

Space For Rough Work

ENGLISH

Roll No.

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## NMMS - NOVEMBER, 2015

MENTAL ABILITY AND  
SCHOLASTIC APTITUDE TEST

Time : Part - I : 90 Minutes

Time : Part - II : 90 Minutes

Max. Marks : 90

Max. Marks : 90

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.**

Code No. and Roll No. shall remain the same as given on the Admission Card.

1. Please write your Centre Code No. and Roll No. very clearly (only one digit in one block) on the OMR Sheet as given in your admission card. Please see that no block is left unfilled and even Zeros appearing in the Centre Code No. are correctly transferred to the appropriate blocks on the OMR Sheet as shown in the example given in the OMR Sheet. For all subsequent purposes, your Centre
2. The Test is in TWO Parts. **Part-I** consists of **90** questions and **Part-II** also consists of **90** questions.
3. All questions in Part-I and Part-II 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 both the Parts.

## PART - I

## MENTAL ABILITY TEST

Time : 90 Minutes

Max. Marks : 90

**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.

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 out in the first instance and try them again.
7. Since the time allotted to the two parts of this 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 each part.
9. **REMEMBER, YOU HAVE TO SHADE ANSWERS ON A SEPARATE OMR 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 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. After the examination, you should hand over the OMR Sheet to the Invigilator of the room.
13. The candidate need **not** return this Question Paper booklet and can take it after the completion of the examination. No candidate should leave the examination hall before the end of the examination.

**Directions :****(Questions 1 to 10)**

In the number series given below, one number is missing. Each series is followed by five alternatives : (1), (2), (3), (4) and (5). One of them is the right answer. Indicate it as per the 'Instructions'.

1. 2, 3, 5, 7, 11, ?, 17

(1) 12  
(2) 13  
(3) 14  
(4) 15  
(5) 16

2. 5, 11, 17, ?, 31, 41

(1) 19  
(2) 21  
(3) 23  
(4) 25  
(5) 27

3. 7, 13, 21, ?, 43, 57

(1) 27  
(2) 29  
(3) 31  
(4) 35  
(5) 41

4. 3, 15, 35, ?, 99, 143

(1) 63  
(2) 69  
(3) 77  
(4) 81  
(5) 85

5. 2, 1, 2, 4, 4, 5, 6, 7, 8, 8, 10, 11, ?

(1) 9  
(2) 10  
(3) 11  
(4) 12  
(5) 13

6. 0, 7, 26, ?, 134, 215

(1) 37  
(2) 51  
(3) 63  
(4) 88  
(5) 120

7. 1, 1, 8, ?, 27, 9, 64

(1) 4  
(2) 6  
(3) 9  
(4) 16  
(5) 25

8. 2, 20, ?, 110, 182

(1) 56  
(2) 72  
(3) 90  
(4) 96  
(5) 100

9. 3, 8, 35, 48, ?, 120

(1) 64  
(2) 72  
(3) 80  
(4) 96  
(5) 99

10. 3, 6, 24, 30, 63, 72, ?, 132

(1) 42  
(2) 58  
(3) 90  
(4) 110  
(5) 120

**Directions :****(Questions 11 to 15)**

These are based on letter analogy. There are two pairs of letters combination in each question. The first (left hand side) pair has some relationship between its members. In the second pair, one member is missing. Find this out from the answers (1), (2), (3), (4) and (5) such that this pair has a similar relationship as the first pair. Indicate your answer as per the 'Instructions'.

11. LXNU : NYPV :: QTBR : ?

(1) SDSU  
(2) RSUD  
(3) RUSD  
(4) SRUD  
(5) SUDS

12. DFHJ : LNPR :: ? : BDFH

(1) SVXZ  
(2) TVXZ  
(3) UVXZ  
(4) VXZT  
(5) TXVZ

13. ACEG : ? :: BDFH : KMOQ

(1) NLPR  
(2) LMNO  
(3) JLNP  
(4) JNLO  
(5) JLON

14. DULC : EVMD :: ? : GXOF

(1) FNWE  
(2) HWNE  
(3) FUEN  
(4) FWNE  
(5) HNWE

15. MRPL : OTRN :: ? : EJID

(1) CFHB  
(2) HGFE  
(3) GHBF  
(4) EFGH  
(5) CHEH

**Directions :****(Questions 16 to 25)**

In these questions, there are five alternatives among which four alternatives are alike but one is different from others. Find out that different one alternative and indicate your correct response.

16. (1) 131

(2) 151  
(3) 161  
(4) 171  
(5) 181

17. (1) Three

(2) Four  
(3) Five  
(4) Six  
(5) Nine

18. (1) 169

(2) 179  
(3) 135  
(4) 149  
(5) 157

19. (1) Dr. Abdul Kalam

(2) Sardar Vallabhai Patel  
(3) Pratibha Patil  
(4) Dr. Rajendra Prasad  
(5) Pranab Mukherjee

20. (1) Anxiety  
(2) Anger  
(3) Sorrow  
(4) Joy  
(5) Feeling

21. (1) Listen  
(2) Feel  
(3) Think  
(4) Sing  
(5) Hear

22. (1) Eye  
(2) Ear  
(3) Nose  
(4) Tongue  
(5) Hand

23. (1) A  
(2) U  
(3) I  
(4) Y  
(5) O

24. (1) Copper  
(2) Iron  
(3) Gold  
(4) Silver  
(5) Wood

25. (1) Crow  
(2) Pigeon  
(3) Bat  
(4) Bulbul  
(5) Parrot

P-300

[6]

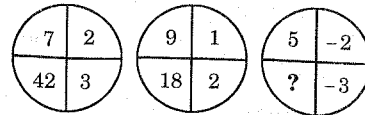
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Directions :

(Questions 26 to 35)

In these questions, a figure is divided into parts. Each part bears a number and one is blank. Numbers are given on the basis of a certain rule. You have to find out the number among the given alternatives and indicate your correct sequence.

