Instructions to Candidates

1. The Question Booklet containing 100 questions and the OMR answer sheet is given to you.

2. All questions are compulsory, each question carries one mark.

3. During the examination,
   - Read the questions carefully.
   - Completely darken/shade the relevant oval against Question No. in the OMR answer sheet, using blue/black ball point pen. Do not try to alter the entry and not to do any stray marks on OMR Sheet.
   - Ex: In a question paper if No. 3 is the correct answer for Question No. 20, then darken in OMR answer sheet shade circle 3 using blue/black ball point pen as follows.
     20. ① ② ④
     (This is an example only)

4. If more than one oval is darkened for a given question, such answer is treated as wrong and no marks will be given.

5. The candidate and Room Supervisor should sign in the OMR sheet.

6. Candidate should return the OMR answer sheet only to the room supervisor before leaving the examination hall.

7. The calculator, mobiles and any other electronic equipments are not allowed inside the examination hall.

8. English version of the question paper will be considered as final, in case of any dispute arising out of variation in translation version.
GENERAL MENTAL ABILITY TEST

(Questions : 1 – 9)
Directions: Complete the given number / letter / figure analogy by choosing the correct answer from the given alternatives.

1. 496 : 204 :: 329 : ?
   1) 90
   2) 110
   3) 115
   4) 135

2. \[ \frac{7}{11} : \frac{336}{110} :: ? : \frac{720}{156} \]
   1) \[ \frac{9}{17} \]
   2) \[ \frac{9}{13} \]
   3) \[ \frac{11}{13} \]
   4) \[ \frac{11}{17} \]

3. 11 18 32 60 : 17 30 56 108 :: 13 24 46 90 : ?
   1) 17 36 68 138
   2) 19 30 52 124
   3) 19 36 70 136
   4) 19 36 70 138

4. FLOWER : 21 O 12 D 22 I 2 :: BUNCHES :
   1) 25 F 13 X 19 V 8
   2) 2 F 14 X 8 V 19
   3) 25 H 13 P 19 R 8
   4) 2 H 14 P 8 R 19

5. AWSXC : RNJOT :: ? : UQMRW
   1) FAVZD
   2) DZVAF
   3) INRMH
   4) DINJF

3
6. EHKAM : YMWTO :: PWORZ : ?
1) DKCFA
2) BIADL
3) AFKCD
4) LDAIB

7. 

1) DKCFA
2) BIADL
3) AFKCD
4) LDAIB

8. 

1) 2)
3)
4)

9. 

1) 2)
3)
4)
GMAT(K-10)

(Question : 10)

10. P, Q, R and S are four persons standing at the corners of a square park of area 100 m x 100 m. They move anticlockwise along the edge of the park by 100 m, 150 m, 200 m and 250 m respectively. Now in which direction is Q with respect to S?

1) Southeast
2) Southwest
3) Northeast
4) Northwest

(Question : 11)

11. A person starts from point A and walks 800 m in the northeast direction to reach B. Then he turns towards east and walks 350 m and reaches C. He then moves in the southwest direction by 650 m to reach D. He again moves by 250 m eastward and reaches E. He now walks 150 m in the southwest direction and finally arrives at F. Find the distance between A and F.

1) 400 m
2) 500 m
3) 600 m
4) 800 m
GMAT(K-10)

(Questions: 12 – 16)

Directions: Identify the number of specified geometric shapes in the given diagrams and mark the correct answers.

12. How many SQUARES are there in the given figure?

13. How many TRIANGLES are there in the given figure?

14. How many RHOMBUS are there in the given figure?
GMAT(K-10)

15. How many SEMICIRCLES are there in the given figure?

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

16. How many TRAPEZIUMS are there in the given figure?

1) 6  
2) 7  
3) 8  
4) 9

(Questions : 17 – 18)

Directions: Find the correct mirror images for the following problem figures choosing from the alternatives.
GMAT(K-10)

18.

(Questions : 19 – 20)

Directions: Find the correct WATER images for the following problem figures choosing from the alternatives.

19.

20.

(Questions : 19 – 20)

Directions: Find the correct WATER images for the following problem figures choosing from the alternatives.
GMAT(K-10)

(Question : 21)

21. At present a boy’s father is 6 times older and his grandfather 13 times older than the boy. If six years later, the grandfather will be seven times older than the boy, what is the present age of the boy’s father?

1) 36 years 2) 42 years 3) 30 years 4) 48 years

(Question : 22)

22. The present ages of a son and his father are in the ratio 5 : 21. Four years earlier their ages were in the ratio 3 : 19. What is the present age of the son?

1) 4 years 2) 6 years 3) 8 years 4) 10 years

(Questions : 23 – 32)

Directions: Complete the following number/letter/figural series by choosing the correct answer from the given alternatives.

23. ?, 22, 31, 58, 139, 382

1) 17 2) 18 3) 19 4) 20

24. 12, 9, 27, 23, 92, 87, ?, ?

1) 355, 349 2) 385, 379 3) 425, 419 4) 435, 429

25. 47, 7, 69, 28, ?, ?, 125, 1344, 159, 13440

1) 94, 158 2) 95, 168 3) 95, 178 4) 96, 268

26. 5, 25, 105, ?, 1705

\begin{align*}
\frac{11}{30} & 87, ?, 771 \\
1) & 425 \quad 2) \frac{525}{261} \\
3) & \frac{625}{389} \quad 4) \frac{1125}{760}
\end{align*}
27. m m n m n m n n n n
   1) m m n m n m n
   2) m n n m n m m
   3) n m m n m m
   4) n m n m m n

28. WMCS, I Y O E, _____, GWMC
   1) U Y O E
   2) Q A K U
   3) U K A Q
   4) P B J T

29.

30.

31.
(Question : 33)

33. A, B, C, D, E and F are sitting around a round table facing its centre.
   a. C is just left of E
   b. A is the only one between D and E
   c. B is sitting opposite to E
   d. D is the only one between A and B

Then where is F sitting?
1) Between B and D
2) Between A and D
3) Between B and C
4) Between A and C

(Question : 34)

34. Six elephants P, Q, R, S, T and U are weighed. The elephant U is heavier than R but lighter than T. Elephants P and S are of same weight. Elephant Q is lighter than P and R is heavier than S. Which one of the elephants is the heaviest?

1) Q
2) T
3) R
4) U
GMAT(K-10)

(Questions : 35 - 40)

Directions : In the following questions four groups of numbers / letters / pairs of numbers are given. Of these, three are alike and one is different. Find the one which is different.

35. 1) 210
    2) 135
    3) 72
    4) 33

36. 1) 193
    2) 283
    3) 293
    4) 323

37. 1) 12, 156
    2) 14, 182
    3) 16, 272
    4) 18, 342

38. 1) 1, 4
    2) 2, 12
    3) 3, 36
    4) 4, 80

(Question : 41)

41. If RELIC is coded as 7 4 3 6 5 and ANTHEM as 2 9 0 1 4 8 then MERCANTILE can be written as :

\[ E - \eta \]

1) 8427369054
2) 8439695704
3) 8457630214
4) 8475290634
(Question : 45)

45. Directions: When \(-\) and \(=\), \(60\) and \(20\) are interchanged, find which one of the following equations will be correct.

\[ (20 + 3) \times 6 + 8 - 32 = 76 \]

1) \(8\) and \(6\)
2) \(+\) and \(-\)
3) \(3\) and \(8\)
4) \(\times\) and \(+\)

1) \(100 = 80 + 60 \times 2 = 20\)
2) \(80 = 20 = 60 \times 3 + 80\)
3) \(100 = 80 = 20 + 60 \times 2\)
4) \(80 = 20 = 60 \times 2 + 40\)

(Question : 46)

46. Directions: The interchange of which of the given numbers / signs in the alternatives will make the given equation meaningful?

