

DO NOT OPEN THE SEAL UNTIL INSTRUCTED TO DO SO.

NTSE (E)

NTSE - NOV, 2018

Medium : English

MENTAL ABILITY TEST

Q. Booklet No. 108334

Candidate's Roll Number

Paper - I

4	0	1	9	0	3	1	7	1	0	3
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Time allowed : 120 Minutes

Total Questions : 100

Maximum Marks : 100

**INSTRUCTION :** Please check that OMR Answer Sheet No. and Question Booklet No. match with each other. If they do not match immediately replace the Question Booklet and OMR Answer Sheet. Candidate should fill the correct Question Booklet No. in OMR Answer Sheet.

### Instructions to Candidates

Read the following instructions carefully before you answer the questions. Answers are to be SHADED on a SEPARATE OMR Answer sheet given, with a **HB pencil**. Read the **Instructions printed on the OMR sheet carefully before answering the questions.**

1. Please write your Hall Ticket No. very clearly (only one digit in one block) on the OMR Answer sheet as given in your admission card. Please see that no block is left unfilled and even Zeros are correctly transferred to the appropriate blocks on the OMR Answer sheet. For all the subsequent purposes, your Centre Code No. and other details shall remain the same as given on the Admission Card.
2. **Paper-I (Mental Ability)** consists of 100 questions (Q. Nos. 1 to 100).
3. All questions carry **one** mark each.
4. Since **all** questions are **compulsory**, do not try to read through the whole question paper before beginning to answer it.
5. Begin with the first question and keep trying one question after another till you finish all the questions.
6. If you do not know the answer to any question, do not spend much time on it and pass on to the next one. If time permits, you can come back to the questions which you have left in the first instance and try them again.
7. Since the time allotted to the question paper is very limited, you should make the best use of it by not spending too much time on any question.
8. A blank page is provided for rough work at the end of question paper.
9. **REMEMBER YOU HAVE TO SHADE ANSWERS ON A SEPARATE OMR ANSWER SHEET PROVIDED.**
10. Answer to each question is to be indicated by **SHADING** the circle having the number of the correct alternative in the OMR Answer sheet from among the ones given for the corresponding question in the booklet.
11. Now turn to the next page and start answering the questions.
12. The OMR Answer sheet consists of two copies, the **ORIGINAL COPY** and the **CANDIDATE'S COPY**. Do not separate or displace them. Do not darken the bubbles in two copies of OMR Answer sheets separately. After the examination, you should hand over the original copy of OMR Answer sheet to the invigilator of the room and can take away the Candidate's copy of OMR Answer Sheet with them.
13. The candidate **need not return** this Question Paper booklet and can take it after completion of the examination. No candidate should leave the examination hall before the end of the examination.

Hemaksh Behara

**PAPER – I**  
**MENTAL ABILITY TEST**  
**(Q. Nos. 1 to 100)**  
**Max. Marks : 100**

**Note : SHADE** the correct alternatives in the OMR Answer Sheet provided, from amongst the ones given against the corresponding questions in the Question Booklet. For shading the circles, use a **HB pencil**.



**Direction: In Question nos. 1 to 10:**

There are four terms in each question. The term right to symbol : : have some relationship as the term of the left to the symbol : : and out of the four, one term is missing, which is among one of the given four alternatives. Find the correct alternatives.

**Direction: In Question nos. 11 to 20:**

Questions have become wrong due to wrong order of signs. Choose the correct order of signs from the four alternatives given under each question, so that the equation becomes right. Write it in your answer sheet against the corresponding question number.

1. AZY : EXW :: IVU : TS  
 (1) TSO (2) ~~OTS~~  
 (3) SOT (4) OST
2. \_\_\_\_\_ : Play :: Sing : Anthem  
 (1) Field (2) ~~Act~~  
 (3) Theater (4) Scene
3. Rook : Chess :: \_\_\_\_\_ : Badminton  
 (1) Grass (2) Tennis  
 (3) ~~Shuttlecock~~ (4) Swing
4. Cytology : \_\_\_\_\_ :: Geology : Rocks  
 (1) ~~Cells~~ (2) Psychology  
 (3) Cyclones (4) Pharmacology
5. \_\_\_\_\_ : Wrist :: Belt : Waist  
 (1) ~~Bracelet~~ (2) Bend  
 (3) Arm (4) Hand
6. AFK : BGL :: \_\_\_\_\_ : EJO  
 (1) SXZ (2) PUZ  
 (3) ~~DIN~~ (4) DHL
7. Ruby : Red :: Sapphire : \_\_\_\_\_  
 (1) Black (2) Green  
 (3) White (4) ~~Blue~~
8. Stars : Astronomy :: \_\_\_\_\_ : History  
 (1) Autumn (2) ~~Battles~~  
 (3) Eclipse (4) Horse
9. AEZ : EYI :: IOX : \_\_\_\_\_  
 (1) UYZ (2) EIX  
 (3) AEX (4) ~~OUW~~
10. AJT : BKU :: \_\_\_\_\_ : DMW  
 (1) ~~CLV~~ (2) EHF  
 (3) ENO (4) CVL

11.  $5 - 6 = 11 \div 19$   
 (1)  $+\div$   
 (2)  ~~$\times+$~~   
 (3)  $+-$   
 (4)  $-\div$
12.  $14 \div 2 + 16 = 12$   
 (1)  $+-$   
 (2)  $\div-$   
 (3)  $\times+$   
 (4)  ~~$\times+$~~
13.  $39 - 24 - 9 = 7$   
 (1)  $++$   
 (2)  $+-$   
 (3)  $+\div$   
 (4)  ~~$++$~~
14.  $7 = 5 \times 16 - 19$   
 (1)  $\div=+$   
 (2)  ~~$\times=+$~~   
 (3)  $-+=$   
 (4)  $+=-$
15.  $11 \times 7 - 23 = 5$   
 (1)  $-=\times$   
 (2)  ~~$+=-$~~   
 (3)  $\div=-$   
 (4)  $+=-$
16.  $12 = 3 \div 19 + 4$   
 (1)  ~~$+=-$~~   
 (2)  $\div=-$   
 (3)  $\times=-$   
 (4)  $\times\div$
17.  $11 \times 7 \div 13 = 5$   
 (1)  ~~$+==$~~   
 (2)  $\div+=$   
 (3)  $\times=-$   
 (4)  $-+=$
18.  $2 - 7 \div 5 = 19$   
 (1)  $++$   
 (2)  ~~$\times+=$~~   
 (3)  $-+=$   
 (4)  $\div=-$
19.  $2 = 11 \div 3 \times 19$   
 (1)  $-=\times$   
 (2)  $\div\div$   
 (3)  $+=-$   
 (4)  ~~$\times=+$~~
20.  $3 + 5 - 2 = 13$   
 (1)  ~~$\times=+$~~   
 (2)  $-=\times$   
 (3)  $+=-$   
 (4)  $\div=-$

Handwritten calculations and corrections at the bottom of the page:

- $2 \times 5 = 16 + 19$
- $35 = 35$
- $11 - 7 = 23 \times 5$
- $39 + 24 = 9 + 7$
- $39 = 24 + 9 + 7$
- $39 + 24 = 9 \times 7$
- $63$



**Direction: In Question nos. 21 to 30:**

In the number series given below, one number is missing. Each series is followed by four alternatives (1), (2), (3) and (4). One of them is the right answer. Identify and indicate it as per the "instructions".

21.  $8, 24, 12, 36, 18, 54, \underline{\hspace{2cm}}$   $\begin{matrix} 2 \\ -8 \\ \times 3 \\ \hline 54 \end{matrix}$

(1) 72 (2) 68  
(3) 108 (4) ~~27~~

22.  $7, 10, 8, 11, 9, 12, \underline{\hspace{2cm}}$

(1) 16 (2) 14  
(3) 13 (4) ~~10~~

23.  $8, 0, 6, 5, 9, 3, 12, 1, 15, \underline{\hspace{2cm}}$

(1) -3 (2) 18  
(3) -1 (4) 13

24.  $77, 91, 105, 119, 133, 161, \underline{\hspace{2cm}}$

(1) 189 (2) 203  
(3) 175 (4) 193

25.  $888, 440, 216, 104, 48, \underline{\hspace{2cm}}$

(1) 26 (2) 28  
(3) 24 (4) ~~20~~

26.  $4, 9, 19, 39, 79, \underline{\hspace{2cm}}$

(1) 139 (2) ~~159~~  
(3) 119 (4) 169

27.  $11, 23, 48, 99, \underline{\hspace{2cm}}, 409$

(1) 205 (2) 200  
(3) 202 (4) 201

28.  $10, 26, 74, 218, 650, \underline{\hspace{2cm}}$

(1) 1946 (2) 1950  
(3) 1956 (4) 1942

29.  $0, 7, 26, 63, 124, 215, \underline{\hspace{2cm}}$

(1) 295 (2) 323  
(3) 305 (4) ~~342~~

30.  $0, 3, 8, 15, 24, \underline{\hspace{2cm}}$

(1) 35 (2) 39  
(3) 27 (4) 32

**Direction: In Question nos. 31 to 35:**

Some letters are given in Column I and some digits are given in Column II. Each digit of Column II represents any letter of Column I. Study the columns and write the alternative letter after choosing the correct alternative against the corresponding question.