26.



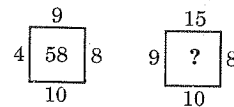
- (1) 13  
(2) 18  
(3) 30  
(4) -30  
(5) -18

27.

|     |     |    |
|-----|-----|----|
| 5   | 6   | 7  |
| 3   | 4   | 5  |
| 9   | 10  | 11 |
| 345 | 660 | ?  |

- (1) 755  
(2) 775  
(3) 535  
(4) 477  
(5) 565

28.



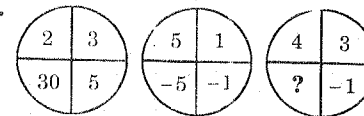
- (1) 63  
(2) 78  
(3) 100  
(4) 117  
(5) 122

29.

|   |   |   |    |
|---|---|---|----|
| 4 | 6 | 3 | 8  |
| 2 | 8 | 4 | 4  |
| 6 | 5 | ? | 10 |

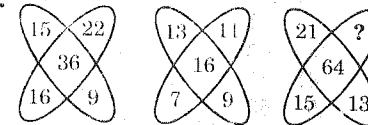
- (1) 3  
(2) 6  
(3) 8  
(4) 10  
(5) 12

30.



- (1) 7  
(2) -12  
(3) 12  
(4) 9  
(5) -5

31.



- (1) 23  
(2) 19  
(3) 20  
(4) 22  
(5) 17

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32.

|     |     |     |
|-----|-----|-----|
| 51  | 63  | 29  |
| 26  | 14  | 48  |
| 5   | 8   | ?   |
| 410 | 680 | 588 |

- (1) 9  
(2) 6  
(3) 5  
(4) 7  
(5) 11

33.

|    |    |   |
|----|----|---|
| 1  | 2  | 3 |
| 4  | 5  | 6 |
| 7  | 8  | 9 |
| 27 | 38 | ? |

- (1) 49  
(2) 50  
(3) 51  
(4) 52  
(5) 53

34.

|    |    |    |
|----|----|----|
| 28 | 60 | 48 |
| 5  | 6  | 7  |
| 14 | 39 | 27 |
| 7  | ?  | 16 |

- (1) 23  
(2) 24  
(3) 27  
(4) 18  
(5) 29

35.

|   |    |    |
|---|----|----|
| 3 | 5  | 7  |
| 4 | 9  | 8  |
| 2 | 3  | ?  |
| 5 | 11 | 10 |

- (1) 4  
(2) 6  
(3) 3  
(4) 5  
(5) 7

**Directions :****(Questions 36 to 45)**

In these questions, first two given words are related in some way. The same relation exists in between third and fourth word. Find out that word among the given alternatives and indicate your correct alternative.

36. Boy : Man :: Girl : ?

- (1) Mother  
(2) Father  
(3) Woman  
(4) Wife  
(5) Girl

37. Hand : Gloves :: Foot : ?

- (1) Pant  
(2) Nail  
(3) Socks  
(4) Thumb  
(5) Finger

38.  $\frac{A}{Z} : 25 :: \frac{C}{T} : ?$ 

- (1) 17  
(2) 18  
(3) 20  
(4) 21  
(5) 23

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39.  $\square : M :: \triangle : ?$ 

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

40.  $\triangle : \triangle :: \square : ?$ 

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

41. ABE : BCF :: MPU : ?

- (1) NQV  
(2) PQW  
(3) NQW  
(4) PWQ  
(5) NVQ

42. PQR : ONM :: DEF : ?

- (1) BAC  
(2) CBA  
(3) CAB  
(4) BCA  
(5) ABC

43. Pond : Water :: Library : ?

- (1) Paper  
(2) Almirah  
(3) Book  
(4) Chair  
(5) Table

44.  $\frac{2}{3} : 8 :: \frac{4}{2} : ?$ 

- (1) 12  
(2) 64  
(3) 8  
(4) 16  
(5) 18

45. DG : 47 :: BI : ?

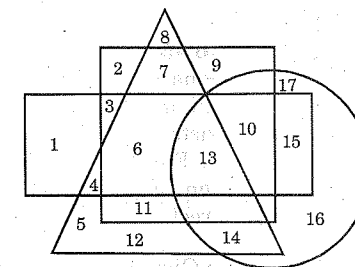
- (1) 18  
(2) 28  
(3) 29  
(4) 19  
(5) 27

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**Directions :****(Questions 46 to 53)**

In the following questions, Engineers are depicted in rectangle, Doctors in triangle, Farmers in square and Leaders in circle. Therefore have a look on the following figure and indicate your correct alternatives.

46. How many people are only farmers?



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

47. How many Engineers are farmers, but not the doctors and leaders?

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

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48. How many Leaders are there, who are also farmers, doctors and engineers?

