



8011

**GOVERNMENT OF PUDUCHERRY
DIRECTORATE OF SCHOOL EDUCATION**

QUESTION BOOKLET

MARCH 2022-23

**PART – I
MENTAL ABILITY TEST**

Centre Code No.

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Register No.

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INSTRUCTIONS

1. Answer all the questions. All questions carry one mark each
2. Since all questions are compulsory, do not try to read through the whole question paper before beginning to answer.
3. Begin with the first question and keep on trying one question after another till you finish all the question.
4. If you do not know the answer to any question, do not spend much time on it but pass on to the next one. If time permits, you can come back to the questions which you have left in the first instance and try them again.
5. Since the time allotted to this question paper is very limited, you should make the best use of it by not spending too much time on any one question.
6. Separate sheets have been provided for rough work in the Question Booklet itself.
7. The answers should be marked on a separate answer sheet provided in the Examination Hall.
8. The answer sheet has two parts corresponding to Part – I and Part –II of the Test.
9. Answer to each question is to be indicated by shading the number of the correct choice in the answer sheet with black ballpoint pen from amongst the ones given for the corresponding question in the test booklet.

PART I
MENTAL ABILITY TEST – MARCH 2022-23

8011

Duration: 90 minutes

Max Marks: 90

(Question: 1 to 10)

Directions: In Questions given the numbers in the figures are related. Identify the relationship that exists among the numbers in the figure from the given choices under each.

1)

3	4	9
2	5	2
6	7	?
36	140	18

(1) 1

(2) 7

(3) 11

(4) 18

2)

5	8	4	12
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8	12	3	12
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9	24	4	?
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(1) 12

(2) 16

(3) 18

(4) 20

3)

6	8	2	
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7	9	3	
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8	10	5	
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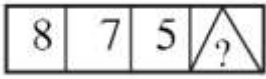
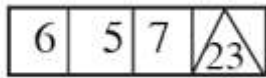
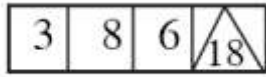
(1) 20

(2) 16

(3) 12

(4) 10

4)



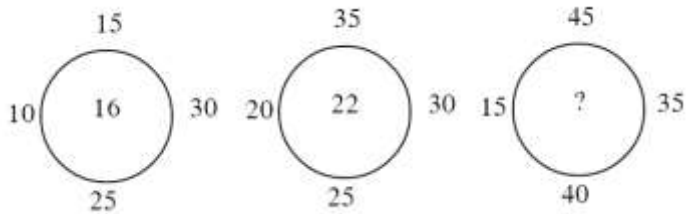
(1) 40

(2) 47

(3) 51

(4) 61

5)



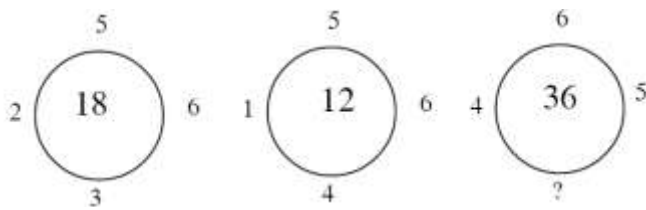
(1) 24

(2) 27

(3) 29

(4) 33

6)



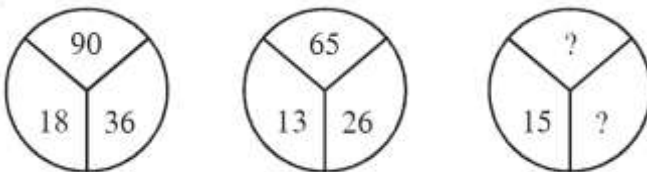
(1) 9

(2) 6

(3) 3

(4) 2

7)



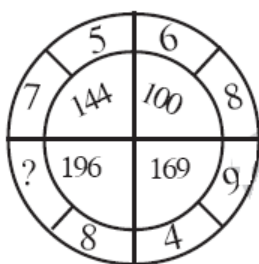
(1) 60, 85

(2) 45, 65

(3) 30, 75

(4) 15, 75

8)



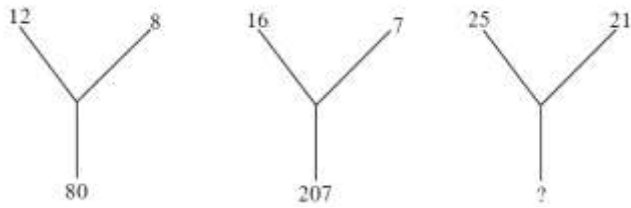
(1) 4

(2) 6

(3) 8

(4) 12

9)