Column - I Column - II

GCUHV	<del>56372</del>
CKXJD	<del>9508A</del>
UDVGH	37862
<del>DVKVX</del>	<del>18394</del>
HXGJY	06291
<del>CGUDV</del>	<del>25738</del>
HGKDY	14628
UDCKG	42587
KYDXC	<del>19085</del>
GXHJD	<del>62980</del>

813  
J → 0  
612  
au8  
KDX  
au85  
490  
287

31. The code for Y is \_\_\_\_\_

(1) 1 (2) 8  
(3) 3 (4) 7

32. The code for C is \_\_\_\_\_

(1) 3 (2) ~~5~~  
(3) 6 (4) 2

33. The code for D is \_\_\_\_\_

(1) 3 (2) ~~8~~  
(3) 0 (4) 7

34. The code for G is \_\_\_\_\_

(1) 8 (2) 6  
(3) ~~2~~ (4) 4

35. The code for J is \_\_\_\_\_

(1) 3 (2) 2  
(3) ~~0~~ (4) 4

$\begin{matrix} 432 \\ +3 \\ \hline 1296 \end{matrix}$   
 $\begin{matrix} 161296 \\ +3 \\ \hline 1946 \end{matrix}$   
 $\begin{matrix} 48 \\ -28 \\ \hline 20 \end{matrix}$

$\begin{matrix} 48 \\ -16 \\ \hline 32 \end{matrix}$   
 $\begin{matrix} 102 \\ -26 \\ \hline 76 \end{matrix}$   
 $\begin{matrix} 199 \\ -144 \\ \hline 55 \end{matrix}$   
 $\begin{matrix} 103 \\ -11 \\ \hline 92 \end{matrix}$   
 $\begin{matrix} 23 \\ -11 \\ \hline 12 \end{matrix}$   
 $\begin{matrix} 25 \\ -23 \\ \hline 2 \end{matrix}$   
 $\begin{matrix} 51 \\ -48 \\ \hline 3 \end{matrix}$   
 $\begin{matrix} 102 \\ -103 \\ \hline -1 \end{matrix}$   
 $\begin{matrix} 103 \\ -207 \\ \hline -104 \end{matrix}$   
 $\begin{matrix} 216 \\ -104 \\ \hline 112 \end{matrix}$   
 $\begin{matrix} 48 \\ -48 \\ \hline 0 \end{matrix}$   
 $\begin{matrix} 56 \\ -56 \\ \hline 0 \end{matrix}$



**Direction: In Question nos. 36 to 40:**

Read the following and answer the questions given below :

There are six persons in the family of Mr. Murty

- (i) They are A, B, C, D, E and F.
- (ii) There are two married couples.
- (iii) B is an engineer and the father of E.
- (iv) F is the paternal grandfather of C and is a doctor.
- (v) D is the paternal grandmother of E and is a housewife.
- (vi) There is one engineer, one doctor, one teacher, one housewife and two students in the family.

**Direction: In Question nos. 41 to 50:**

In these questions, numbers are placed in the figures on the basis of some rules. One place is vacant, which is indicated as "?". Find out the correct alternatives to replace the 'question mark (?)'.

36. Who among the following members are the males ?

- (1) B, F and D
- (2) B and F
- (3) F and D
- (4) B, F and A

37. Who is the husband of A ?

- (1) B
- (2) E
- (3) F
- (4) C

38. What is A's profession ?

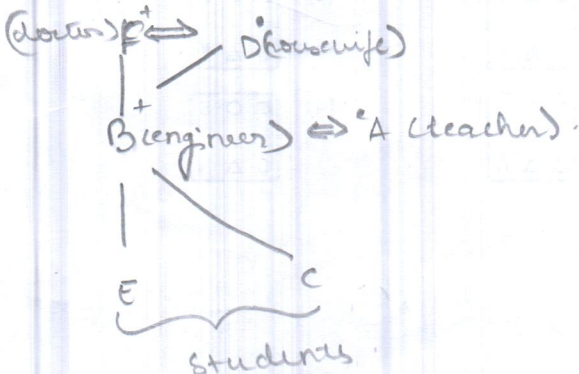
- (1) Student
- (2) Teacher
- (3) Housewife or teacher
- (4) Housewife

39. Who is the sister of E ?

- (1) A
- (2) D
- (3) Data inadequate
- (4) C

40. Which of the following are the two married couples ?

- (1) ED and CF
- (2) FD and BA
- (3) FD and CA
- (4) FD and BE



41.

32	35	39
42	46	51
3	8	?

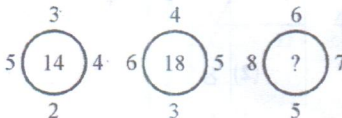
- (1) 90
- (2) 60
- (3) 11
- (4) 14

42.

?	2
108	3
18	6

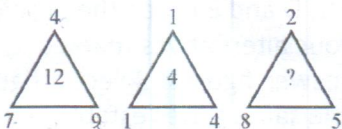
- (1) 216
- (2) 1944
- (3) 1
- (4) 36

43.



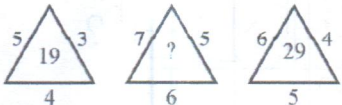
- (1) 28
- (2) 24
- (3) 26
- (4) 22

44.



- (1) 9
- (2) 8
- (3) 5
- (4) 11

45.



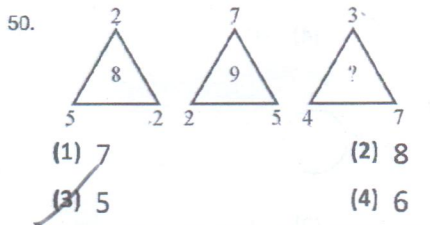
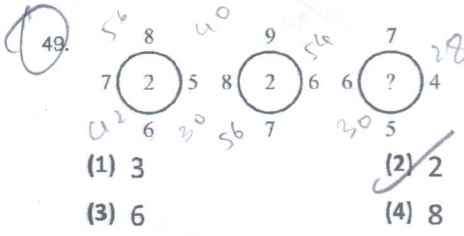
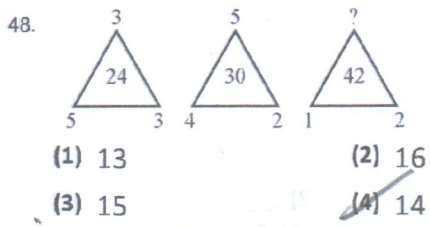
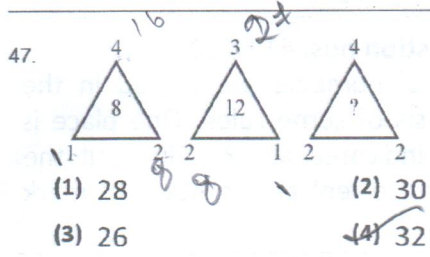
- (1) 47
- (2) 37
- (3) 25
- (4) 41

46.