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

49. Over all how many Doctors are there?

- (1) 6
- (2) 7
- (3) 8
- (4) 9
- (5) 10

50. How many Engineers are leaders but not the farmers and doctors?

- (1) 1
- (2) 3
- (3) 5
- (4) 6
- (5) 7

51. How many Farmers are there, who are also engineers, doctors and leaders?

- (1) 1
- (2) 5
- (3) 6
- (4) 4
- (5) 8

52. How many Engineers are also doctors?

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

53. Over all how many Leaders are there?

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

**Directions :**

(Questions 54 to 60)

Questions are based on letter series. In each Question, some letters are missing shown by (-). The missing letters are given in proper sequence as one of the five alternatives given below each question. Find out the correct alternative.

54. \_ b c \_ d b \_ c c d b \_ c \_ d

- (1) c b d c d
- (2) b b c d c
- (3) b c b b c
- (4) c b d c b
- (5) b b b b c

55. r \_ t \_ \_ t \_ r u t v

- (1) v r u t v
- (2) u v r u v
- (3) v r u t u
- (4) r t v u r
- (5) t t t r u

56. b c \_ e b c \_ e \_ c d e \_ \_ d e

- (1) c d b c d
- (2) d c b c b
- (3) e c b d c
- (4) d d b b c
- (5) b b b d e

57. \_ c c \_ d \_ c h \_ c \_ h

- (1) d h c d c
- (2) c h d h c
- (3) d c h d c
- (4) c h d h c
- (5) c d d c e

58. e \_ o \_ \_ o o e n \_ o

- (1) e n o e n
- (2) n n e o n
- (3) n o e n o
- (4) e o n e n
- (5) c e e n e

59. \_ b m z \_ a b \_ \_ d a \_ \_ z d

- (1) m a d m z b
- (2) d a m z b z
- (3) a d m z b m
- (4) z d m a d m
- (5) a d m z m b

60. \_ x y y \_ x x \_ \_ z \_ x

- (1) x z y y z
- (2) y z y y x
- (3) z z y y x
- (4) x z z z x
- (5) x z y y x

**Directions :**

(Questions 61 to 65)

Some letters are given in Column-I and in Column-II, some digits are given. Each digit of Column-II represents any letter of Column-I. Study the columns

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and write the alternative letter after choosing the correct alternative against the corresponding question.

| Column-I | Column-II |
|----------|-----------|
| CHIAE    | 41796     |
| JAERH    | 51492     |
| YCGUA    | 80473     |
| UJRYG    | 83052     |
| RGIHE    | 95861     |
| IAUGC    | 78046     |
| HYJCE    | 31972     |
| RJCYA    | 24375     |
| ECRGU    | 50899     |
| GJIHU    | 61028     |

61. The code for H is .....

- (1) 4
- (2) 1
- (3) 9
- (4) 6
- (5) 2

62. The code for Y is .....

- (1) 5
- (2) 0
- (3) 7
- (4) 3
- (5) 4

63. The code for E is .....

- (1) 1
- (2) 8
- (3) 6
- (4) 5
- (5) 9

64. The code for J is .....

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

65. The code for G is .....

- (1) 7
- (2) 6
- (3) 8
- (4) 2
- (5) 3

**Directions :**

(Questions No. 66 to 70)

These questions are based on simple arithmetic principles. Find the right answer from among the alternatives and indicate it as per the instructions.

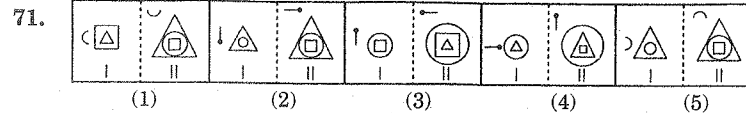
66.  $159 \div \dots = 15900$

- (1) 10.0
- (2) 1.0
- (3) 0.001
- (4) 0.01
- (5) 0.1

**Directions :**

(Questions No. 71 to 80)