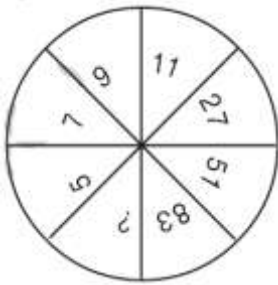
(1) 184

(2) 210

(3) 241

(4) 425

10)



(1) 123

(2) 145

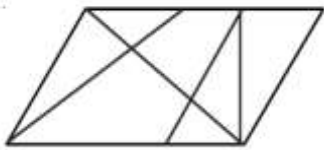
(3) 171

(4) 198

(Questions 11 to 15)

Directions: In Question given, identify the number of geometrical figures in the given diagrams and find the correct answer for each question and indicate.

11) How many triangles are there in the given figure?



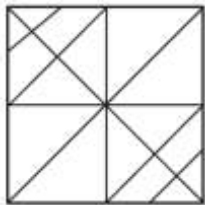
(1) 12

(2) 10

(3) 8

(4) 6

12) How many triangles are there in the given figure?



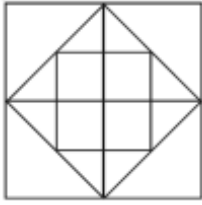
(1) 24

(2) 26

(3) 28

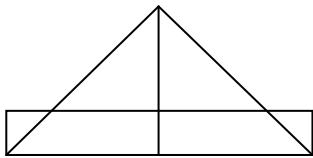
(4) 30

- 13) How many squares are there in the given figure?



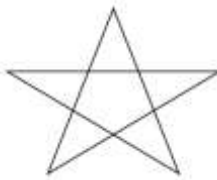
- (1) 6 (2) 8 (3) 10 (4) 12

- 14) How many triangles are there in the given figure?



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

- 15) How many triangles are there in the given figure?



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

Questions (16 to 20)

Look at the following series and identify what number should come next? In other words, do the numbers increase or decrease and by how much?

16. 7, 13, 21, ?, 43, 57

- (1) 27 (2) 29 (3) 31 (4) 35

17. 3, 6, 12, 21, 33, 48, ?

- (1) 57 (2) 63 (3) 66 (4) 69

18. 18, 23, 31, 42, 56, ?

- (1) 98 (2) 87 (3) 78 (4) 73

19. 7, 18, 40, 73, 117, ?

- (1) 215 (2) 205 (3) 201 (4) 172

20. 11, 13, 17, 19, ?, 25

- (1) 21 (2) 23 (3) 27 (4) 29

(Questions: 21 to 25)

Directions: In the following questions, a series of numbers have been given of which one number is wrong. Find the wrong number in each Question from amongst the four alternatives given and indicate.

21) 3, 7, 13, 27, 55, 107

(1) 13

(2) 27

(3) 55

(4) 107

22) 5, 6, 21, 18, 45, 38, 78

(1) 21

(2) 45

(3) 38

(4) 78

23) 480, 480, 240, 80, 20, 10

(1) 10

(2) 20

(3) 240

(4) 480

24) 2, 4, 7, 14, 17, 34, 37, 64

(1) 64

(2) 17

(3) 14

(4) 4

25) 2, 2, 3, 4, 4, 6, 5, 7

(1) 3

(2) 4

(3) 6

(4) 7

(Questions 26 to 30)

Directions: In the following questions, pairs of numbers are given. Among them three pairs follow a rule between themselves, whereas one does not. Identify the odd one to find the answer.

26) (1) 11, 23

(2) 31, 43

(3) 51, 63

(4) 71, 83

27) (1) 5, 12

(2) 8, 18

(3) 10, 25

(4) 12, 26

28) (1) 4, 32

(2) 6, 108

(3) 8, 128

(4) 10, 200

29) (1) 56, 7

(2) 81, 9

(3) 48, 6

(4) 32, 4

30) (1) 441, 12

(2) 256, 13

(3) 484, 16

(4) 289, 19

(Questions 31 to 35)

Directions: In the following questions, there is a question mark (?) in a blank space. Under each question one of the four alternatives given satisfies the relationships between the two terms to the left or to the right of the sign:: given in the question. Find the correct answer for each question.

31) 7 : 196 :: 8 : ?

(1) 224

(2) 256

(3) 272

(4) 324

32) 20 : 11 :: 102 : ?

(1) 48

(2) 51

(3) 52

(4) 55

33) 20 : 16 :: 30 : ?

(1) 49

(2) 36

(3) 25

(4) 16

34) 12 : 35 :: 16 : ?