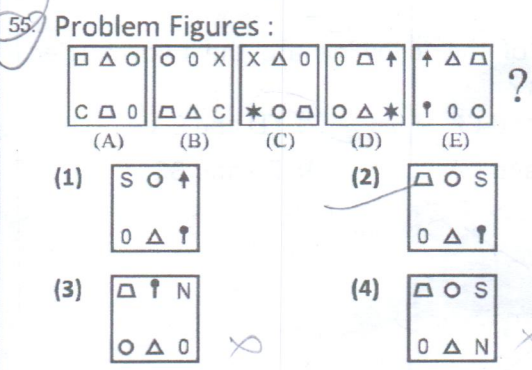
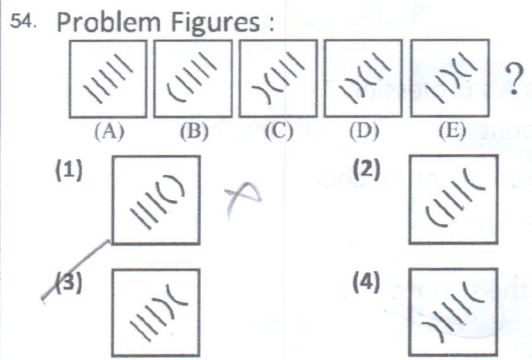
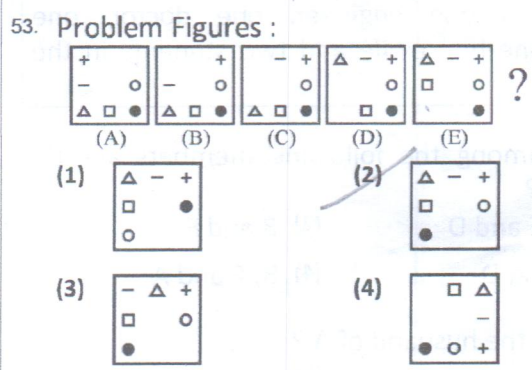
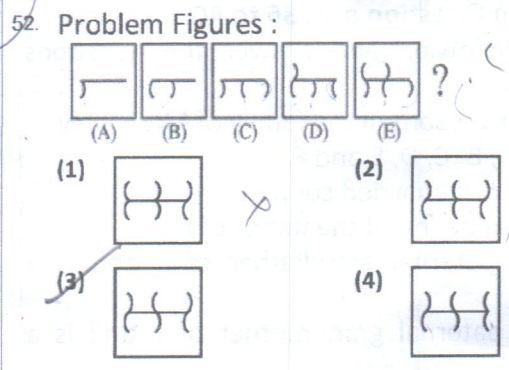
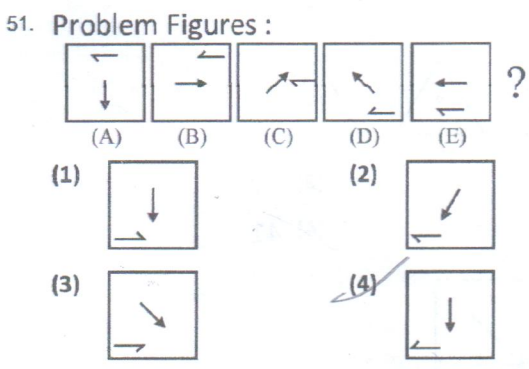
16	49
?	9
3	8
7	4

- (1) 56
- (2) 64
- (3) 49
- (4) 96

28

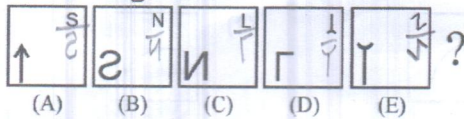


**Direction: In Question nos. 51 to 60:**  
 Each of the following questions consists of the five figures marked A, B, C, D and E called the problem figures followed by four alternatives marked 1, 2, 3 and 4 called the answer figures. Select a figure which will continue the same series established by the five problem figures :



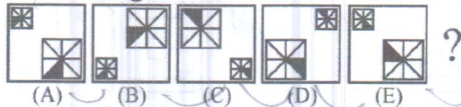


56. Problem Figures :



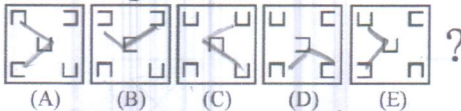
- (1) (2) (3) (4)

57. Problem Figures :



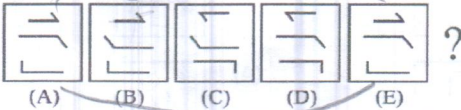
- (1) (2) (3) (4)

58. Problem Figures :



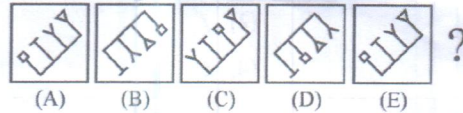
- (1) (2) (3) (4)

59. Problem Figures :



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

60. Problem Figures :



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

Direction: In Question nos. 61 to 65:

Some letters are given in Column I and some digits are given in Column II. Each digit of Column II represents any letter of Column I. Study the columns and write the alternative letter after choosing the correct alternative against the corresponding question.

Column - I	Column - II
ABLMS	90418
QRLBA	63109
LRNPQ	37261
MSPTQ	87354
RABLS	04961
PLQST	51437
<u>P</u> TQAB	79350
ATRNP	62705
QPNAR	62703
<u>T</u> SLBA	49150

*m - 8*  
*1/4*  
*87354*  
*50437*  
*87354*  
*S → 4*  
*5 → 7*

61. The code for M is \_\_\_\_\_.

- (1) 1 (2) 6  
 (3) 0 (4) 8

62. The code for P is \_\_\_\_\_.

- (1) 7 (2) 9  
 (3) 3 (4) 4

63. The code for S is \_\_\_\_\_.

- (1) 2 (2) 9  
 (3) 4 (4) 3

64. The code for B is \_\_\_\_\_.

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

*P → 7*  
*Q → 3*  
*S → 4*  
*m → 8*  
*A → B*  
*7 → 9*  
*8 → 4*

65. The code for Q is \_\_\_\_\_.

- (1) 3
- (2) 7
- (3) 5
- (4) 4

**Direction: In Question nos. 66 to 75:**

Out of the four figures (1), (2), (3), (4) given in each question, three are similar in a certain way. Choose the figure which is different from the other figures.

66. (1)

(2)

(3)

(4)

67. (1)

(2)

(3)

(4)

68. (1)

(2)

(3)

(4)

69. (1)

(2)

(3)

(4)

70. (1)

(2)

(3)

(4)

71.

(1)

(2)

(3)

(4)

72.

(1)

(2)

(3)

(4)

73.

(1) 

1	3
5	7

(2) 

3	5
7	9

(3) 

7	9
11	13

(4) 

4	6
8	10

74.

(1)

(2)

(3)

(4)

75.

(1)

(2)

(3)

(4)

**Direction: In Question nos. 76 to 85:**

In each of the following questions, a letter series is given, in which some letters are missing. The missing letters are given in the proper sequence as one of the alternatives. Find the correct alternative.

76. A B C A A B C A B C A B C A
- (1) A A B B
  - (2) B B A A
  - (3) B B A B
  - (4) B A B A

A B C A B B C A B C A

A B C A B B C A B C A



77. A B B C A A B C C A A B B C C  
 (1) ACBA (2) ABBA  
 (3) CABA (4) BACB

78. A A A B B B C C C A A A B B B C C C  
 (1) BCCC (2) BBCC  
 (3) CCBB (4) ACBC

79. A B C A B C A A B B C A B B C C A  
 (1) ABBA (2) BBAA  
 (3) CCAA (4) ABAC

80. B A A B A A B A A B A B A A B B  
 (1) ABAAB (2) ABABA  
 (3) AABBA (4) BABAB

81. A A B B B A A A B B B A  
 (1) ABBA (2) ABAB  
 (3) BABB (4) ABAA

82. A B A C B A C A B A C B A C A A B A C B A C A  
 (1) CABC (2) ABCB  
 (3) CACB (4) CCAB

83. A B C D A A B B C C D D A A A B B B C C C D D D  
 (1) BBDAC (2) DBBCA  
 (3) BDDCA (4) BDBDA

84. A B C C B B A A B C B A  
 (1) BCAB (2) BBCA  
 (3) ABCA (4) AABC

85. A C B A B C C B A B C  
 (1) ACAB (2) BACA  
 (3) CABA (4) ABAB

**Direction: In Question nos. 86 to 95:**  
 The following questions consists of two sets of figures. Figures A, B, C and D constitute the problem set while figures 1, 2, 3 and 4 constitute the answer set. A Definite relationship exists between figures A and B. You are required to establish a similar relationship between figures C and D by choosing a suitable figure D from the answer set.