In each of the following questions in four out of five figures element-I is



67.  $(65 \div 100) \times 7$

- (1) 4.55
- (2) 4.05
- (3) 4.5
- (4) 4.65
- (5) 4.75

68.  $\frac{40 + (6 \times 0.04)}{8}$

- (1) 0.503
- (2) 5.3
- (3) 5.003
- (4) 5.13
- (5) 5.03

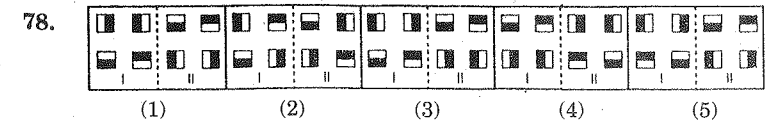
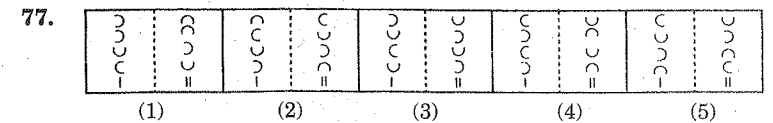
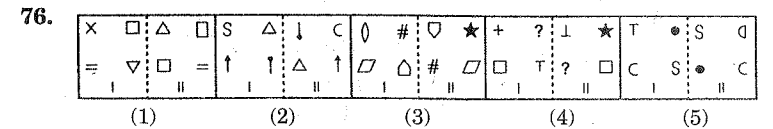
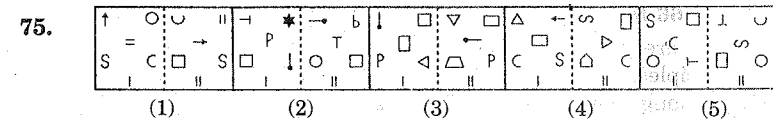
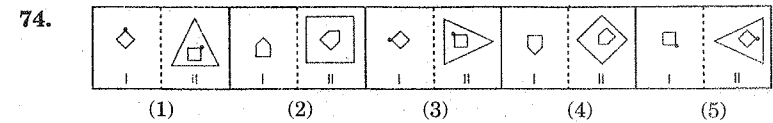
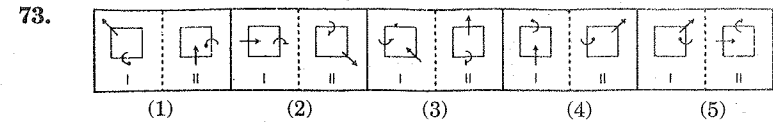
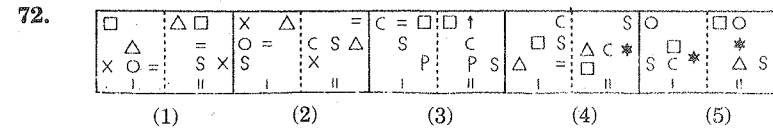
69.  $\frac{5x + 215}{3} = 4x + 60$ , then  $x = ?$

- (1) 3
- (2) 4
- (3) 5
- (4) 2
- (5) 0.5

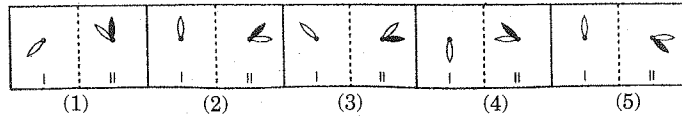
70. If  $64 \times 27 \times 25 = 2^a \times 3^b \times 5^c$ , then  $a + b + c = ?$

- (1) 11
- (2) 10
- (3) 8
- (4) 7
- (5) 6

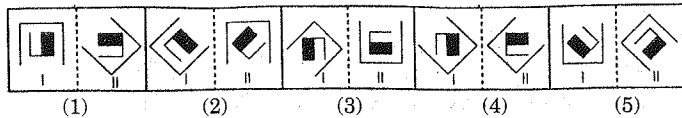
related to element-II in the same particular way. Find out the figure in which the element-I is not related to element-II.



79.



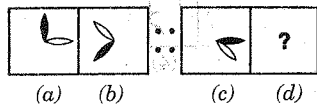
80.

**Directions :****(Questions No. 81 to 90)**

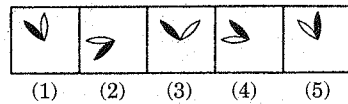
In each of the following questions, the second figure in the first unit of the problem figure bears a certain relationship to the first figure.

Similarly one of the answer figure bears the same relationship to the first figure of the second unit of the problem figures. Locate the figure that would fit the Question mark.