(1) 63

(2) 55

(3) 47

(4) 32

35) $7/48 : 9/80 :: ? : 100/9999$

(1) $10/999$

(2) $100/999$

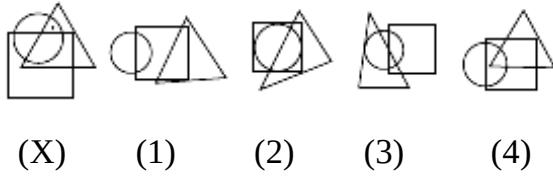
(3) $10/99$

(4) $100/99$

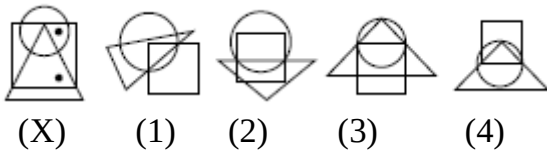
Directions: (Q. 36 to 39)

In each of the following questions, among all the alternatives marked (1), (2), (3) and (4), select the one which satisfies the same condition of placement of the dot(s) as in Fig.(X)

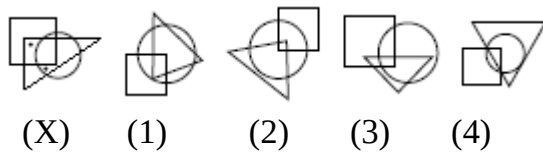
36)



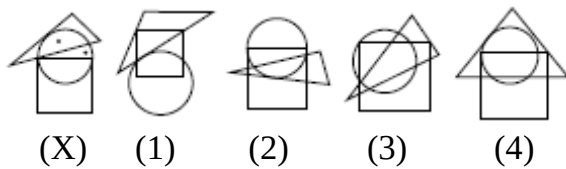
37)



38)

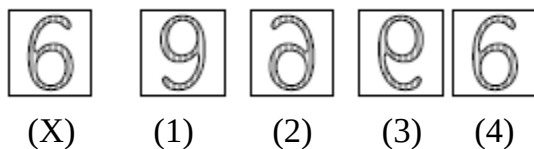


39)

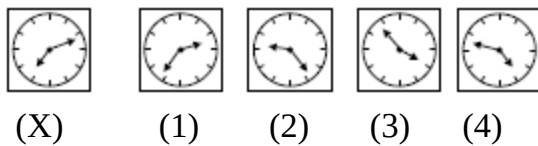


Directions: (Q. 40 to 42) In each of these questions, choose the correct mirror image of the figure (X) from four alternatives given along with it.

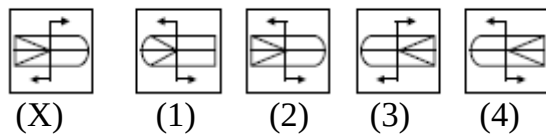
40)



41)

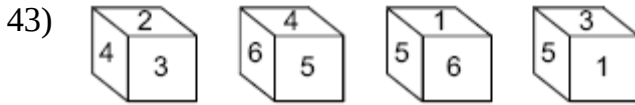


42)



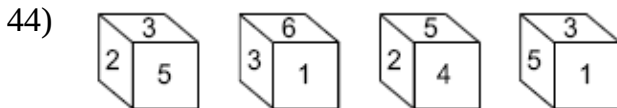
Directions: (Q. 43 to 45)

In these questions, different positions of a dice are given. Answer the question followed by figures?



Which number is opposite to 4?

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



Which number is opposite to 3?

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



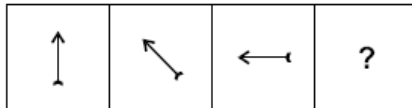
Which number is opposite to 2?

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

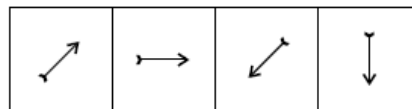
Directions: (Q. 46 to 50)

Select a suitable answer figure that would replace the question mark?