86. Problem Figures :

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

(1)

(2)

(3)

(4)

87. Problem Figures :

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

(1)

(2)

(3)

(4)

88. Problem Figures :

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

(1)

(2)

(3)

(4)

A A C B A B C C B A A B B C

A A C B A B C C B A A B B C

B

A

C

A

C C A A B C A

C B A B C C B A B C

A

A A C B A B C C B A A B B C

A

B

C

A

B

A

A

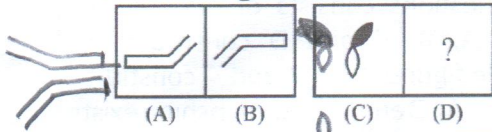
B

A

B

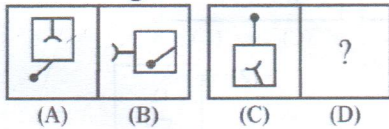


89. Problem Figures :



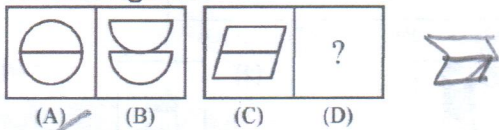
- (1) (2) (3) (4)

90. Problem Figures :



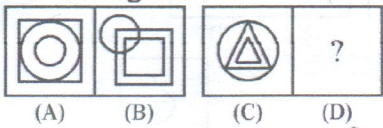
- (1) (2) (3) (4)

91. Problem Figures :



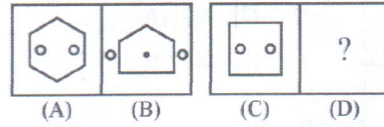
- (1) (2) (3) (4)

92. Problem Figures :



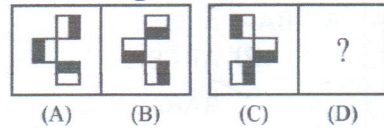
- (1) (2) (3) (4)

93. Problem Figures :



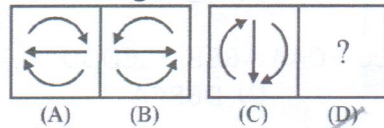
- (1) (2) (3) (4)

94. Problem Figures :



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

95. Problem Figures :



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

**Direction: In Question nos. 96 to 100:**  
 Read the following information carefully and answer the questions that follow :  
 There are six cities.  
 (i) They are A, B, C, D, E and F.  
 (ii) A is a historical place and not a hill station.  
 (iii) B and E are not historical places.  
 (iv) D is not a twin city.  
 (v) A and B are not alike.  
 (vi) D is not a historical city.

96. Which two cities are hill stations ?  
 (1) A and F (2) A and E  
 (3) E and D (4) A and D  
 C → HP

A → HP x H S  
 B → x HP  
 E → HP x HS  
 D → TC x HC x HS



97. Which two cities are historical places ?  
 (1) D and F ✗ (2) A and C ✗  
 (3) A and D ✗ (4) E and D ✗
98. Which city is a hill station and a twin city but not a historical place ?  
 (1) B ✗ (2) A ✗  
 (3) E ✗ (4) D ✗
99. Which two cities are neither historical places nor twin cities ?  
 (1) B and D ✗ (2) B and E ✗  
 (3) A and F ✗ (4) A and B ✗
100. Which two cities are twin cities ?  
 (1) B and E ✗ (2) E and A ✗  
 (3) C and E ✗ (4) B and F ✗

HSA Historic P.  
 HP ✗ B HS TC  
 C HP.  
 HC.  
 TC ✗ D HS.  
 HP ✗ E HS TC  
 F





DO NOT OPEN THE SEAL UNTIL INSTRUCTED TO DO SO.

NTSE (E)

NTSE – NOV, 2018

Medium : English

SCHOLASTIC APTITUDE TEST

Q. Booklet No. 209199

Candidate's Roll Number

Paper – II

4	0	1	9	0	3	2	0	1	7	2	
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Time allowed : 120 Minutes

Total Questions : 100

Maximum Marks : 100

**INSTRUCTION** : Please check that OMR Answer Sheet No. and Question Booklet No. match with each other. If they do not match immediately replace the Question Booklet and OMR Answer Sheet. Candidate should fill the correct Question Booklet No. in OMR Answer Sheet.

### Instructions to Candidates

Read the following instructions carefully before you answer the questions. Answers are to be SHADED on a SEPARATE OMR Answer sheet given, with a **HB pencil**. Read the **Instructions printed on the OMR sheet carefully before answering the questions.**

1. Please write your Hall Ticket No. very clearly (only one digit in one block) on the OMR Answer sheet as given in your admission card. Please see that no block is left unfilled and even Zeros are correctly transferred to the appropriate blocks on the OMR Answer sheet. For all the subsequent purposes, your Centre Code No. and other details shall remain the same as given on the Admission Card.
2. **Paper-II (Scholastic Aptitude Test)** consists of 100 questions (Q. Nos. 1 to 100).
3. All questions carry **one** mark each.
4. Since **all** questions are **compulsory**, do not try to read through the whole question paper before beginning to answer it.
5. Begin with the first question and keep trying one question after another till you finish all the questions.
6. If you do not know the answer to any question, do not spend much time on it and pass on to the next one. If time permits, you can come back to the questions which you have left in the first instance and try them again.
7. Since the time allotted to the question paper is very limited, you should make the best use of it by not spending too much time on any question.
8. Blank pages are provided for rough work at the end of question paper.
9. REMEMBER YOU HAVE TO SHADE ANSWERS ON A SEPARATE OMR ANSWER SHEET PROVIDED.
10. Answer to each question is to be indicated by SHADING the circle having the number of the correct alternative in the OMR Answer sheet from among the ones given for the corresponding question in the booklet.
11. Now turn to the next page and start answering the questions.
12. The OMR Answer sheet consists of two copies, the ORIGINAL COPY and the CANDIDATE'S COPY. Do not separate or displace them. Do not darken the bubbles in two copies of OMR Answer sheets separately. After the examination, you should hand over the original copy of OMR Answer sheet to the invigilator of the room and can take away the Candidate's copy of OMR Answer Sheet with them.
13. The candidate **need not return** this Question Paper booklet and can take it after completion of the examination. No candidate should leave the examination hall before the end of the examination.

**PAPER – II**  
**SCHOLASTIC APTITUDE TEST**  
**(Q. Nos. 1 to 100)**  
**Max. Marks : 100**

**Note :**

(i) Subjects, Total Questions of each subject and Marks allotted :-

(1)	Physics	13 Questions	13 Marks
(2)	Chemistry	13 Questions	13 Marks
(3)	Biology	14 Questions	14 Marks
(4)	Mathematics	20 Questions	20 Marks
(5)	History	12 Questions	12 Marks
(6)	Geography	12 Questions	12 Marks
(7)	Political Science	08 Questions	08 Marks
(8)	Economics	08 Questions	08 Marks

(ii) **SHADE** the correct alternatives in the OMR Answer Sheet provided, from amongst the ones given against the corresponding questions in the Question Booklet. For shading the circles, use a **HB pencil**.



## BIOLOGY

- Which of the following is the connecting link between the aves and reptiles ?  
 (1) Archaeopteryx      (2) Alligator  
(3) Dinosaurs      (4) Amphioxus
- Deficiency of Vasopressin causes a disease called  
(1) Asthma       (2) Goiter  
(3) Diabetes insipidus      (4) Diabetes mellitus
- Saliva contains an enzyme called  
 (1) Trypsin      (2) Ptyalin  
(3) Lipase      (4) Pepsin
- Area of best vision present in the retina  
(1) Blind spot       (2) Pupil  
(3) Sclera      (4) Yellow spot
- Granular structures present on the rough endoplasmic reticulum are  
(1) Lipids      (2) Plastids  
 (3) Ribosomes      (4) Lysosomes
- Name the connecting tissue that connects a muscle to the bone.  
(1) Areolar tissue       (2) Cartilage  
(3) Ligament      (4) Tendon
- What happens to the inhaled air as it passes through the nasal cavity ?  
(1) Warmed to the body temperature  
(2) Moistened by mucus  
 (3) All of these  
(4) Filtered in the nasal cavity
- Match the item in Column-I with Column-II :

Column-I	Column-II
(a) Retinol	(i) Scurvy
(b) Thiamine	(ii) Xerophthalmia
(c) Ascorbic acid	(iii) Rickets
(d) Calciferol	(iv) Beri-beri