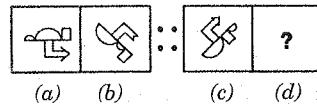
81. Problem figures



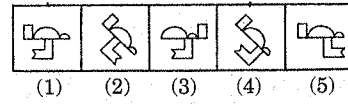
Answer figures



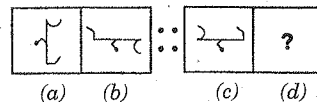
82. Problem figures



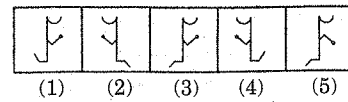
Answer figures



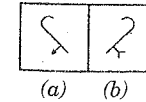
83. Problem figures



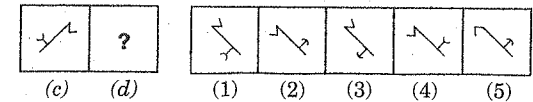
Answer figures



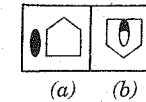
84. Problem figures



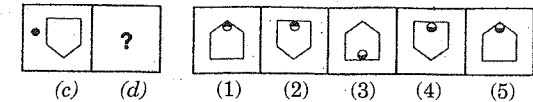
Answer figures



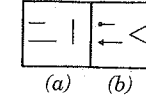
85. Problem figures



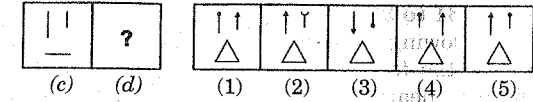
Answer figures



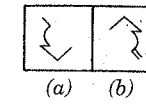
86. Problem figures



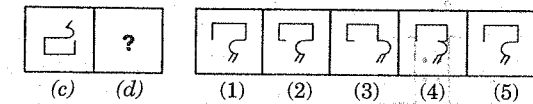
Answer figures



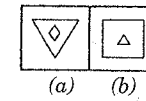
87. Problem figures



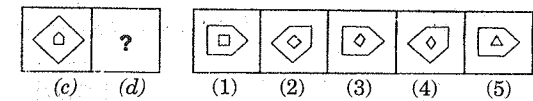
Answer figures



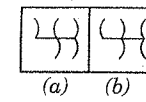
88. Problem figures



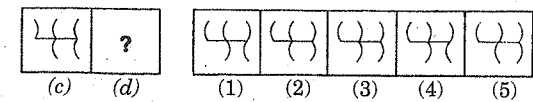
Answer figures



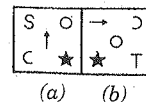
89. Problem figures



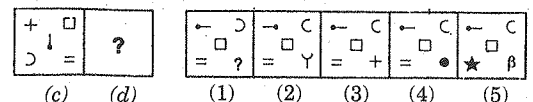
Answer figures



90. Problem figures



Answer figures





Rough Work

PART - II

## SCHOLASTIC TEST

Time : 90 Minutes

Max. Marks : 90

Note :-

(i) Subjects, Questions Sl. No. and Marks allotted :-

|                       |                      |          |
|-----------------------|----------------------|----------|
| (1) Physics           | 91 to 102 Questions  | 12 Marks |
| (2) Chemistry         | 103 to 113 Questions | 11 Marks |
| (3) Biology           | 114 to 125 Questions | 12 Marks |
| (4) Mathematics       | 126 to 145 Questions | 20 Marks |
| (5) History           | 146 to 155 Questions | 10 Marks |
| (6) Geography         | 156 to 165 Questions | 10 Marks |
| (7) Political Science | 166 to 175 Questions | 10 Marks |
| (8) Economics         | 176 to 180 Questions | 05 Marks |

(ii) **SHADE** the circle having the correct alternative in the OMR Sheet provided, from amongst the ones given against the corresponding question in the Question Paper Booklet. For shading the circles, use a **HB Pencil**.

## PHYSICS

91. The smallest audible sound is zero decibels. A sound of 90 decibels is ..... times more powerful than that of zero decibels.
- $10^9$
  - 90
  - 900
  - $10^{90}$
92. The power bill of September month for a house is 500 rupees. The cost of one unit power is 4 rupees. The average electric energy consumed by that house per day is .....
- 3.2 kWH
  - 4.8 kWH
  - 4.2 kWH
  - 5 kWH
93. 0.1 ml is equal to .....
- $10^{-6} \text{ m}^3$
  - $10^{-7} \text{ m}^3$
  - $10^{-4} \text{ m}^3$
  - $10^{-5} \text{ m}^3$
94. Which planet has more number of satellites?
- Uranus
  - Jupiter
  - Neptune
  - Saturn
95. A passenger in a train, moving with a speed of 72 km/hr, sees another train moving with a speed 32.4 km/hr in opposite direction for 10 seconds through a window. The length of the second train is .....
- 300 m
  - 240 m
  - 270 m
  - 290 m
96. A block is placed on a rough horizontal surface. The maximum static friction between block and surface is 10 N. The force of friction on the block by the surface is .....
- 0 N
  - 10 N
  - 5 N
  - <10 N
97. To prevent the effects of magnetic fields on some instruments, they are kept in a certain box. The box should be made of .....
- glass
  - plastic
  - soft iron
  - wood
98. The distance between the fixed points of a thermometer is 20 cm. If the level of mercury is at 13 cm, then the temperature is .....
- $50^\circ\text{C}$
  - $65^\circ\text{C}$
  - $55^\circ\text{C}$
  - $75^\circ\text{C}$

99. Which one of the following is not a field force ?
- Gravitational force
  - Spring force
  - Electric force
  - Magnetic force
100. When a sharp pointed charged wire is placed very close to the candle flame, then the shape of the candle flame .....
- remains same.
  - moves away from the wire totally.
  - moves towards the wire totally.
  - some part moves towards the wire and remaining part moves away from the wire.
101. The material generally used in minimum thermometer is .....
- alcohol
  - water
  - salt water
  - mercury
102. An inverted virtual image of your face is seen on the concave surface of steel spoon because of .....
- scattering.
  - single reflection.
  - double reflection.
  - opaque steel.

## CHEMISTRY

103. Match the following :

| Name of the base        | Found in                      |
|-------------------------|-------------------------------|
| (a) Calcium hydroxide   | (1) Milk of Magnesia.         |
| (b) Ammonium hydroxide  | (2) Lime water.               |
| (c) Potassium hydroxide | (3) Window cleaning solution. |
| (d) Magnesium hydroxide | (4) Soap.                     |

- (1) a-2, b-3, c-1, d-4  
 (2) a-2, b-3, c-4, d-1  
 (3) a-1, b-2, c-4, d-3  
 (4) a-3, b-2, c-1, d-4

104. PET is a familiar form of .....

- (1) Plastic  
 (2) Polyester  
 (3) Acrylic  
 (4) Rayon

105. Crumple a small piece of paper into a ball of size smaller than the mouth of an empty bottle. Hold the empty bottle on its side and place the paper ball just inside its mouth. Now try to blow on the paper ball to force it into the bottle.



- (1) The paper ball does not enter into the bottle, it falls outside.

- (2) The paper ball enters very rapidly into the bottle.  
 (3) The paper ball will go into the bottle and comes back after colliding the bottom of the bottle.  
 (4) The paper ball will stick to the bottom of the bottle.

106. Iron metal used for bridges and in making automobiles is coated with ..... metal to prevent corrosion and formation of rust.

- (1) Gadolinium  
 (2) Copper  
 (3) Nickel  
 (4) Zinc

107. Most of the metals are sonorous but which of the following is not sonorous ?

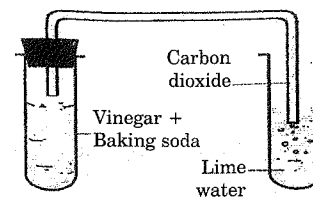
- (1) Iron  
 (2) Copper  
 (3) Mercury  
 (4) Gold

108. For inflammable substances, ignition temperature is ....

- (1) Very high.  
 (2) Ignition temperature has no effect on the flammability.  
 (3) Very low.  
 (4) Either high or low.