\((20 + 3) \times 6 + 8 - 32 = 76\)

1) \(8\) and \(6\)
2) \(+\) and \(-\)
3) \(3\) and \(8\)
4) \(\times\) and \(+\)

1) \(8\) and \(6\)
2) \(+\) and \(-\)
3) \(3\) and \(8\)
4) \(\times\) and \(+\)

(Question : 47)

47. Direction:

If \(\vee\) stands for \(\times\)
\(\land\) stands for \(+\)
\(\forall\) stands for \(-\)
\(\oplus\) stands for \(\div\)

Then, which of the following will be correct equations?

1) \(72 \land 64 \land 16 < 16 \vee 8 \forall 72\)
2) \(48 \land 12 \forall 16 > 80 \forall 32 \land 24\)
3) \(72 \land 24 \vee 8 < 48 \land 16 \forall 32\)
4) \(16 \vee 8 \forall 72 > 80 \land 8 \land 48\)
42. The minute hand of a clock in the horizontal plane is on the number 6 of the clock and is pointing towards west. If the hour hand is pointing towards southeast, what time will the clock show exactly after three hours from now?

1) 1.30 hour
2) 4.30 hour
3) 7.30 hour
4) 10.30 hour

(Questions : 43 – 44)
Directions: To get the correct equation, choose which set of signs from the given alternatives to be substituted sequentially in places of (*).

43. 15 * 3 * 5 * 16 * 41

1) = + − ÷
2) ÷ + = −
3) − + ÷ =
4) ÷ × + =

44. 13 * 4 * 5 * 12 * 6

1) > + × ÷
2) × + = ÷
3) × + > ÷
4) × + = −
GMAT(K-10)

(Questions : 50 – 51)

Directions: There are 120 students in a class. Among them,

a. 20 students play both hockey and kabaddi, as well the same number of students play only football.
b. 25 students play both hockey and football.
c. 15 students play both football and kabaddi.
d. The number of students who play only hockey are the same as the number of students who do not play any of the three games.
e. The number of students who play only hockey is half the number of students who play football only.

50. How many students play only kabaddi ?

1) 10
2) 20
3) 30
4) 40

51. How many students do not play any of the three games ?

1) 5
2) 10
3) 15
4) 20
GMAT(K-10)
(Questions : 48 – 49)
Directions: The following Venn diagrams represent the relation among four given objects. Indicate the appropriate Venn diagram to represent the relationship.

48. Quadrilaterals, Rhombus, Parallelograms, Squares

49. Grandmothers, Sisters, Mothers, Sisters-in-law

1) A
2) B
3) C
4) D

1) D
2) C
3) B
4) A
GMAT (K-10)

(Questions: 54 – 55)

Directions: Find the set of figures which have similar characteristics, choosing from the given alternatives.

54.

A B C D E F

1) A and C
2) B and E
3) D and A
4) F and D

1) A and C
2) B and E
3) D and A
4) F and D

55.

A B C D E F

1) A and D
2) C and E
3) D and F
4) B and F

1) A and D
2) C and E
3) D and F
4) B and F

Questions: 56 – 58

Directions: Identify the wrong number / group of letters in the series.

56. 5, 35, 220, 1050, 4200

1) 35
2) 220
3) 1050
4) 4200
GMAT(K-10)

(Questions : 52 – 53)

Directions : Take the given statements as true and decide which of the conclusions logically follow from the statements.

52. Statements :
   a. All buses are ships.
   b. All ships are aeroplanes.

Conclusions :
I. Some aeroplanes are ships.
II. All buses are aeroplanes.
1) Only conclusion I follows
2) Only conclusion II follows
3) Both conclusions I and II follow
4) Neither conclusion I nor II follows

53. Statements :
   a. All sparrows are crows.
   b. Some pigeons are sparrows.

Conclusions :
I. Some crows are pigeons.
II. All pigeons are sparrows.
1) Only conclusion I follows
2) Only conclusion II follows
3) Both conclusions I and II follow
4) Neither conclusion I nor II follows
GMAT(K-10)

(Questions : 64 – 67)
Directions : Find the missing part of the given figure from the alternatives.

64.

65.

66.

67.
57. 256, 343, 64, 49, 16, 7, 2, 1
    1) 256
    2) 49
    3) 2
    4) 1

58. YWTPZ, VTQMW, SQNJ, PNLIQ, MKHDN
    1) PNLIQ
    2) SQNJ
    3) VTQMW
    4) YWTPZ

(Question : 59)
59. The difference between two numbers is 6 and the average of their squares is 234. What is the average of the two numbers?
    1) 13
    2) 15
    3) 16
    4) 18

(Questions : 60 – 63)
Directions: Find the missing number in the given matrices.

60. 10 12 29
    22 8 27
    32 14 ?
    1) 31
    2) 34
    3) 38
    4) 44

61. 128 76 14
    132 58 18
    137 ? 23
    1) 74
    2) 72
    3) 64
    4) 60

62. 87 42 19
    93 63 13
    31 ? 8
    37 36 2
    1) 13
    2) 14
    3) 15
    4) 16

63. 9 6 39
    12 13 ?
    5 14 43
    1) 50
    2) 62
    3) 63
    4) 69
GMAT (K-10)

71.  
\[
\begin{array}{ccc}
10 & 4 & 54 \\
8 & 6 &
\end{array}
\]
1) 132  
2) 154  
3) 168  
4) 184

72.  
\[
\begin{array}{ccc}
84 & 65 & 18 \\
12 &
\end{array}
\]
1) 208  
2) 178  
3) 164  
4) 144

(Questions : 73 – 74)
Directions : In the questions below, a problem figure is given. The problem figure is hidden in one of the figures given as alternatives. Find the figure in which the problem figure is hidden.

73.  
\[
\begin{array}{ccc}
& &
\end{array}
\]
1) 2) 3) 4)

74.  
\[
\begin{array}{ccc}
& &
\end{array}
\]
1) 2) 3) 4)
GMAT(K-10)
(Question : 68)
68. In this problem,
   i. A < B means A is daughter of B
   ii. A > B means A is son of B
   iii. A = B means A is brother of B
   iv. A + B means A is father of B
Which of the following indicates “P is grandson of S” ?
1) P = Q < R + S
2) 12 10 11
3) P + Q = R > S
4) 13 8 3
(Questions : 69 – 72)
Directions : In the questions below, the numbers in the figures are related. Identify their relationship and find the missing numbers in the given series.

69.

70.

(Answers : 68)
68. ಅನುಕ್ರಮವೂ,
   i. A < B ಎಂದರೆ A ಸುತ್ತಿತು B ಕುಂಭಕಾರ
   ii. A > B ಎಂದರೆ A ಕುಂಭಕಾರ B ಕುಂಭಕಾರ
   iii. A = B ಎಂದರೆ A ಬಹುತ್ತು B ಬಹುತ್ತು
   iv. A + B ಎಂದರೆ A ಬಹುತ್ತು B ಬಹುತ್ತು
ಸಾರ್ವತ್ರದರ್ಶಿಯನ್ನು ಕೆಲಸಗೆ "P ಸುತ್ತಿತು S ಕುಂಭಕಾರ" ಎಂಬುದು ಸಾರ್ವತ್ರದರ್ಶಿಯನ್ನು?
2) P > Q = R < S
4) P < Q + R = S
(Questions : 69 – 72)
ನಿಷ್ಣವಿಧಾನ : ಅತ್ಯಂತ ದೃಢವಾಹಿತವಾದ ಸಾರ್ವತ್ರದರ್ಶಿಯನ್ನು ಸಾರ್ವತ್ರದರ್ಶಿಯನ್ನು ಸಾರ್ವತ್ರದರ್ಶಿಯನ್ನು ಸಾರ್ವತ್ರದರ್ಶಿಯನ್ನು. ಅತ್ಯಂತ ದೃಢವಾಹಿತವಾದ ಸಾರ್ವತ್ರದರ್ಶಿಯನ್ನು ಸಾರ್ವತ್ರದರ್ಶಿಯನ್ನು. ಅತ್ಯಂತ ದೃಢವಾಹಿತವಾದ ಸಾರ್ವತ್ರದರ್ಶಿಯನ್ನು. ಅತ್ಯಂತ ದೃಢವಾಹಿತವಾದ ಸಾರ್ವತ್ರದರ್ಶಿಯನ್ನು. ಅತ್ಯಂತ ದೃಢವಾಹಿತವಾದ ಸಾರ್ವತ್ರದರ್ಶಿಯನ್ನು. ಅತ್ಯಂತ ದೃಢವಾಹಿತವಾದ ಸಾರ್ವತ್ರದರ್ಶಿಯನ್ನು. ಅತ್ಯಂತ ದೃಢವಾಹಿತವಾದ ಸಾರ್ವತ್ರದರ್ಶಿಯನ್ನು.