(1) a - iii, b - i, c - iv, d - ii  
(2) a - iv, b - ii, c - iii, d - i  
 (3) a - ii, b - iv, c - i, d - iii  
(4) a - iv, b - iii, c - ii, d - i
- Choose the correct statement from the below :  
Each human cell contains  
(1) one pair of autosome and 22 pairs of allosomes  
(2) only 23 pairs of allosomes  
(3) only 23 pairs of autosomes  
 (4) 22 pairs of autosomes and one pair of allosome
- Name the structure that helps the sperm in penetrating into ovum.  
(1) Tail      (2) Middle piece  
 (3) Acrosome       (4) Neck
- From which part of cinchona plant the alkaloid quinine is obtained ?  
(1) Seeds       (2) Bark  
(3) Leaves      (4) Roots
- Scientific and objective study of animal behaviour is called  
(1) Zoo geography      (2) Ecology  
(3) Zoology       (4) Ethology
- The process of entry of pollutants into a food chain is known as  
(1) Biomass      (2) Bio-magnification  
 (3) Bio-accumulation      (4) Biosphere
- The nickname given to the neural apparatus of human digestive tract  
 (1) Fore brain      (2) Mid brain  
(3) Hind brain      (4) Second brain

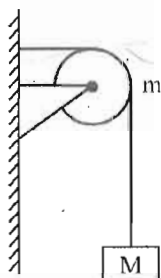
## POLITICAL SCIENCE

15. Four statements are given below to support the argument "Democracy is the best form of government". Which one of them is not correct?
- (1) Mistakes can never be made in democracy.
  - (2) Democracy promotes equality among citizens.
  - (3) Democracy offers better chances of a good decision.
  - (4) Democracy enhances the dignity of citizens.
16. A party was recognised as a state party after general elections to the Legislative Assembly of a State. It secured six percent of the total votes. In addition to this, it must have won atleast :
- (1) four seats                      (2) two seats
  - (3) three seats                      (4) one seat
17. At present, 'right to property' is a
- (1) Constitutional Right
  - (2) Human Right
  - (3) Fundamental Right   (4) Natural Right
18. When all the democracies and dictatorships for the 50 years between 1950 and 2000 are considered :
- (1) Dictatorships have slightly higher rate of economic growth.
  - (2) Democracies have slightly higher rate of economic growth.
  - (3) Democracies have very higher rate of economic growth.
  - (4) Both the dictatorships as well as the democracies have equal rate of economic growth
19. In India, the Prime Minister is
- (1) None of these
  - (2) The head of the Government
  - (3) The head of the State as well as Government
  - (4) The head of the State
20. "... as long as there are tears and suffering, so long our work will not be over" - who spoke these words in his/her speech to the Constituent Assembly ?
- (1) Sarojini Naidu              (2) Mahatma Gandhi
  - (3) Dr. B.R. Ambedkar   (4) Jawaharlal Nehru
21. Which among the following statements is/are correct with reference to Election Commission (EC) of India ?
- A. The Government Officers work under the control of the EC and not the government when they are on election duty.
  - B. EC implements the code of conduct and punishes any candidate or party that violates it.
  - C. The Chief Election Commissioner is not answerable to the President or the Government.
  - D. The Chief Election Commissioner is appointed by the President of India.
- (1) A, B, C and D              (2) B only
  - (3) B, C and D                      (4) C only
22. Which of the following States has its own Constitution ?
- (1) Jammu and Kashmir
  - (2) Nagaland
  - (3) Gujarat                              (4) None of these



**PHYSICS**

23. A string of negligible mass going over a clamped pulley of mass  $m$  supports a block of mass  $M$  as shown in the figure. The force on the pulley by the clamp is  
( $g$  = acceleration due to gravity)



- (1)  $\sqrt{(M-m)^2 + m^2}g$  (2)  $\sqrt{(M-m)^2 - m^2}/g$   
(3)  $\sqrt{(M+m)^2 + m^2}g$  (4)  $\sqrt{(M+m)^2 + M^2}g$

24. A small block slides without friction down on inclined plane starting from rest. Let  $S_n$  be the distance travelled from time  $t = (n - 1)$  to time

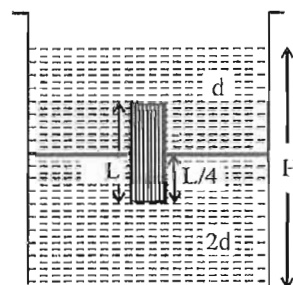
$t=n$ . Then  $\frac{S_n}{S_{n+1}} =$

- (1)  $\frac{(2n+1)^2}{2n+3}$  (2)  $\frac{2n+1}{2n-1}$   
(3)  $\frac{2n-1}{2n}$  (4)  $\frac{2n-1}{2n+1}$

25. The refractive index of the material of a double convex lens is 1.5 and its focal length is 5 cm. If the radii of curvature are equal, the value of the radius of curvature is \_\_\_\_\_ cm.

- (1) 6.5 (2) 5  
(3) 8 (4) 5.6

26. In a container (Cross-sectional Area  $A$ ) a homogeneous solid cylinder of length  $L$  ( $L < H/2$  as shown in the figure), cross-sectional area  $A/5$  is immersed such that it floats with its axis vertical at the liquid-liquid surface with length  $L/4$  in the denser liquid as shown in the figure. The lower density liquid is open to the atmosphere. Then the density  $D$  of solid is given by



- (1)  $\frac{4}{5}d$  (2)  $4d$   
(3)  $\frac{d}{5}$  (4)  $\frac{5}{4}d$

27. On a planet whose size (including radii) is the same and mass is 4 times as that of our earth. Then the amount of work done to lift 3 kg mass vertically upwards through 3 m distance on that planet is

- ( $g$  on the surface of earth is  $10 \text{ m/s}^2$ )  
(1) 40 J (2) 360 kg  
(3) 360 J (4) 40 kg

28. Three unequal resistors in parallel are equivalent to a resistance 1 ohm. If two of them are in the ratio of 1:2 and if no resistance value is fractional, (let them be natural numbers) the smallest of the three resistance (in ohms) is

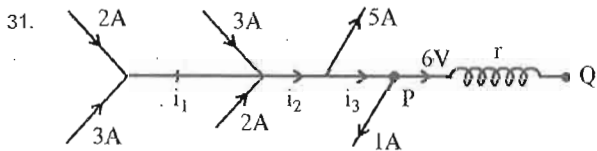
- (1) 6 (2) 2  
(3) 4 (4) 3

29. Two trains with  $V_1, V_2$  speeds take 3 seconds to pass one another when going in opposite direction, but takes only 2.5 seconds if the speed of any one of it is increased by (its speed) 50%. The time would take to pass the other when going in the same direction with  $V_1, V_2$  speeds in \_\_\_\_\_ sec.

- (1) 10 (2) 18  
~~(3) 15~~ (4) 12

30. Let the smallest audible sound (nearer to total silence) is 0 dB. A sound 1000 times more powerful than the sound nearer to total silence is

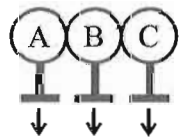
- (1) 3 dB ~~(2) 1000 dB~~  
~~(3) 10 dB~~ (4) 30 dB



Then  $r =$

- (1)  $1 \Omega$  ~~(2)  $3 \Omega$~~   
 (3)  $2.5 \Omega$  (4)  $1.5 \Omega$

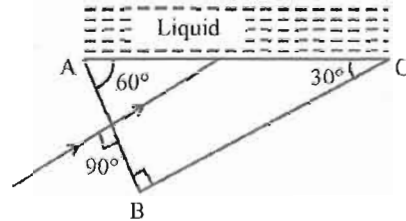
32. Three identical (in all aspects) metal spheres A, B and C are supported on separate insulated stands and placed in contact as shown in the figure. A charged glass rod rubbed by a silk cloth is kept near the metal sphere A, then charges on A, B and C respectively are



Insulated Stands

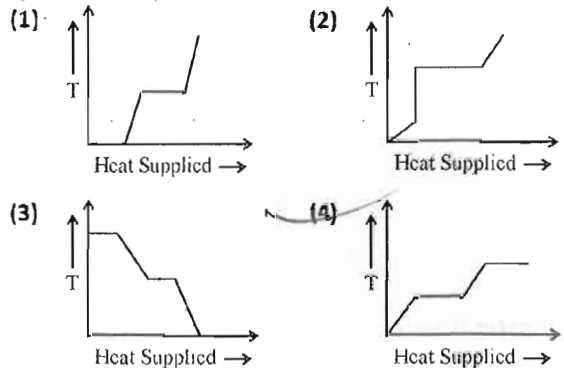
- (1) Positive charge, Neutral, Neutral  
~~(2) Negative charge, Positive charge, Neutral~~  
 (3) Negative charge, Neutral, Positive charge  
 (4) Positive charge, Neutral, Negative charge

33. A ray of light is incident normally on face AB of a prism as shown in the figure. A liquid of refractive index  $\mu$  is placed on the face AC of the prism. The prism is made of glass of refractive index  $3/2$ . The limit of  $\mu$  for which total internal reflection takes place on face AC is



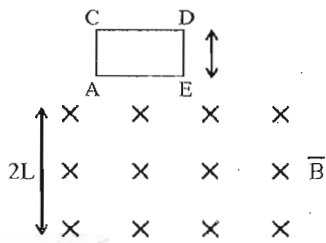
- (1)  $\mu < \frac{3\sqrt{3}}{4}$  (2)  $\mu < \frac{3\sqrt{3}}{14}$   
~~(3)  $\mu > \frac{\sqrt{3}}{2}$~~  (4)  $\mu < \sqrt{3}$

34. A block of ice at  $-10^\circ\text{C}$  is slowly heated and converted to steam at  $100^\circ\text{C}$ . Which of the following curves represents the phenomenon qualitatively?