109. Observe the following figure:

In this activity, the lime water changes to .....



- (1) red colour  
 (2) blue colour  
 (3) milky white  
 (4) gaseous state

110. Which of the following is not a separating technique?

- (1) Winnowing  
 (2) Sieving  
 (3) Evaporation  
 (4) Carbonisation

111. Match the following.

| Change in physical state | Name of the process |
|--------------------------|---------------------|
| 1. Gas to solid          | (a) Freezing.       |
| 2. Liquid to solid       | (b) Condensation.   |
| 3. Gas to liquid         | (c) Sublimation.    |
| 4. Liquid to gas         | (d) Evaporation.    |

- (1) 1-a, 2-b, 3-c, 4-d  
 (2) 1-c, 2-a, 3-b, 4-d  
 (3) 1-c, 2-d, 3-b, 4-a  
 (4) 1-b, 2-c, 3-d, 4-a

112. Rohit tested three solutions X, Y, Z and observed as follows :

| Substance/Litmus | X          | Y         | Z         |
|------------------|------------|-----------|-----------|
| Blue litmus      | no change  | turns red | no change |
| Red litmus       | turns blue | no change | no change |

|     | Acidic | Basic | Neutral |
|-----|--------|-------|---------|
| (1) | X      | Y     | Z       |
| (2) | Y      | X     | Z       |
| (3) | Y      | Z     | X       |
| (4) | -      | -     | X, Y, Z |

113. Which of the following is not a practice related to 4R principle for creating an eco-friendly environment?

- (1) Reduce  
 (2) Respond  
 (3) Reuse  
 (4) Recycle

## BIOLOGY

NMMS(E)

114. Possible answer that can be tested is called .....
- (1) Variable
  - (2) Hypothesis
  - (3) Classification
  - (4) Comparision
115. Plant cell is more rigid than animal cell. Because .....
- (1) presence of Cell membrane.
  - (2) presence of Nucleus.
  - (3) presence of Vacuole.
  - (4) presence of Cell wall.
116. Match the items in Column-I with Column-II.
- | Column-I    | Column-II           |
|-------------|---------------------|
| A. Bacteria | (i) Bread Mould     |
|             | Rhizopus.           |
| B. Fungi    | (ii) Amoeba         |
| C. Algae    | (iii) Lactobacillus |
| D. Protozoa | (iv) Chlamydomonas  |
- Select the correct matching.
- (1) A-iii, B-iv, C-i, D-ii
  - (2) A-ii, B-i, C-iv, D-iii
  - (3) A-iii, B-ii, C-iv, D-i
  - (4) A-iii, B-i, C-iv, D-ii
117. Choose the incorrect statement about Vaccine.
- (1) Dr. Edward Jenner discovered the vaccine.
  - (2) Vaccines protect us from harmful diseases.
  - (3) Vaccine for 'Rabies' was discovered by Dr. Yellapragada Subba Rao.
  - (4) Small Pox vaccine saved millions of people from deadly diseases.

**P-300**

[22]

118. Choose the incorrect pair.
- (1) Hydra - Budding
  - (2) Amoeba - Binary fission
  - (3) Human beings - External fertilization
  - (4) Dolly - Cloning
119. If the earthworm's skin is dried up, what will happen to it?
- (1) It can't respire.
  - (2) It can't take food.
  - (3) It can't protect itself.
  - (4) No change occurs in its life.

120. Why do seeds disperse?

Choose the incorrect statement.

- (1) Seed dispersal is essential for the survival of plants.
  - (2) They (plants) get sufficient place to grow.
  - (3) They get sufficient sunlight and water.
  - (4) Most people eat sprouts.
121. To preserve the fertility of soil, which method do you choose?
- (1) Continuous cultivation of same type of crop in the same land.
  - (2) Keep the land vacant.
  - (3) Rotation of crops.
  - (4) Excess usage of chemical fertilizers.

122. If you want to keep good health, which type of food do you avoid eating?

- (1) Dry fruits
- (2) Junk food
- (3) Roughages
- (4) Green salads

123. The secretions of ductless glands are known as .....

- (1) Enzymes
- (2) Vitamins
- (3) Hormones
- (4) Minerals

NMMS(E)

124. By which method, milk can be stored?

- (1) Fumigation
- (2) Drying in sunlight
- (3) Fermentation
- (4) Pasteurization

125. Formation of Zygote occurs in .....

- (1) Asexual reproduction.
- (2) Vegetative reproduction.
- (3) Sexual reproduction.
- (4) Sporulation.

**P-300**

[23]

## MATHEMATICS

126. If  $10^{2015} - 2015$  is expressed as an integer, what is the sum of its digits?

- (1) 0  
(2) 18031  
(3) 18128  
(4) 18006

127. If  $x + \frac{1}{y + \frac{1}{z}} = \frac{37}{7}$ , then find the value of  $x(z^y)$ , where  $x, y, z$  are positive integers.