69.

70.

(Answers : 69 – 72)
69. 484 10 11 2) 576
3) 676 4) 729

70. 1) 316
2) 396
3) 416
4) 476
GMAT(K-10)
(Questions : 79 – 80)
Directions : Given below are two matrices containing letters. The rows and the columns are numbered 1 to 4 in Matrix I and 5 to 8 in Matrix II. Each letter from these matrices are represented first by its row number and next by its column number.
Ex : Letter “O” is represented as 14, 23, 31, 42.

Matrix - I

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<td>N</td>
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<td>O</td>
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<td>4</td>
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<td>N</td>
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Matrix - II

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<th>7</th>
<th>8</th>
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<td>R</td>
</tr>
<tr>
<td>6</td>
<td>I</td>
<td>R</td>
<td>T</td>
<td>A</td>
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<tr>
<td>8</td>
<td>R</td>
<td>I</td>
<td>A</td>
<td>T</td>
</tr>
</tbody>
</table>

79. Which set of numbers will represent the word RATION?

A) 77, 55, 88, 78, 42, 34
B) 85, 87, 56, 57, 24, 44
C) 66, 76, 75, 65, 14, 21
D) 58, 68, 67, 22, 31, 13

80. Which set of numbers will represent the word INMATE?

A) 65, 44, 11, 87, 77, 24
B) 78, 13, 34, 55, 67, 23
C) 57, 21, 43, 66, 88, 12
D) 86, 32, 22, 68, 56, 41
GMAT(K-10)

(Questions : 75 – 76)
Directions: In the following questions, a set of numbers is given. From the alternatives, choose the set which is similar to the given set.

75. 81, 144, 225
   1) 169, 484, 529
   2) 625, 676, 841
   3) 729, 784, 961
   4) 441, 784, 841

76. 315, 210, 35
   1) 261, 87, 29
   2) 288, 192, 32
   3) 225, 75, 25
   4) 207, 68, 23

(Question : 77)
77. In a leap year the new year day celebration is on a wednesday. What day will be the teachers’ day in the same year? (as per English calendar)
   1) Sunday
   2) Wednesday
   3) Friday
   4) Saturday

(Question : 78)
78. In a code language, if H A T can be coded as J A R and W E as I S, in the same code, J U G can be written as :
   1) D O N
   2) M E T
   3) L A P
   4) P E G
GMAT(K-10)
(Question : 83)

83. Direction: Two positions of the dice are shown below. When face with 3 dots is shown at the top, which face will be at the bottom?

(Questions : 84 – 85)
Directions: Answer the following questions based on the sequence of numbers / letters given.

84. 4 1 9 1 9 7 2 3 6 1 6 8 2 2 4 2 8 1 7 7 4 2 8 1 8 1 1 1 2 2 3 6 1 9 9

If the product of any two consecutive numbers is the very next number, how many times such numbers occur in the given sequence?

1) 8
2) 9
3) 12
4) 13
GMAT(K-10)

(Question : 81)
81. Direction : When the given figure is folded as a cube, which one of the formation of cubes shown below is NOT POSSIBLE?

(Question : 82)
82. Directions : The different faces of a cube are shown through three folded cubes. Among the alternatives, identify which one of the figures represent the unfolded cube.
88. Which one of the following statements is true?
1) The number 12 is not inside all the three shapes I, II and IV
2) The number 3 is inside all the three shapes I, II and III
3) The number 13 is inside all the three shapes I, II and IV
4) The number 4 is inside all the three shapes I, IV and V

(Question : 89)

89. How many blocks are unseen in the given figure?

![Image]

(Question : 90)

90. To calculate the average rainfall in the second week of August 2018 in Bangalore, the following data is given. Decide whether the data given is sufficient.

I. The average rainfall of first four days of the week is 147 mm.
II. The average rainfall of last three days of the week is 133 mm.

1) Data in I only is sufficient
2) Data in II only is sufficient
3) Data in I and II together are sufficient
4) Data in I and II are not sufficient
In the given letter sequence, if all the “e”s from letter z to g are changed to “c” and all the “c”s from letter g to p are changed to “e”, how many “c”s and “e”s will occur respectively in the sequence?

1) 5, 6
2) 6, 6
3) 6, 7
4) 7, 7

(Questions: 86 – 88)

Directions: The following questions are based on the given intersecting figures.

86. How many numbers are enclosed in only two figures?

1) 5
2) 4
3) 3
4) 2

87. Which of all the three shapes have “14” inside?

1) I, II, V
2) II, IV, V
3) II, III, IV
4) III, IV, V
GMAT (K-10)

(Questions: 91 – 93)
Directions: The words are given under Column – I. Their codes are given under Column – II without following the same order as in Column – I. Find the codes for the letters of words in Column – I and find the codes for the given words in the questions.

<table>
<thead>
<tr>
<th>Column – I</th>
<th>Column – II</th>
</tr>
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<tbody>
<tr>
<td>SUN</td>
<td>ybl</td>
</tr>
<tr>
<td>CAP</td>
<td>kdm</td>
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<tr>
<td>NAME</td>
<td>axyk</td>
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<tr>
<td>GOLD</td>
<td>fpsc</td>
</tr>
<tr>
<td>STAR</td>
<td>klni</td>
</tr>
<tr>
<td>ROAD</td>
<td>sknc</td>
</tr>
</tbody>
</table>

91. MASTER
1) aklbxdf 2) kmsixn
3) bxldcf 4) aklixn

92. SOLUTE
1) mcxban 2) lcfxi
3) snblma 4) lcfxi

(Questions: 94 – 95)
Directions: In the following questions a set of two figures is given as problem figure. Find which one of the following alternative figures would be formed, if the first figure is superimposed on the second figure.

94. 1) 2) 3) 4)
GMAT(K-10)

95. (Questions : 96 – 98)
Directions: The following questions are based on the numbers and letters arranged in the pyramid pattern. Study the pattern and complete the given analogy.

(ಶ್ರೇಷ್ಠ : 96 – 98)
ದಿಕ್ಷಣಾವಭ : ನಂಬಿಗಳು ಹಾಗೂ ಮಟ್ಟದ ಮಾತ್ರದಾರ ಮೇಲೆ ಸಮೀಪ ಸುಮಾರು ನಂಬಿಗಳು ಹಾಗೂ ಎಡಗೊಳ್ಳುವ ಅವಳಿ. ನಂಬಿಗಳು ಮಂತ್ರವಾಗಿ ಕಂಡುಹಾಕಿ ಮೇಲೆ ಮಂತ್ರಾಂಶಗಳು ಮಂತ್ರಾಂಶಗಳು.

96. T c 8 : V e 14 :: E R 17 : ?
1) L Y 27  2) L Y 24  3) K X 27  4) J W 26

97. C P 8 : R a 3 :: F S 11 : ?
1) U W 15  2) U H 24  3) U W 5  4) U d 6

98. 2 8 D : 6 14 L :: ? : 5 13 K
1) 3 11 I  2) 3 9 E  3) 3 10 F  4) 3 11 G
99. In order to form the given ellipse, which four appropriate parts out of A, B, C, D, E and F are to be combined?