35. A square coil ACDE with its plane vertical is released from rest in horizontal uniform magnetic field  $\vec{B}$  of length  $2L$ . The acceleration of the coil when coming out of the field is (Acceleration due to gravity  $g$ )



- (1) More than  $g$                       (2) Twice to  $g$   
 (3) Less than  $g$                       (4) Equal to  $g$

## MATHEMATICS

36. One of the factor for  $x^3 - 23x^2 + 142x - 120$  is

- (1)  $x + 10$                       (2)  $x + 12$   
 (3)  $x - 4$                         (4)  $x - 1$

37. The volume of regular cylindrical wire of diameter 2 mm is 99 cubic cm, then the length of wire in metres.

- (1) 51.3                              (2) 35.1  
 (3) 31.5                              (4) 53.1

38. The radius of cone and cylinder are in the ratio 2 : 3 and their heights are in the ratio 3 : 2, then their volumes are in the ratio

- (1) 9 : 2                              (2) 2 : 3  
 (3) 3 : 2                              (4) 2 : 9

39. If  $\operatorname{cosec} \theta - \sin \theta = 4$ , then  $\sin^2 \theta + \operatorname{cosec}^2 \theta =$

- (1) 4                                    (2) 8  
 (3) 16                                  (4) 18

40. If the number of observations  $n$  is even, then median is

- (1) average of  $\frac{n}{2}$  and  $\left(\frac{n-1}{2}\right)^{\text{th}}$  observations  
 (2) average of  $\frac{n}{2}$  and  $\left(\frac{n}{2} + 1\right)^{\text{th}}$  observations  
 (3) average of  $n$  and  $(n + 1)^{\text{th}}$  observations  
 (4) average of  $\frac{n}{2}$  and  $\left(\frac{n+1}{2}\right)^{\text{th}}$  observations

41. Four numbers in A.P. whose sum is 20 and the sum of whose squares is 120, then the numbers are

- (1) 6, 8, 10, 12                      (2) 4, 6, 8, 10  
 (3) 2, 4, 6, 8                        (4) 8, 10, 12, 14

42.  $3(\sin x - \cos x)^4 + 6(\sin x + \cos x)^2 + 4(\sin^6 x + \cos^6 x) =$

- (1) 7                                    (2) 9  
 (3) 13                                  (4) 14

43. In  $\Delta ABC$ , D, E and F are respectively mid points of the sides BC, CA and AB and P is a point on BC such that  $AP \perp BC$ . If  $\angle DEF = 50^\circ$ , then  $\angle FPD =$

- (1)  $130^\circ$                               (2)  $135^\circ$   
 (3)  $120^\circ$                               (4)  $110^\circ$

44. From the adjacent figure  $\Delta ABC$ ,  $DE \parallel BC$  and  $\frac{AD}{DB} = \frac{3}{5}$ , if  $AC = 5.6$  then  $AE$  is

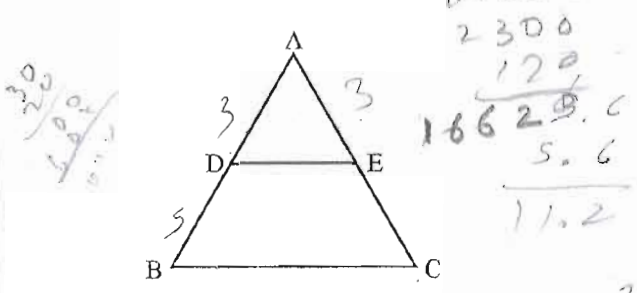
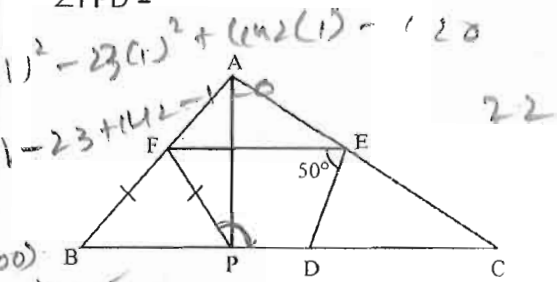
- (1) 6 cm                                (2) 15 cm  
 (3) 9 cm                                (4) 2.1 cm

45. If  $x < 1, y < -1$ , then  $(x - 1, y - 3)$  lies in

- (1)  $Q_1$                                 (2)  $Q_3$   
 (3)  $Q_4$                                 (4)  $Q_2$

46. If  $a, b, c$  are in A.P., then  $ax + by + c = 0$  will always pass through a fixed point whose co-ordinates are

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



Handwritten notes on the left margin:  
 36.  $x^3 - 23x^2 + 142x - 120$   
 $(x-1)(x^2 - 22x + 120)$   
 $(x-1)(x-10)(x-12)$   
 37.  $V = \pi r^2 h$   
 $99 = \pi (1)^2 h$   
 $h = \frac{99}{\pi} \approx 31.5$   
 38.  $V = \frac{1}{3} \pi r^2 h$   
 $\frac{1}{3} \pi (2)^2 (3) = \frac{1}{3} \pi (3)^2 (2)$   
 $4\pi = 6\pi$   
 $2:3$   
 39.  $\frac{1}{\sin \theta} - \sin \theta = 4$   
 $\frac{1 - \sin^2 \theta}{\sin \theta} = 4$   
 $\frac{\cos^2 \theta}{\sin \theta} = 4$   
 $\cos^2 \theta = 4 \sin \theta$   
 $1 - \sin^2 \theta = 4 \sin \theta$   
 $\sin^2 \theta + 4 \sin \theta - 1 = 0$   
 $\sin \theta = \frac{-4 \pm \sqrt{16 + 4}}{2} = \frac{-4 \pm \sqrt{20}}{2}$   
 $\sin \theta = -2 \pm \sqrt{5}$   
 $\sin \theta = -2 + \sqrt{5}$   
 $\sin^2 \theta + \operatorname{cosec}^2 \theta = (-2 + \sqrt{5})^2 + \frac{1}{(-2 + \sqrt{5})^2} = 16 - 4\sqrt{5} + 5 + \frac{1}{16 - 4\sqrt{5} + 5} = 21 - 4\sqrt{5} + \frac{1}{16 - 4\sqrt{5} + 5}$   
 $\frac{1}{16 - 4\sqrt{5} + 5} = \frac{16 + 4\sqrt{5} + 5}{(16 - 4\sqrt{5} + 5)(16 + 4\sqrt{5} + 5)} = \frac{21 + 4\sqrt{5}}{256 - 160\sqrt{5} + 100 + 40\sqrt{5} - 80} = \frac{21 + 4\sqrt{5}}{176 - 120\sqrt{5}}$   
 $\frac{21 + 4\sqrt{5}}{176 - 120\sqrt{5}} \cdot \frac{176 + 120\sqrt{5}}{176 + 120\sqrt{5}} = \frac{(21 + 4\sqrt{5})(176 + 120\sqrt{5})}{176^2 - (120\sqrt{5})^2} = \frac{3708 + 2520\sqrt{5} + 704\sqrt{5} + 5040}{30976 - 72000} = \frac{3708 + 2520\sqrt{5} + 704\sqrt{5} + 5040}{-41024}$   
 $\frac{8748 + 3224\sqrt{5}}{-41024}$   
 $\frac{8748 + 3224\sqrt{5}}{-41024} \approx 16$