- (1) 40  
(2) 36  
(3) 24  
(4) 56

128. The last digit of the number  $1^2 + 2^2 + 3^2 + \dots + 99^2$  is .....

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

129. A credit card number (with 14 digits) is written in the boxes below. If the sum of any three consecutive digits is 20, then what is Y?

|  |  |  |   |  |  |  |   |  |  |  |  |   |  |  |
|--|--|--|---|--|--|--|---|--|--|--|--|---|--|--|
|  |  |  | 9 |  |  |  | Y |  |  |  |  | 7 |  |  |
|--|--|--|---|--|--|--|---|--|--|--|--|---|--|--|

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

130. The sum of three numbers is 98. The ratio of the first to the second is  $\frac{2}{3}$  and the ratio of the second to the third is  $\frac{5}{8}$ . What is the second number?

- (1) 25  
(2) 28  
(3) 30  
(4) 32

131. If  $\left(r + \frac{1}{r}\right)^2 = 3$ , then the value of

$$r^3 + \frac{1}{r^3} \text{ is } \dots\dots$$

- (1) 0  
(2) 1  
(3) 2  
(4)  $\frac{1}{2}$

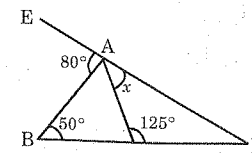
132. Let  $a, b$  and  $c$  be real numbers such that  $a - 7b + 8c = 4$  and  $8a + 4b - c = 7$ , then the value of  $a^2 - b^2 + c^2$  is .....

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

133. What is the value of  $\frac{(2^4)^8}{(4^8)^2}$ ?

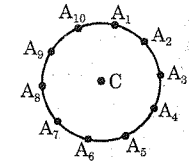
- (1) 16  
(2) 32  
(3) 8  
(4) 1

134. In the given figure, the value of 'x' is .....



- (1)  $25^\circ$   
(2)  $30^\circ$   
(3)  $20^\circ$   
(4)  $35^\circ$

135. On a circle, ten points  $A_1, A_2, A_3, \dots, A_{10}$  are equally spaced. If C is the centre of the circle, what is the size in degrees of the angle  $A_1 A_5 C$ ?



- (1)  $24^\circ$   
(2)  $18^\circ$   
(3)  $36^\circ$   
(4)  $45^\circ$

136. If  $P = 3^{2015} + 3^{-2015}$  and

$$Q = 3^{2015} - 3^{-2015}, \text{ then } P^2 - Q^2 = ?$$

- (1)  $2 \cdot 3^{2015}$   
(2) 4  
(3) 0  
(4)  $(3^{2015})^2$

137. In a magic square, the sum of the three entries in any row, column or diagonal is the same value. The figure shows four of the entries of a magic square, then the value of  $x$  is .....

|     |    |    |
|-----|----|----|
| $x$ | 19 | 96 |
| 1   |    |    |
|     |    |    |

- (1) 200  
(2) 156  
(3) 144  
(4) 196

138. Two is 10% of  $x$  and 20% of  $y$ , what is  $x - y$ ?

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

139. The average (mean) of 20 numbers is 30, and the average of 30 other numbers is 20. What is the average of all 50 numbers?

- (1) 23                      (2) 24  
(3) 25                      (4) 26

140. Let A, M and C be digits with  $(100A + 10M + C)(A + M + C) = 2005$ , then the value of A is ....

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

141. Which of the following is the same

as  $\frac{2-4-6-8+10-12+14}{3-6-9-12+15-18+21} = ?$

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

142. What is the difference between the sum of the first 2015 even counting numbers and the sum of the first 2015 odd counting numbers?

- (1) 2000                      (2) 2015  
(3) 0                      (4) 1960

143. What is the value of

$(3x - 2)(4x + 1) - (3x - 2)(4x + 1)$ ,  
when  $x = 4$ ?

- (1) 0                      (2) 1  
(3) 10                      (4) 11

144. If  $a$ ,  $b$  and  $c$  are positive real numbers, such that

$a(b + c) = 152$ ,  $b(c + a) = 162$  and  
 $c(a + b) = 110$ , then  $abc$  is .....

- (1) 720                      (2) 672  
(3) 688                      (4) 704

145. The value of

$\left(1 - \frac{1}{2^2}\right)\left(1 - \frac{1}{3^2}\right)\left(1 - \frac{1}{4^2}\right) \dots \left(1 - \frac{1}{2015^2}\right)$

is ....

- (1) 1                      (2)  $\frac{2016}{4030}$   
(3)  $\frac{1004}{2015}$                       (4)  $\frac{2014}{2015}$

## HISTORY

146. In which Session, the Congress declared the attainment of "Purna Swaraj"?

- (1) 1927 Madras Session.  
(2) 1928 Calcutta Session.  
(3) 1929 Lahore Session.  
(4) 1931 Karachi Session.

147. During which Governor General period, did the East India Company introduce Permanent Settlement?

- (1) William Bentinck  
(2) Warren Hastings  
(3) Wellesley  
(4) Cornwallis

148. During 1861, the world wide cotton prices soared high. The reason for this is .....

- (1) 1857 Sepoy Revolt.  
(2) Civil War in America.  
(3) Great Depression.  
(4) All the above.

149. "Sarfe-e-Khas" means .....

- (1) Nizam Personal Jagir.  
(2) Deshmukhs Jagir.  
(3) Revenue from Inam lands.  
(4) Own lands of Doras.

150. After the death of Jyoti Rao Phule, who took over the responsibility of Satya Sodak Samaj?

- (1) Pandit Ramabai Saraswati.  
(2) Tarabai Shinde.  
(3) Keshav Chandra Sen.  
(4) Savithribai Phule.