1) B, D, C, F
2) E, F, D, A
3) B, A, C, F
4) A, C, E, B

100. In order to form the given hexagon, which three appropriate parts out of A, B, C, D and E are to be combined?

1) A, C, D
2) A, B, E
3) B, D, E
4) C, D, E
1. ಮಾ.ಸ.ಟ್ಯಾ. (OMR) ಭಾಗ ಕ್ಮೂಡ ಮತ್ತು 100 ಶ್ರೇಣಿಗಳ ತೊಂದರೆ ಬೇರೆ ಭಾಗಗಳಾಗಿ.
2. ಆದಾಯ ವಿದೇಶದಲ್ಲಿ. ಯಾರು ಹುಟ್ಟು ಆದಾಯ.
3. ಇದರಿಂದ ಗೊತ್ತಿಪಟ್ಟಿ.
   • ಬಿಳಿ ಡಸ್ಪ್ರೆಜ್ಹರದ ವಿವರಣೆಯು ನಮೂನೆ.
   • ಮಾ.ಸ.ಟ್ಯಾ. (OMR) ನೋಟು ಪ್ರತಿ ಪ್ರತಿ ಸಾಂದ್ರತೆ ಬಿಡುವ ಸಮಯದಲ್ಲಿ ಕೈಗಾರಿಕೆಯ ಲ್ಯಾಂಡ್ ಪ್ರವೃತ್ತಿಯಿಂದ ಶುದ್ಧಪಟ್ಟಿ ಪ್ರತಿ ಪ್ರತಿ ಸಾಂದ್ರತೆ ಬಿಡುವ ಸ್ಥಳದ ಸಾಲ ಹಾಗು ವಿದೇಶದ ಕೈಗಾರಿಕೆಯ ಪ್ರವೃತ್ತಿಯ ಸಾಲ.
4. ಮಾ.ಸ.ಟ್ಯಾ. (OMR) ನೋಟು ಪ್ರತಿ ಪ್ರತಿ ಸಾಂದ್ರತೆ ಬಿಡುವ ಸ್ಥಳದ ಸಾಲ ಹಾಗು ವಿದೇಶದ ಕೈಗಾರಿಕೆಯ ಪ್ರವೃತ್ತಿಯ ಸಾಲ ಹಾಗು ವಿದೇಶದ ಕೈಗಾರಿಕೆಯಿಂದ ಸಾಲ ಹಾಗು ವಿದೇಶದ ಕೈಗಾರಿಕೆಯ ಪ್ರವೃತ್ತಿಯ ಸಾಲ.
5. ಮಾ.ಸ.ಟ್ಯಾ. (OMR) ನೋಟು ಪ್ರತಿ ಪ್ರತಿ ಸಾಂದ್ರತೆ ಬಿಡುವ ಸ್ಥಳದ ಸಾಲ ಹಾಗು ವಿದೇಶದ ಕೈಗಾರಿಕೆಯಿಂದ ಸಾಲ ಹಾಗು ವಿದೇಶದ ಕೈಗಾರಿಕೆಯ ಪ್ರವೃತ್ತಿಯ ಸಾಲ.
8. ಯಾರು ಕೈಗಾರಿಕೆಯ ಪ್ರತಿ ಪ್ರತಿ ಸಾಂದ್ರತೆ ಬಿಡುವ ಮಾ.ಸ.ಟ್ಯಾ. (OMR) ನೋಟು ಪ್ರತಿ ಪ್ರತಿ ಸಾಂದ್ರತೆ ಬಿಡುವ ಮಾ.ಸ.ಟ್ಯಾ. (OMR) ನೋಟು ಪ್ರತಿ ಪ್ರತಿ ಸಾಂದ್ರತೆ ಬಿಡುವ ಮಾ.ಸ.ಟ್ಯಾ. (OMR) ನೋಟು ಪ್ರತಿ ಪ್ರತಿ ಸಾಂದ್ರತೆ ಬಿಡುವ.

Note: English version of the instructions is printed on the front cover of this booklet.
Instructions to Candidates

1. The Question Booklet containing 100 questions and the OMR answer sheet is given to you.

2. All questions are compulsory, each question carry one mark.

3. During the examination,
   - Read the questions carefully.
   - Completely darken/shade the relevant oval against Question No. in the OMR answer sheet, using blue/black ball point pen. Do not try to alter the entry and not do any stray marks on OMR Sheet.
   - Ex: In a question paper if No. 3 is correct answer for Question No. 20, then darken in OMR answer sheet shade circle 3 using blue/black ball point pen as follows.

   20. 1 2 3  (This is an example only)

4. If more than one oval is darkened for a given question, such answer is treated as wrong and no marks will be given.

5. The candidate and Room Supervisor should sign in the OMR sheet.

6. Candidate should return the OMR answer sheet only to the room supervisor before leaving the examination hall.

7. The calculator, mobiles and any other electronic equipments are not allowed inside the examination hall.

8. English version of the question paper will be considered as final, in case of any dispute arising out of variation in translation version.
# SCHOLASTIC APTITUDE TEST

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1. The current in the circuit shown below is

\[ \frac{2}{3} \times 2 = \frac{4}{3} \]

1) 1.5 A  2) 0.5 A  3) 2.5 A  4) 0.66 A

2. A Heating unit of an electric stove is rated at 880 W. It is connected to a power supply of 220 V the current it will consume

1) 2 A  2) 6 A  3) 4 A  4) 8 A

3. A wire of resistance 12 ohm is bent in the form of a circular ring. The effective resistance between the two points on any diameter of the circle is

1) 24 Ω  2) 12 Ω  3) 6 Ω  4) 3 Ω

4. A person needs a lens of power = 4.5D for correction of his/her vision then the focal length of corrective lens is

1) +4.5 m  2) -0.22 m  3) +2.2 m  4) -0.45 m

5. Sheela cannot read newspaper when she holds it closer than 100 cm. The defect in her eye and the power of lens prescribed to her [Normal eye near point = 25 cm]

1) Myopia with +3D lens
2) Myopia with -3D lens
3) Hypermetropia with -3D lens
4) Hypermetropia with +3D lens
6. A metallic rod falls under gravity with its ends pointing east and west, then

1) no e.m.f. induced at all
2) an e.m.f. induced in it as it cuts the magnetic lines of force
3) two e.m.f.s of equal but opposite signs are induced giving no net e.m.f.
4) its acceleration is equal to the product of g and the radius of the ring.

7. A bar magnet is used to pick up an iron nail

At which part P, Q and R is the easiest for the magnet to pick up the iron nail?

1) At P
2) At Q
3) At R
4) It makes no difference at any part

8. An athlete completes one round of a circular track of radius R in 40 seconds. The displacement at the end of 2 minutes 20 seconds will be

1) Zero
2) 2R
3) πR
4) 7πR

9. The amount of material that releases 4.5 x 10^{14} J of energy when it is completely converted into energy during a nuclear reaction [Given speed of light = 3 x 10^8 m/s]

1) 0.5 g
2) 5 g
3) 50 g
4) 500 g
10. For a nuclear reactor 48 KJ of energy is produced per minute. If the energy released per fission is $3.2 \times 10^{-11}$ J then the number of fissions which would be taking place in a reactor per second is
1) $5 \times 10^{14}$
2) $2 \times 10^{14}$
3) $5.2 \times 10^{13}$
4) $2.5 \times 10^{13}$

11. Select the correct statement:
1) A lens with + 2D power and + 0.5 m focal length is convex lens.
2) A lens with + 2D power and + 0.5 m focal length is convex lens.
3) A lens with − 2D power and + 0.5 m focal length is concave lens.
4) A lens with + 2D power and − 0.5 m focal length is concave lens.

