XYZ (B) XZY (C) YXZ (D) ZYX
97. X Y Z A B C U V W _____
 (A) E (B) F (C) D (D) G
98. AA, CE, EI, GO, _____
 (A) IT (B) IS (C) IR (D) IU

Directions: (Q. 99 to 100) In each of the following letter series, some of the letters are missing which are given in that order as one of the alternatives below it. Choose the correct alternative:

99. _ b b m _ a n b _ m _ a _ b b
 (A) n b a b n (B) a b n a b (C) n a b a n (D) a n b b m
100. a b a _ b c a _ a c _ c a b _ c b c
 (A) b b b b (B) c c b a (C) c b b a (D) c a a c

Space for rough work

JEE EXPERT

Going - XI
(MAT) [20.01.2019]
ANSWERS

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