151. Who started Bengal Chemical Works?

- (1) PC. Ray  
(2) Jamshedji Tata  
(3) R.C. Dutt  
(4) Dadabhai Naoroji

152. "Shalabhoga" means .....

- (1) Land for non-brahmin proprietors.  
(2) Land gifted to brahmins.  
(3) Land for the maintenance of a school.  
(4) Land gifted to temples.

153. Who constructed the Thousand Pillared Temple in Hanumakonda?

- (1) Prola II  
(2) Rudra deva  
(3) Ganapati deva  
(4) Rudrama devi

154. Who wrote Akbar Nama?

- (1) Abul Fazal  
(2) Birbal  
(3) Shaikh Mubarak  
(4) Abdul Rahim

155. The Battle of Plassey took place in the year .....

- (1) 1747  
(2) 1757  
(3) 1767  
(4) 1787

**GEOGRAPHY**

**156.** Who devised Mercator's projection ?

- (1) William Lambton
- (2) Al Idrisi
- (3) Ptolemy
- (4) Gerardus Mercator

**157.** Which colour in Thematic Maps represents Swamps ?

- (1) Yellow
- (2) Light Blue
- (3) Black
- (4) Brown

**158.** If the insolation received at the Equator is 100 units, then what is the amount of insolation received at 90° ?

- (1) 25 units
- (2) 40 units
- (3) 50 units
- (4) 60 units

**159.** Where does the Sun rise first in the cities given below ?

- (1) Hyderabad
- (2) Madurai
- (3) Kohima
- (4) Jaipur

**160.** The most commonly accepted meaning of Eskimos is .....

- (1) Snow-shoe netter
- (2) The real people
- (3) Ancient people
- (4) Snow eaters

**161.** According to the 1993 New National Mineral Policy, this mineral cannot be leased or operated by private companies.

- (1) Diamond
- (2) Rock petroleum
- (3) Atomic minerals
- (4) Iron

**162.** Budapest, the capital of Hungary is located on the banks of river .....

- (1) Danube
- (2) Rhone
- (3) Volga
- (4) Rhine

**163.** World's largest river, River Nile originates from .....

- (1) Lake Victoria
- (2) Lake Nyasa
- (3) Lake Chad
- (4) Lake Tanganika

**164.** What do you call the grasslands in Africa that are so tall that even elephants can hide in them?

- (1) Pampa
- (2) Veld
- (3) Savanna
- (4) Down

**165.** Prakasam Barrage was built across River Krishna in the year .....

- (1) 1850
- (2) 1885
- (3) 1853
- (4) 1919

**POLITICAL SCIENCE**

**166.** This represents the basic principles and objectives of Indian Constitution.

- (1) Directive Principles.
- (2) Preamble of the Constitution.
- (3) Fundamental Rights.
- (4) Objective Resolutions.

**167.** Which of the following statement is correct ?

- (1) Democratic countries generally contain a Constitution.
- (2) To make a Constitution to a diverse country like India, is not an easy task.
- (3) Constitution determines the relationship between people and government.
- (4) All are correct.

**168.** Who elects the Rajya Sabha members ?

- (1) Directly elected by the people.
- (2) By the members of the State legislatures.
- (3) Appointed by the Prime Minister.
- (4) By the members of the Lok Sabha.

**169.** "Concurrent list" means .....

- (1) Subjects on which laws can be made only by the Parliament.
- (2) Subjects on which laws can be made only by the State legislative assemblies.
- (3) Subjects on which laws can be made by both the Parliament and State legislative assemblies.
- (4) Executive powers of President.

**170.** Police belong to this part .....

- (1) Executive
- (2) Legislative
- (3) Judiciary
- (4) All the above.

**171.** Right to Life is enshrined in this Article of the Constitution.

- (1) Article 19
- (2) Article 20
- (3) Article 21
- (4) Article 22

172. Who elects the Speaker of Legislative Assembly ?
- (1) Members of Legislative Assembly.
  - (2) Members of Legislative Council.
  - (3) Elected by the state people.
  - (4) Nominated by the Governor.

173. Who maintains the land records in a mandal ?

- (1) Tahsildar (MRO).
- (2) Mandal Parishad Development Officer.
- (3) Mandal Agricultural Officer.
- (4) Mandal Education Officer.

174. MLA's (Members of Legislative Assembly) are elected for .... years.

- (1) 4
- (2) 5
- (3) 6
- (4) 8

175. The state to introduce Mid-day Meal Scheme is .....

- (1) Andhra Pradesh
- (2) Maharashtra
- (3) Kerala
- (4) Tamilnadu

## ECONOMICS

176. The first bank to be established in Europe is in .....

- (1) Paris
- (2) London
- (3) Amsterdam
- (4) Rome

177. Who is responsible for printing and circulating the money in India ?

- (1) Finance Ministry.
- (2) NABARD.
- (3) Reserve Bank of India.
- (4) Parliament.

178. Who introduced powerloom production in India ?

- (1) Mughals
- (2) British
- (3) Portuguese
- (4) Americans

179. Which country has the largest number of medical colleges in the world ?

- (1) India
- (2) United States of America.
- (3) France
- (4) England

180. Which of the following places does not have a paper mill ?

- (1) Rajahmundry
- (2) Sirpur Kagaznagar
- (3) Bhadrachalam
- (4) Visakhapattanam