12. The magnification of image formed at a distance of 4 cm by a needle when it is placed at a distance of X cm away from a convex mirror of focal length 12 cm
1) − 0.66
2) + 0.66
3) − 1.5
4) + 1.5

13. The speed of sound in air at NTP is 332 m/s. If air pressure becomes four times the normal then the speed of sound waves will
1) double
2) quadruple
3) remain the same
4) become $\frac{1}{4}$ of the original value
14. An isoelectronic species are
a. Na$^+$ b. Al$^{13+}$ c. Mg$^{2+}$ d. Ca$^{2+}$
1) a, b and c 2) a, c and d 3) a, b and d 4) a, b, c and d

15. Identify the correct order of elements according to their metallic character.
1) B > Al > Mg > K 2) Al > Mg > B > K 3) Mg > Al > K > B 4) K > Mg > Al > B

16. Identify the correct representation of reaction occurring during chloralkali process.
1) $2\text{NaCl}_2(\ell) + 2\text{H}_2\text{O}_2(\ell) \rightarrow 2\text{NaOH}_2(\ell) + \text{Cl}_2(\ell) + \text{H}_2(\ell)$
2) $2\text{NaCl}_{(aq)} + 2\text{H}_2\text{O}_2(\ell) \rightarrow 2\text{NaOH}_{(aq)} + \text{Cl}_2(\ell) + \text{H}_2(\ell)$
3) $2\text{NaCl}_{(aq)} + 2\text{H}_2\text{O}_2(\ell) \rightarrow 2\text{NaOH}_{(aq)} + \text{Cl}_2(\ell) + \text{H}_2(\ell)$
4) $2\text{NaCl}_{(aq)} + 2\text{H}_2\text{O}_2(\ell) \rightarrow 2\text{NaOH}_{(aq)} + \text{Cl}_2(\ell) + \text{H}_2(\ell)$

17. Identify the sets of quantum numbers which are not possible?
1) $n = 0, l = 0, m_l = 0, m_s = +\frac{1}{2}$
2) $n = 1, l = 0, m_l = 0, m_s = -\frac{1}{2}$
3) $n = 1, l = 1, m_l = 0, m_s = +\frac{1}{2}$
4) $n = 2, l = 1, m_l = 0, m_s = -\frac{1}{2}$
1) a and b 2) a and c 3) a and d 4) b and d
18. An example(s) for endothermic process(es) is (are)
a. Dilution of sulphuric acid
b. Sublimation of dry ice
c. Condensation of water vapours
d. Evaporation of water
1) a and c 2) b only
3) c only 4) b and d

19. X → Alkaline KMnO₄ + Heat → Y
Y + X → Esterification (acid) → Z
Identify X, Y and Z.
1) Ethanoic acid, Ethanol and Ethylethanoate
2) Ethanol, Ethylethanoate and Ethanoic acid
3) Ethanol, Ethanoic acid and Ethylethanoate
4) Ethanoic acid, Ethylethanoate and Ethanol

20. Identify the solid acid at room temperature.
1) COOH 2) CH₃COOH
3) H₂CO₃ 4) HCOOH

Reason (R): In the combustion of methane, water is one of the product.
Select the correct option from the given alternatives.
1) Both A and R are true, but R is not the correct explanation of A
2) A is true but R is false
3) A is false but R is true
4) Both A and R are false
22. Assertion (A): Sodium Chloride formed by the action of Chlorine gas on sodium metal is a stable compound.
Reason (R): Sodium and Chloride ions acquire octet configuration in sodium Chloride formation.
Select the correct option from the given alternatives.
1) A and R are correct and R is the correct explanation of A
2) A and R are correct, but R is not the correct explanation of A
3) A is true but R is false
4) Both A and R are false

23. Choose the correct statements about the given chemical reaction.
\[ 3\text{Fe(s)} + 4\text{H}_2\text{O(g)} \rightarrow \text{Fe}_3\text{O}_4(s) + 4\text{H}_2(g) \]
a. Iron is getting oxidised.
b. Water is getting reduced.
c. Water is acting as a reducing agent.
d. Water is acting as an oxidising agent.
1) a, b and c
2) c and d
3) a, b and d
4) b and c

24. The half life of a radioisotope is 4 hours. If the initial mass of the isotope was 200 g, the mass remaining after 24 hours undecayed
1) 1.042 g
2) 3.125 g
3) 2.084 g
4) 4.167 g

25. The element 'X' has an electronic configuration 2, 8, 3. Element 'Y' has an electronic configuration 2, 8, 7. The chemical formula of the compound formed when they react is
1) Ionic XY_3
2) Covalent X_3Y
3) Covalent XY_3
4) Ionic X_3Y

26. Identify the olfactory indicators.
1) Vanilla and turmeric
2) Vanilla and petunia
3) Vanilla and clove
4) Vanilla and hydrangia
27. Read the following statements and select the correct option.

A: When the body size of animals is large, the diffusion pressure alone cannot take care of oxygen delivery to all parts of the body.

B: In human beings haemoglobin pigments take up oxygen from the air in the lungs to carry it to tissues which are deficient in oxygen.

1) A is true and B is false
2) A is false and B is true
3) Both A and B are true
4) Both A and B are false


Reason (R): Each plant part takes care of its own gas exchange needs.

Select the correct option from the given alternatives.
1) A is true and R is false
2) A is false and R is true
3) Both A and R are true and R explains A
4) Both A and R are true but R does not explain A

29. Match Column – I with Column – II and identify the correct answer.

<table>
<thead>
<tr>
<th>Column – I</th>
<th>Column – II</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Oxytocin</td>
<td>i. Reabsorption of water</td>
</tr>
<tr>
<td>B. Luteinizing hormone</td>
<td>ii. Regulation of diurnal rhythm of our body</td>
</tr>
<tr>
<td>C. Vasopressin</td>
<td>iii. Uterus contraction during child birth</td>
</tr>
</tbody>
</table>

1) A – iii, B – v, C – i, D – ii
2) A – ii, B – iii, C – iv, D – i
3) A – v, B – i, C – ii, D – iv
4) A – v, B – iv, C – i, D – iii
30. The recessive character in pea plant in the following
1) Violet flower
2) Axillary flower
3) Round seed
4) Green seed

31. Assertion (A) : The walls of the ventricle are thicker than the walls of the auricles.
Reason (R) : The ventricles have to pump blood to long distances and various organs.
Select the correct option from the given alternatives.
1) A is true and R is false
2) A is false and R is true
3) Both A and R are true and R explains A
4) Both A and R are true but R does not explain A

32. The presence of following kind of bacteria in water indicates contamination by disease causing micro-organisms
1) Agrobacterium
2) Coliform
3) Pseudomonas
4) Lactobacillus

33. Read the following statements and select the correct option.
A: Imbibition is a special type of phenomenon by which plant cells absorb water.
B: The rupturing of seed coat in germinating seeds is due to imbibition.
1) Both A and B are true
2) Both A and B are false
3) A is true and B is false
4) A is false and B is true
34. Identify the correct statements about chlorophyll.
   A. Chlorophyll is highly sensitive to light.
   B. There are varieties in Chlorophyll.
   C. The formation of Chlorophyll does not depend on the exposure of the plant to light.
   D. Nutritional deficiencies of minerals cause loss of chlorophyll.
   1) A and C only
   2) A, B and D only
   3) B, C and D only
   4) A and D only

35. Haemophilia is more common in males because it is a
   1) recessive character carried by Y chromosome
   2) dominant character carried by Y chromosome
   3) dominant trait carried by X chromosome
   4) recessive trait carried by X chromosome

36. A person was found to have reduced level of reabsorption of water and glucose due to kidney damage. The following labelled part would be the site of damage for this patient.

   1) Q
   2) P
   3) S
   4) R
37. Examine the following statements and select the correct option.
   A: Ethylene promotes fruits ripening.
   B: Gibberelins are used to increase the length of grape stalks.
   1) A is true and B is false
   2) A is false and B is true
   3) Both A and B are true
   4) Both A and B are false

38. Identify the correct statements about blood.
   A. Platelets are produced in the bone marrow.
   B. When haemoglobin combines with oxygen it forms carboxyhaemoglobin.
   C. Calcium ions play an important role in clotting of blood.
   D. Fibrins are formed by the conversion of fibrinogen by the enzyme thrombin.
   1) A and B only
   2) B, C and D only
   3) B and D only
   4) A, C and D only

39. A farmer wants to save his crops from heavy rain and likes to have early flowering. The technique that could be used in this situation
   1) Photoperiodism
   2) Vernalization
   3) Phototropism
   4) Polyploidy

40. Assertion (A) : Genetic variation is disadvantageous to a population.
   Reason (R) : It does not enable any individual to adapt to the environment.
   Select the correct option from the given alternatives.
   1) Both A and R are true and R explains A
   2) Both A and R are false
   3) A is true and R is false
   4) A is false and R is true
41. The location shown on the map of India was a French Colony

1) Chandranagore  2) Goa
3) Mahe  4) Pondicherry

42. Assertion (A): The Mughal Emperor Jahangir issued a royal permission to English East India Company to establish their warehouse factory.