47. If the equation  $(k+3)x^2 - (5-k)x + 1 = 0$  has distinct roots, the value of  $k$  will be  
 (1)  $k < 13$  or  $k > 1$     ~~(2)  $k = 1$  or  $k = 13$~~   
 (3)  $k > 13$  or  $k < 1$     (4)  $k > 12$  or  $k < 1$

48. If the roots of the equation  $(b-c)x^2 + (c-a)x + (a-b) = 0$  are equal, then  $\frac{a+c}{b} =$   
~~(1) 1~~    (2) 3  
 (3) 2    (4) 4

49. If  $\frac{x+1}{2} + \frac{y-1}{3} = 8$  and  $\frac{x-1}{3} + \frac{y+1}{2} = 9$ , then  $y =$   
 (1) 7    (2) 12  
 (3) 8     (4) 13

50. If the sum of the squares of the roots of quadratic polynomial  $f(x) = x^2 - 8x + k$  is 40, then  $k =$   
 (1) 12    (2) 6  
 (3) 36    (4) 18

51. 14 cards numbered 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 are placed in a box and mixed thoroughly. If a card is drawn from the box, then probability that the number on the card divisible by 3 or 2 is  
 (1)  $\frac{12}{14}$      (2)  $\frac{5}{14}$   
 (3)  $\frac{9}{14}$     (4)  $\frac{4}{14}$

52. If  $a^{x-1} = bc, b^{y-1} = ca, c^{z-1} = ab$  then  $xy + yz + zx =$   
 (1)  $xyz$     (2) 0  
 (3) 1    (4)  $\frac{1}{a} + \frac{1}{b} + \frac{1}{c}$

Handwritten work for Q52:  
 $\frac{1}{a^0} = \frac{bc}{a^0}$   
 $\frac{1}{a^0} = \frac{bc}{1}$   
 $1 = bc$   
 $1 = \frac{ca}{b}$   
 $b = ca$   
 $1 = \frac{ab}{c}$   
 $c = ab$   
 $xy + yz + zx = xyz + xyz + xyz = 3xyz$   
 $3xyz = 3 \cdot 1 = 3$

53. If  $a^x = b^{y+z}$  then  
 (1)  $\frac{\log b}{\log a} = \frac{y+z}{x}$      (2)  $\frac{\log a}{\log b} = \frac{x}{y+z}$   
 (3)  $\frac{\log a}{\log b} = \frac{y+z}{x}$     (4)  $x \log a = yz \log b$

54. If the sum of the roots of the equation  $(x^2 - x) = \lambda(2x - 1)$  is zero, then the value of  $\lambda$  is  
 (1)  $\frac{1}{2}$      (2) -2  
 (3)  $-\frac{1}{2}$     (4) 2

55. If  $(a, 0), (0, b)$  and  $(1, 1)$  are collinear, then  $\frac{1}{a} + \frac{1}{b} =$   
 (1) 4    (2) 1  
 (3) 3     (4) 2

Handwritten work for Q55:  
 $(a, 0), (0, b), (1, 1)$  are collinear  
 $\frac{1}{a} + \frac{1}{b} = 2$   
 $\frac{1}{a} + \frac{1}{b} = \frac{a+b}{ab} = 2$   
 $a+b = 2ab$   
 $\frac{1}{a} + \frac{1}{b} = 2$   
 $\frac{1}{a} = 2 - \frac{1}{b}$   
 $\frac{1}{a} = \frac{2b-1}{b}$   
 $a = \frac{b}{2b-1}$   
 $\frac{1}{a} + \frac{1}{b} = \frac{2b-1}{b} + \frac{1}{b} = \frac{2b}{b} = 2$

## CHEMISTRY

56. The correct set of quantum number is \_\_\_\_\_.

(1)  $n = 2, l = 1, m = 0, s = 0$

(2)  $n = 2, l = 2, m = -1, s = -\frac{1}{2}$

(3)  $n = 2, l = -2, m = 1, s = +\frac{1}{2}$

(4)  $n = 2, l = 1, m = 0, s = +\frac{1}{2}$

57. Which of the following sets of phenomena would increase on raising the temperature ?

a. Evaporation of liquid

b. Sublimation of solid

c. Solubility of solute in water

d. Solubility of gases in water

(1) a, b

(2) a, b, c

(3) a, c

(4) a, b, c, d

58. Arrange the elements B, Al, Mg, K in the increasing order of metallic character.

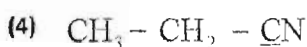
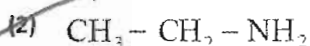
(1)  $B < Mg < K < Al$

(2)  $B < Al < Mg < K$

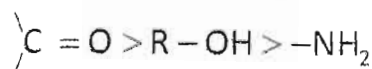
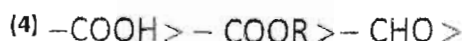
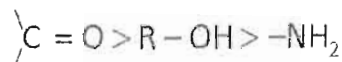
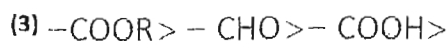
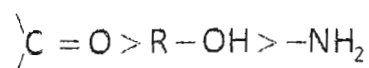
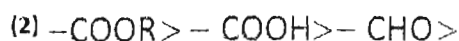
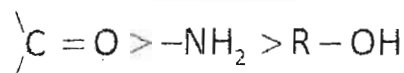
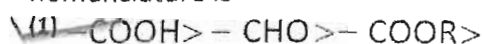
(3)  $B < K < Mg < Al$

(4)  $B < Mg < Al < K$

59. Which of the following compound with underlined carbon is having  $sp^3$  hybridisation?



60. The decreasing order of priority for choosing and naming a principal characteristic group in nomenclature is



61. Refining of Impure Copper with Zinc Impurity is to be done by electrolysis using anode and cathode respectively as

(1) Pure Zinc, Pure Copper

(2) Pure Copper, Pure Zinc

(3) Impure Copper, Pure Copper

(4) Impure Zinc, Pure Zinc

62. An element X belongs to 3<sup>rd</sup> period and 3<sup>rd</sup> group of the periodic table. Choose the correct statement(s) regarding it.

a. It is used in thermite process.

b. One of its allotropic is tetra atomic  $X_4$ .

c. It belongs to p-block.

d. Third most abundant element after oxygen and silicon in the earth crust.

(1) a and b

(2) a, b and d

(3) b only

(4) a, c and d

63. Potassium Super Oxide ( $KO_2$ ) is used in submarines because it

(1) absorbs moisture

(2) absorbs  $CO_2$  and decrease  $O_2$  concentration

(3) produces ozone

(4) absorbs  $CO_2$  and increase  $O_2$  concentration



64. Which of the following is not an oxidation reaction ?
- (1) The poling process involving the removal of impurities from a molten metal
  - (2) The black coating on silver due to formation of silver sulphide
  - (3) Bleaching of coloured sugarcane juice/vegetables using moist sulphur dioxide.
  - ~~(4) Rancidity of fats~~
65. Find the false procedure.
- (1) Roasting - Presence of oxygen - Sulphide ore - Oxide ore
  - (2) Calcination - Presence of oxygen - Carbonate ore - Oxide ore
  - (3) Froth Floatation - Presence of blown air - Impure sulphide ore - Increase concentration of sulphide ore
  - (4) Smelting - Presence of Flux - Reduction of oxide ore - Metal
66.  $\text{CuO} + \text{H}_2 \rightarrow \text{Cu} + \text{H}_2\text{O}$  is a balanced chemical equation, causing reduction of CuO. What volume of  $\text{H}_2$  at STP is required to reduce 7.95 gm of CuO to give Cu and  $\text{H}_2\text{O}$  ? (Atomic weight of Cu = 63.5 U and Atomic weight of O = 16 U)
- (1) 22.4 lit
  - (2) 2.24 lit
  - (3) 0.224 lit
  - (4) 224 lit
67. Ionic compounds are formed most easily when the combination is having
- (1) High Electron Affinity, Low Ionisation Energy
  - (2) Low Electron Affinity, Low Ionisation Energy
  - (3) High Electron Affinity, High Ionisation Energy
  - (4) Low Electron Affinity, High Ionisation Energy
68. Find the incorrect statement.
- (1) 10% ethanol in gasoline (gasohol) is a good motor fuel.
  - (2) Ethanol is a colourless liquid with characteristic of sweet odour and pure ethanol is called absolute alcohol.
  - (3) Orange colour  $\text{Cr}_2\text{O}_7^{2-}$  changes bluish green  $\text{Cr}^{3+}$  during the process of oxidation of ethanol to ethanal and ethanoic acid.
  - (4) Denatured alcohol means 100% alcohol in the form of pure ethanol.