Reason (R): English Company established their first warehouse factory at Surat.

Select the correct option from the given alternatives.
1) A is true R is false
2) R is true A is false
3) Both A and R are correct. R is the correct explanation of A
4) Both A and R true, but R is not correct explanation of A

43. The correct chronological order of the treaties signed between British and Native States.
A. The treaty of Salbai, the treaty of Srirangapatna, the treaty of Amritsar and the treaty of Mangalore.
B. The treaty of Salbai, the treaty of Mangalore, the treaty of Srirangapatna and the treaty of Amritsar.
C. The treaty of Amritsar, the treaty of Mangalore, the treaty of Salbai and the treaty of Srirangapatna.
D. The treaty of Amritsar, the treaty of Salbai, the treaty of Srirangapatna and the treaty of Mangalore.
1) A  2) B
3) C  4) D
44. The List ‘A’ contains the great personalities and the List ‘B’ with their works. The correct option that matches exactly.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Montesque</td>
<td>i. Uncle Tom’s Cabin</td>
</tr>
<tr>
<td>B. Rousseau</td>
<td>ii. Common Sense</td>
</tr>
<tr>
<td>C. Mazini</td>
<td>iii. The Spirit of Laws</td>
</tr>
<tr>
<td>D. Harriet Stowe</td>
<td>iv. Social Contract</td>
</tr>
<tr>
<td></td>
<td>v. Italy Austria Papacy</td>
</tr>
</tbody>
</table>

A  B  C  D
1) iii iv v i
2) iv iii i ii
3) v iv i iii
4) ii iv iii i

45. The correct provision passed by the British Government in India in their chronological order is

A. Supreme Court of Judicature was established at Calcutta.
B. A new institution named ‘Board of Controllers’ consisting of six Commissioners was started.
C. The post of Governor General was changed into Viceroy.
D. Representation of the Regional Council was allowed Indians through election based on religion.

1) D C A B
2) A B C D
3) B A D C
4) C D B A

46. Choose the correct statements with reference to the Indian judiciary system before the British rule in northern part of India.

A. All Indians were treated with only the Sharia laws of Mughals
B. Criminal courts were under the control of Qajis
C. Civil courts were called ‘Diwani Adalat’
D. Hindus were dispensed justice as per the Hindu scriptures

1) A and B only
2) A, B and C only
3) C and D only
4) B, C and D only

44. ‘A’ list contains personalities whereas ‘B’ list with their works. The correct option that matches exactly.

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<td></td>
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</tr>
</tbody>
</table>

A  B  C  D
1) iii iv v i
2) iv iii i ii
3) v iv i iii
4) ii iv iii i
47. The correct statement related to Sathya Shodak Samaj is
A. The samaj started the Cow Protection Association  
B. The samaj opened the schools for shudras and girls 
C. The samaj advocated polytheism  
D. The samaj encouraged vedic education

1) A 2) B 3) C 4) D

48. Select the correct order of events related to freedom struggle starting from North to South as shown in the map.

A. Dandi Sathyagraha took place  
B. The Moplah uprising against British 
C. The Declaration of Poorna Swaraj  
D. The Quit India Movement was launched

i) C ii) A iii) D iv) B
1) C A D B 2) B D A C 3) D C B A 4) A B C D

49. The chronological order of the incidents of the first war of Indian Independence.
A. The Queen of Britain passed a Declaration assuring a Stable Government for Indians. 
B. A group of soldiers declared Bahadurshah Zafar as the emperor of India. 
C. The Sepoys of Meerut revolted against their British Officers. 
D. Tantia Tope was executed by British at Shivapuri.

i) D ii) C iii) B iv) A
1) D C B A 2) B A C D 3) A D B C 4) C B A D
50. The correct group of statements related to the functions and characteristics of banks.

A. Acceptance of deposits and deals with money.
B. Issuing national savings certificates.
C. Issuing letters of credit guarantee.
D. Discounting of bills.

1) A and B only
2) A, C and D only
3) A, B and C only
4) C and D only


Reason (R): The R.B.I. controls the supply of money through reverse repo rate.

Select the correct option from the given alternatives.

A. A is correct and R is the correct explanation of A
B. R is correct and A is wrong
C. Both A and R are wrong
D. A is correct and R is not the correct explanation of A

1) A 
2) B 
3) C 
4) D

52. Observe the following pictures of Entrepreneurs and identify them in correct order of their achievements.

I II III IV
A. Successful in getting listed the company first on NASDAQ.
B. Established a small scale Anand Milk Dairy (Amul) in Kaira District.
C. Awarded the best entrepreneur of the year 2001 by the Ernest Young.
D. Took the advantage of open sky policy of the government and started JET.

1) B C D A
2) A C B D
3) B D C A
4) C B A D
53. Select the correct statements regarding the advantage of registration of partnership firms.

A. A registered firm can file a suit in court of law against third party.
B. A registered firm can file a case against the other partners against the loans they owe to the firm.
C. Partnership firm partners can not file case against their own firm.
D. A registered partnership firm can not be dissolved.

1) A and C only
2) C and D only
3) D and A only
4) A and B only

54. Assertion (A) : Service charges are collected from current account holder by the banks.
Reason (R) : This account is opened by business men only for the development of their business.
Select the correct option from the given alternatives.

1) R is correct, A is wrong
2) Both R and A are wrong
3) R is correct and A is exactly related to R
4) R is correct and A is not exactly related to R

55. The correct option organised on the basis of evolution and growth of commerce

A. International trade stage
B. Money economy stage
C. Agricultural stage
D. Pastoral stage

1) A B D C
2) B A C D
3) D C B A
4) C B A D
56. Choose the group of correct statements related to Mica.
   a. It is an important non-metallic mineral.
   b. It can be easily split into very thin.
   c. It is transparent and heat resistant.
   d. It is used in electrical industry, telephone, aeroplanes.
   1) a, b and c  
   2) a and d 
   3) a, b and d  
   4) a, b, c and d

57. Choose the correct group of statements with respect to “The Siwalik Hills”.
   a. They are the outer most ranges or foot hills of the Himalayas.
   b. They are the lowest range of the Himalayas.
   c. Their height is 600 to 1500 mts. and width is 15 to 150 k.m.
   d. They extend from Rajasthan to Assam.
   1) a, b and c 
   2) b, c and d 
   3) a, b, c and d  
   4) a, c and d

58. Match Column ‘A’ with Column ‘B’ and choose the correct matching.

<table>
<thead>
<tr>
<th>Column – A</th>
<th>Column – B</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Karnataka</td>
<td>i. Kala balsakhis</td>
</tr>
<tr>
<td>b. Uttar Pradesh</td>
<td>ii. Mango showers</td>
</tr>
<tr>
<td>c. West Bengal</td>
<td>iii. Coffee showers</td>
</tr>
<tr>
<td>d. Kerala</td>
<td>iv. Andhais</td>
</tr>
<tr>
<td>v. Tea blossom</td>
<td></td>
</tr>
</tbody>
</table>

   a b c d
   1) iii i ii iv
   2) i iii i v
   3) iii iv i ii
   4) iv iii ii v
59. Read the following statements and select the correct option.

A. It is a method of farming in which a large amount of capital and labour are applied per unit of land.
B. Under this type of farming, land is cultivated throughout the year.
C. Farmers try to raise two or more crops to get maximum production from small land holdings.
D. It is common in the fertile and irrigated areas of the country.

1) Shifting farming
2) Humid farming
3) Plantation farming
4) Intensive farming

60. Match Column ‘A’ with Column ‘B’ and choose the correct answer.

<table>
<thead>
<tr>
<th>Column – A</th>
<th>Column – B</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Yamunotri</td>
<td>i. Valley</td>
</tr>
<tr>
<td>b. Armakonda</td>
<td>ii. Hill station</td>
</tr>
<tr>
<td>c. Kulu</td>
<td>iii. Glacier</td>
</tr>
<tr>
<td>d. Ranikhet</td>
<td>iv. Peak</td>
</tr>
<tr>
<td>v. Ground water</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>iii</td>
<td>iv</td>
<td>i</td>
</tr>
<tr>
<td>2</td>
<td>ii</td>
<td>iv</td>
<td>i</td>
</tr>
<tr>
<td>3</td>
<td>iv</td>
<td>iii</td>
<td>ii</td>
</tr>
<tr>
<td>4</td>
<td>iii</td>
<td>iv</td>
<td>i</td>
</tr>
</tbody>
</table>
61. Match Column 'A' with Column 'B' and choose the correct answer.

<table>
<thead>
<tr>
<th>Column – A</th>
<th>Column – B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Black buck</td>
<td>i. Extinct</td>
</tr>
<tr>
<td>B. Asiatic elephant</td>
<td>ii. Rare</td>
</tr>
<tr>
<td>C. Andaman wild pig</td>
<td>iii. Endangered</td>
</tr>
<tr>
<td>D. Himalayan brown bear</td>
<td>iv. Vulnerable</td>
</tr>
</tbody>
</table>

1) A – ii B – v C – i D – iii
2) A – iii B – iv C – v D – ii
3) A – v B – iii C – iv D – i
4) A – iii B – iv C – v D – i

62. The Himalayan yew species is in danger because

1) A chemical compound called 'Taxol' is extracted from the bark to cure cancer.
2) The hide of the animal is extracted for producing percussive instruments.
3) The birds feathers are colourful and they are collected by killing.
4) The insecticides have brought adverse effects on them.

63. Read the following statements and select the correct option.

A. During the time of Chandragupta Maurya, dams, lakes and irrigation systems were extensively.
B. In the 14th century, the tank in Hauz Khas in Delhi was constructed by Ilutmish for supplying water to Siri Fort area.

1) A is false and B is true
2) A is true and B is false
3) Both A and B are true
4) Both A and B are false
64. Read the following statements and write the correct option with which all those links.

A. This soil is suitable for cultivation of coffee with adequate doses of manures and fertilizers.
B. This soil is mainly found in Karnataka, Kerala, Tamil Nadu, Madhya Pradesh and the hilly areas of Odisha and Assam.
C. Humus content in this soil is low.
D. It is found in areas with high temperature and heavy rainfall.

1) Alluvial Soil  2) Black Soil  3) Red Soil  4) Laterite Soil

65. Choose the correct type of soil with reference to the shaded areas in the given map.

1) Mountain Soils
2) Black Soils
3) Laterite Soils
4) Red and Yellow Soils
66. Choose the correct group of answer with regarding Child Adolescent Labour Prohibition and Regulation Act.

a. No children below 14 years shall be employed in any sector for any reasons.

b. As per this Act, children between the age of 15 and 18 are considered as Adolescent children.

c. According to the Article 14 of this Act, a fine of rupees 50,000 and 2 years imprisonment is imposed on violators.

d. If children below 14 years are engaged in any household activities, the parents and the head of the family is declared as offenders.

1) a and b only  2) a, b, c and d  3) a, b and c only  4) c and d only

67. Arrange the following Acts in Chronological order.

a. Civil Rights Protection Act.

b. Untouchability Crime Act


d. Protection of Children from Sexual Offences Act.

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

68. “Culture is that complex whole which includes knowledge, belief, art, rules and regulations, traditions and any other capabilities earned by the human being as a member of society” It was defined by

1) Malinowski

2) E.B. Tylor

3) Max Weber

4) Emile Durkheim

66. 66. "Culture is that complex whole which includes knowledge, belief, art, rules and regulations, traditions and any other capabilities earned by the human being as a member of society” It was defined by

1) Malinowski

2) E.B. Tylor

3) Max Weber

4) Emile Durkheim
69. Choose the correct option relating to untouchability Crime Act.
   A. The Government of India has implemented this Act in 1955.
   B. This Act was renamed as 'Civil Rights Protection Act' in 1976.
   C. According to this Act, practice of untouchability is a crime.
   D. This Act consisted of certain mistakes which were amended later.
   
   1) A and B
   2) B and C
   3) B, C and D
   4) A, B, C and D

70. In Column 'A' the works and in Column 'B' their authors are given. Choose the correct matching.

   Column – A       Column – B
   a. Buddha and his Dhamma   i. G.S. Ghruye
   b. Indian Saints   ii. Iravati Karve
   c. Institutions and Relationship   iii. A. R. Desai
   d. Indian rural Sociology   iv. C. Parvathamma
   v. Dr. B.R. Ambedkar

   a b c d
   1) v ii iii iv
   2) ii iii iv v
   3) iii iv v i
   4) v i ii iii
71. Which of the following statement/statements is/are not correct related to the President of India?
   a. appoint the Governors to the States
   b. addresses the joint session of both the Houses of Parliament
   c. appoint the Chief Ministers of the States
   d. nominates 12 members to the Rajya Sabha

   Choices:
   1) a and c only
   2) b and d only
   3) c only
   4) a only

72. The President of India may declare ‘National Emergency’
   a. External aggression
   b. Internal disturbances
   c. Natural disasters
   d. Financial crises

   Choices:
   1) a and b only
   2) b and c only
   3) c and d only
   4) a only

73. Identify the correct chronological sequence in which among the following became Secretary Generals of UNO.
   i. Antonio Guterres
   ii. U. Thant
   iii. Kofi Annan
   iv. Boutros Ghali

   Choices:
   1) i, iii, ii, iv
   2) ii, iv, iii, i
   3) iii, iv, i, ii
   4) iv, ii, i, iii

74. Choose the correct sequence to indicate the following statements as True (T) or False (F).
   a. RTI is an implied Fundamental Right
   b. RTI has been included in Article 19(1) of the Constitution
   c. RTI came into force on October 12, 2005

   Choices:
   1) FFF
   2) TTT
   3) FFT
   4) FTT
75. Read the following statements and select the correct option.

Assertion (A) : Directive Principles are enshrined in the Constitution for the Government Administration.
Reason (R) : People can question in the court for not implementing Directive Principles.

1) A is false but R is true
2) R is false but A is true
3) A and R are true and R is correct explanation of A
4) A and R are true but R is not correct explanation of A

76. Indicators involved in Human Development Index (HDI)

1) National Income, Employment Rate and Sex Ratio
2) Per Capita Income, Life Expectancy and Literacy Rate of Women
3) Life Expectancy, Literacy Attainment and Purchasing Power of People
4) National Income, Purchasing power of People and Sex Ratio

77. Identify the correct statement from the following.

1) As the literacy of people increases, birth rate also increases
2) As the literacy of people increases, birth rate decreases
3) As the literacy of people decreases birth rate also decreases
4) There is no relation between literacy of people and birth rate
78. Consider the following aspects of Fiscal Deficit.
A. Primary Deficit = \( \frac{\text{Fiscal Deficit} - \text{Interest Payment}}{\text{Revenue}} \)
B. Revenue Deficit = \( \frac{\text{Total Revenue} - \text{Total Expenditure}}{\text{Expenditure}} \)

Reference to the above
1) 'A' is correct, 'B' is not correct
2) 'B' is correct, 'A' is not correct
3) Both 'A' and 'B' are correct
4) Both 'A' and 'B' are not correct

79. Aspects of Money Supply Concepts are given below.
   a. Currency Notes
   b. Coins
   c. Savings deposits in Post Office
   d. Time/term deposits of Commercial Banks

The Group which classifies the above aspects as 'Narrow' and 'Broad' Money respectively.
1) a, b and c, d
2) a, c and b, d
3) a, d and b, c
4) b, d and a, c