## ECONOMICS

69. The marginal productivity of the disguised unemployed is  
(1) zero (2) very low  
(3) unmeasured ~~(4) very high~~
70. International Co-operative day is celebrated every year on the  
(1) First Saturday of July  
(2) First Saturday of August  
(3) Second Saturday of July  
~~(4) Second Saturday of August~~
71. US farmers can sell the farm products at abnormally low prices because :  
(1) They use machines for all works of cultivation.  
(2) Production cost is very low in US  
~~(3) They receive massive sums of money from the US Government.~~  
(4) They are very rich and they don't want any profits.
72. When the period of last 4 decades is considered, which of the following statements is/are true regarding the primary sector of Indian economy ?  
A.The primary sector has lost its credit as the largest employer.  
B.The primary sector continues to be the largest employer.  
C.The share of primary sector in GDP has fallen drastically.  
D.The share of primary sector in GDP has increased slightly.  
(1) A & C (2) A & D  
(3) B & C ~~(4) B & D~~
73. Consider the following statements and select the correct answer using the code given below.  
A.According to social scientists, social exclusion is a cause of poverty.  
B.According to social scientists, social exclusion is a consequence of poverty.  
~~(1) Only 'A' is correct. (2) Only 'B' is correct.~~  
(3) Both 'A' and 'B' are correct.  
(4) Both 'A' and 'B' are not correct.
74. Which of the following factors is not at all related to Green Revolution ?  
(1) Use of HYV seeds  
(2) Use of chemical fertilisers  
(3) Loss of soil fertility  
~~(4) All of these are related.~~
75. "We have not inherited the world from our forefathers - we have borrowed it from our children" - This quote expects us :  
(1) To use non-renewable resources extensively.  
~~(2) To extract more ground water.~~  
(3) To prefer sustainability of development.  
(4) To prefer rapid industrialisation.
76. If organised sector is denoted by the code 'A' and unorganised sector by the code 'B', then which of the following statements is correct in the context of contemporary India ?  
(1) Most of the people want to work in 'B' and they are in 'B'.  
(2) Most of the people want to work in 'B' but they have to be in 'A'.  
~~(3) Most of the people want to work in 'A' but they have to be in 'B'.~~  
(4) Most of the people want to work in 'A' and they are in 'A'.



## GEOGRAPHY

77. Consider the following statements :  
A. Igneous rocks are responsible for the formation of black soil.  
B. Terai is a narrow belt of pebbles.  
C. The newer alluvial deposits of the northern plain are called khadar.  
Which of the above statements are correct ?  
(1) A, B and C                      (2) A and B  
(3) B and C                         ~~(4) A and C~~
78. Black soils are generally poor in :  
(1) Calcium carbonate  
(2) Phosphoric contents  
 (3) Magnesium                      (4) Potash and lime
79. Consider the following statements :  
A. India is believed to be the original home of this plant.  
B. It grows well in black soil.  
C. China is the largest producer of it.  
Which of the following crops is mentioned in all the statements given above ?  
(1) Jute                                  (2) Cotton  
(3) Sugarcane                         (4) Rubber
80. Consider the following statements :  
A. 52 percent of the people employed in I.T. and Electronics Industry are women.  
B. Bengaluru has emerged as the electronic capital of India.  
Which of the above statements is/are NOT correct ?  
(1) B only                             ~~(2) Both A and B~~  
(3) A only                                 (4) None of these
81. Which type of forests are not found in Andhra Pradesh ?  
 (1) Deciduous forests              (2) Mangrove forests  
(3) Evergreen forests                (4) Thorn forests
82. The Godavari is known as the 'Dakshin Ganga' because :  
 (1) of its origin in Western Ghats  
(2) of its making of waterfalls  
(3) of its drainage into Bay of Bengal  
(4) of its length and the area it covers
83. Consider the following countries :  
A. USA  
B. Egypt  
C. Brazil  
D. Mongolia  
E. Canada  
F. Uzbekistan  
Which of the above countries are smaller than India with respect to area ?  
 (1) C and D only                      (2) A, B and F only  
(3) B, D and F only                      (4) C and F only
84. Out of the following states, which one receives the South - West monsoon latest ?  
(1) Karnataka                         (2) Kerala  
 (3) Maharashtra                         (4) Gujarat
85. Which of the following has recorded the highest sex-ratio according to Census 2011 ?  
(1) Kerala                                 (2) Delhi  
 (3) Pondicherry                         (4) Haryana
86. What were described as the "temples of modern India" by the 1<sup>st</sup> Prime Minister of India ?  
(1) Hospitals                             (2) Railway stations  
 (3) Schools                                 (4) Dams
87. The biggest port of India is :  
(1) Paradwip port                         (2) Kolkata port  
 (3) Mumbai port                         (4) Kandla port
88. Per capita consumption of which energy source is considered as an index of development ?  
(1) Petroleum                             (2) Electricity  
(3) Natural gas                          (4) Solar energy

## HISTORY

89. Consider the following statements in connection with the printing press invented by Gutenberg.
- A. The first printed book was the Bible.  
B. The new technology entirely displaced the existing art of producing books by hand.  
C. At first the printed books closely resembled the written manuscripts in appearance.  
Which of the statements given above are correct ?
- (1) A and C                      (2) A and B  
 (3) A, B and C                  (4) B and C
90. The national colours of France are :
- (1) Green - Gold  
(2) Saffron - White - Green  
 (3) Red - Blue - Green      (4) Blue - White - Red
91. Which of the following features was NOT related to Stalin ?
- (1) Collectivization of agriculture  
(2) Rapid industrialization  
(3) Announcement of 'The New Deal'  
(4) Introducing five year plans
92. The African word 'Maasai' means :
- (1) My pasture                  (2) My cattle  
 (3) My land                      (4) My people
93. Give the correct chronological order.
- A. Simon Commission  
B. First round table conference  
C. Gandhi - Irwin Pact  
D. Re-launch of Civil Disobedience Movement
- (1) A, B, C, D                   (2) D, C, A, B  
(3) C, B, A, D                  (4) A, C, B, D
94. In 1868 England was producing about 80 percent of the food it consumed. This increase in food-grain production was made possible mainly by :
- (1) The use of only bio-fertilizers  
 (2) Bringing new lands under cultivation  
(3) Extensive use of chemical fertilizers  
(4) Radical innovations in agricultural technology
95. 'A sanyasi, who had earlier been to Fiji as an indentured labourer, led a peasant movement. He used to recite verses from Tulasidas Ramayana to rural audience' - who was 'He' referred to here ?
- (1) Jhinguri Singh  
(2) Jadunandan Sharma  
 (3) Baba Ram Chandra  
(4) Sahajananda Saraswati
96. In 19th century, the main destination(s) of Indian indentured migrants was/were :
- (1) Fiji and Mauritius only  
(2) Fiji, Caribbean islands and Mauritius  
 (3) Fiji and Caribbean islands only  
(4) Fiji only
97. Which one of the following statements is correct ?
- (1) William-I was proclaimed King of united Italy in 1861.  
(2) Victor Emmanuel-II was proclaimed German Emperor in 1861.  
(3) Victor Emmanuel-II was proclaimed King of united Italy in 1871.  
 (4) William-I was proclaimed German Emperor in 1871.
98. Who was the chairman of ' the Democratic Republic of Vietnam' ?
- (1) Nguyen                      (2) Bao Dai  
(3) Ho Chi Minh                (4) Ngo Dinh Diem



99. Consider the following statements regarding the forest policies implemented under the British rule :

A.The first Inspector General of Forests in India was a French expert appointed by the British government.

B.Shifting agriculture in Sri Lanka was called 'Chena'.

C.The people of forest communities benefited in many ways after the forest department took control of the forests.

Which of the above statements is/are correct ?

- (1) B only                      ✓ (2) A and C  
(3) A and B                    (4) A, B and C

100. Famous Enabling Act was passed in Germany in 1933. With this, Hitler :

- (1) restored the dignity of Germany  
(2) established socialism in Germany  
(3) became the chancellor of Germany  
✓ (4) became the dictator of Germany