80. Statistics related to 2011 census are given below. Identify the correctly matched ones.

   List – A       List – B
   A. Work participation rate i. 30.7%
   B. People living in villages ii. 65.46%
   C. Female literacy rate iii. 39.8%
   D. 0 – 14 years children iv. 68.8%

   Choices:
   1) A – iv, B – iii, C – i, D – ii
   2) A – iii, B – iv, C – ii, D – i
   3) A – iv, B – ii, C – i, D – iii
   4) A – iii, B – iv, C – i, D – ii
81. If the sum of ‘n’ terms of an arithmetic progression is \( S_n = 3n + 2n^2 \) then its common difference is
1) 9  
2) 8  
3) 4  
4) 3

82. The value of
\[
\left( \frac{2010}{2\sqrt{7} - 3\sqrt{3}} \right) \left( \frac{4020}{55 + 12\sqrt{21}} \right)
\]
is
1) -1  
2) 0  
3) 1  
4) 2

83. If the graphs of \( x - y = 2 \) and \( kx + y = 3 \) ( \( k \) is a constant) intersect at a point in first quadrant then the value of \( k \) is
1) equal to -1  
2) greater than -1  
3) less than \( \frac{4}{3} \)  
4) between -1 and \( \frac{4}{3} \)

84. In the given circle with centre ‘O’, K and L are the mid points of equal chords AB and CD respectively. \( \angle KLB = 25^\circ \) then the value of \( \angle KLB \) is equal to
1) 125°  
2) 115°  
3) 105°  
4) 90°

85. A tangent of length ‘L’ is drawn from a point ‘A’ to a circle of radius ‘r’. The length of tangent is \( \frac{4}{3} \) of ‘r’, then the shortest distance from point A to circle is
1) \( \frac{r}{2} \)  
2) \( \frac{2r}{3} \)  
3) \( \frac{L}{2} \)  
4) \( \frac{2L}{3} \)
86. In the figure a semicircle with centre ‘O’ is drawn on AB. If \( \angle ABP = 60° \) then the ratio of larger to smaller shaded region is

\[
\frac{4\pi}{2} \quad \frac{2\pi}{2}
\]

1) \( \frac{4\pi - 2\sqrt{3}}{2\pi - 2\sqrt{3}} \)
2) \( \frac{4\pi - 3\sqrt{3}}{3\pi - 3\sqrt{3}} \)
3) \( \frac{4\pi - 3\sqrt{3}}{2\pi - 3\sqrt{3}} \)
4) \( \frac{2\pi - 2\sqrt{3}}{\pi - 2\sqrt{3}} \)

87. The value of ‘C’ if \( \left( \frac{C}{2}, 14 \right) \) is the mid point of the line joining the points \((-3, 8)\) and \((-15, 20)\) is

\[
-\frac{15}{2}
\]

1) 2
2) -9
3) -18
4) -15

88. If the line segment joining \((2, 3)\) and \((-1, 2)\) is divided internally in the ratio 3 : 4 by the graph of the equation \(x + 2y = k\) then the value of ‘k’ is

\[
\frac{5}{7} \quad \frac{31}{7} \quad \frac{36}{7} \quad \frac{41}{7}
\]

1) \( \frac{5}{7} \)
2) \( \frac{31}{7} \)
3) \( \frac{36}{7} \)
4) \( \frac{41}{7} \)
89. If \((\sin \theta + \cosec \theta)^2 + (\cos \theta + \sec \theta)^2 = \tan^2 \theta + \cot^2 \theta + k\) then the value of ‘\(k\)’ is
   1) 9
   2) 7
   3) 4
   4) 3

90. If \((3 \sin \theta) + (5 \cos \theta) = 5\) then the value of \((5 \sin \theta) - (3 \cos \theta)\) is
   1) ±4
   2) ±3
   3) ±5
   4) ±2

91. If the roots of \(x^2 - px + q = 0\) are two consecutive integers then the value of \(p^2 - 4q\) is
   1) 4
   2) 3
   3) 2
   4) 1

92. The mean of ‘\(n\)’ numbers of a series is \(\bar{x}\). If the sum of first \((n - 1)\) terms is ‘\(k\)’ then the \(n^{th}\) number is
   1) \(\bar{x} - k\)
   2) \(n \bar{x} - k\)
   3) \(\bar{x} - nk\)
   4) \(n(\bar{x} - k)\)

93. Three squares of a chess board are selected at random. The probability of getting two squares of one colour and other of a different colour is
   1) \(\frac{16}{21}\)
   2) \(\frac{8}{21}\)
   3) \(\frac{3}{32}\)
   4) \(\frac{3}{8}\)

94. The string of a kite of length 100 m makes an angle of 60° with the horizontal ground. Imaging that there is no slack in the string, the height of the kite from the ground is
   1) \(50\sqrt{3}\) m
   2) \(100\sqrt{3}\) m
   3) \(50\sqrt{2}\) m
   4) 100 m

95. The tip of a partially broken tree touches the ground at a point 10 m from foot of it and makes an angle of elevation of 30° from the ground. Then, the height of the tree is
   1) \(10\sqrt{3}\) m
   2) \(10\sqrt{3}\) m
   3) \(20\sqrt{3}\) m
   4) \(30\sqrt{3}\) m
96. If $l$, $m$ and $n$ are zeroes of the polynomial $f(x) = 2x^3 + 5x^2 + 6x + 10$ then the value of

$$\frac{1}{l} + \frac{1}{m} + \frac{1}{n}$$

is

1) $\frac{5}{2}$
2) $\frac{3}{5}
3) $\frac{5}{3}$
4) $\frac{2}{5}$

97. The perimeters of similar triangles $\triangle ABC$ and $\triangle DEF$ are 60 cm and 36 cm respectively. If $BC = 18$ cm then measure of $EF$ is

1) 1.08 cm
2) 30 cm
3) 10.8 cm
4) 8 cm

98. If $PQRS$ is a square whose vertices are on the sides of a square $ABCD$ then the ratio of the areas of square $PQRS$ to square $ABCD$ is

1) $1:2$
2) $1:\sqrt{2}$
3) $2:1$
4) $\sqrt{2}:1$

99. The volume of a burette of height 82.1 cm obtained by attaching a hemispherical nob on one side of a cylinder of height 80 cm is

1) 1.1 Lt.
2) 1.0 Lt.
3) 1.2 Lt.
4) 1.4 Lt.

100. A conical vessel of radius 6 cm and height 8 cm is completely filled with water. A metal sphere is lowered into the water. The size of the sphere is such that when it touches the inner surface, it just gets immersed. Then, the fraction of water that overflows from the conical vessel is

1) $\frac{3}{8}$
2) $\frac{5}{8}$
3) $\frac{7}{8}$
4) $\frac{5}{16}$
The text on the page is handwritten and contains various symbols and equations, making it difficult to transcribe accurately. The text seems to include mathematical or scientific notations, possibly related to a problem or calculation. There are also some doodles and drawings, including an eye and a sign with the name "Sheetal." Due to the handwriting style, specific content is not clearly legible.
1. Fill in the optical form (OMR) to indicate your answers for the 100 questions in the booklet. Carefully follow the instructions.

2. Ensure that your answers are correct and legible. Make sure your answers are clearly visible.

3. Directions:
   - Fill in the optical form (OMR) accurately and completely. No corrections are allowed.
   - For questions 1 to 30, fill in the optical form (OMR) only on the first page. Questions 31 to 60 are not part of this booklet.
   - The instructions are printed on the front cover of this booklet.

20. 1 2 • 4 (Answer the question)

4. Include your answers for questions 31 to 60. These questions are not part of this booklet.

5. Fill in the optical form (OMR) correctly. No corrections are allowed.

6. Mark your answers for questions 31 to 60. These questions are not part of this booklet.

7. Fill in the optical form (OMR) correctly. No corrections are allowed.

8. Include your answers for questions 31 to 60. These questions are not part of this booklet.

Note: English version of the instructions is printed on the front cover of this booklet.