46) Problem Figures

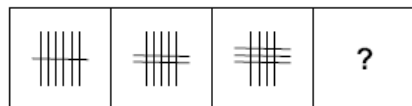


Answer Figures

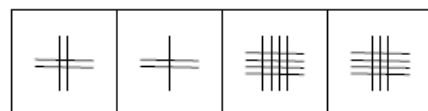


- (1) (2) (3) (4)

47) Problem Figures

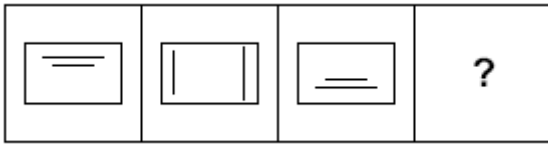


Answer Figures

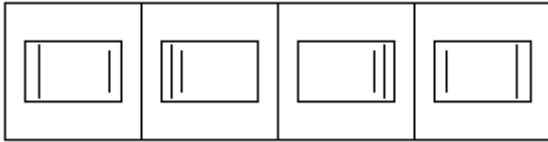


- (1) (2) (3) (4)

48) Problem Figures

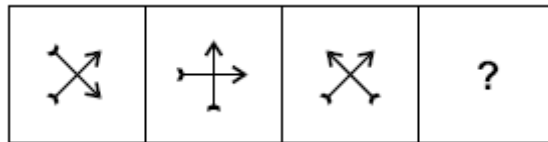


Answer Figures

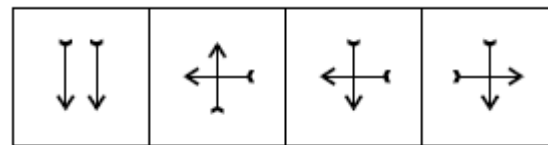


(1) (2) (3) (4)

49) Problem Figures

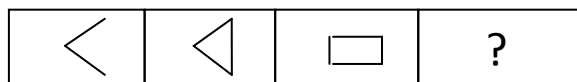


Answer Figures

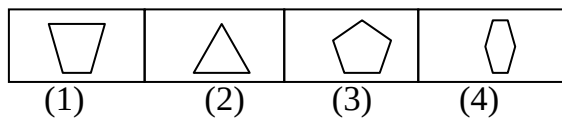


(1) (2) (3) (4)

50) Problem Figures



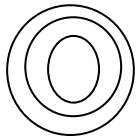
Answer Figures



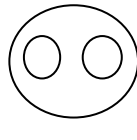
(1) (2) (3) (4)

(Questions: 51 to 60)

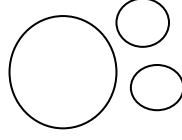
Directions: The Question given are based on the diagrams given below. Each circle represents one item irrespective of the size. Match the figure with items in the questions on the basis of their relationship. Identify the correct answer.



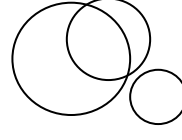
(A)



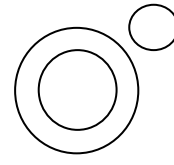
(B)



(C)



(D)



(E)

51) Vegetables, Potato, Cabbage

(1) A

(2) B

(3) C

(4) D

52) Table, Chair, Furniture

(1) A

(2) B

(3) C

(4) E

53) Week, Day, Year

(1) A

(2) B

(3) C

(4) D

54) Judge, Thief, Criminal

1) B

2) C

(3) D

(4) E

55) Husband, Wife, Family

(1) A

(2) B

(3) C

(4) D

56) Square, Rectangle, Polygon

(1) A

(2) B

(3) C

(4) D

57) Bus, Car, Vehicle

(1) A

(2) B

(3) C

(4) D

58) Anxiety, Intelligence, Strength

(1) B

(2) C

(3) D

(4) E

59) House, Bedroom, Bathroom

(1) B

(2) C

(3) D

(4) E

60) Mustard, Barley, Potato

(1) A

(2) B

(3) C

(4) D

(Questions: 61 to 65)

Directions: In each of the following questions, a word has been given, followed by four other words, one of which cannot be formed by using the letters of the given word. Find out that word

61. CONSTRUCTION

- (1) SUCTION (2) COINS (3) CAUTION (4) NOTION

62. INTELLIGENCE

- (1) TILLAGE (2) INCITE (3) GENTLE (4) NEGLECT

63. TRANSFORM

- (1) TRAIN (2) FORT (3) ROAM (4) RANSOM

64. DEPARTMENT

- (1) ENTER (2) PERMIT (3) TEMPER (4) RENTER

65. NECESSARY

- (1) RACE (2) EASY (3) NICE (4) ESSAY

(Questions: 66 to 70)

Directions: In each of the following questions, four words have been given, out of which three are alike in some manner and the fourth one is different. Choose the odd one out.

66. Wood, Cork, Stone, paper

- (1) Wood (2) Cork (3) stone (4) Paper

67. Larva, Pupa, Caterpillar, Nymph

- (1) Larva (2) Pupa (3) Caterpillar (4) Nymph

68. Necklace, Ornament, Bangle, Ring

- (1) Necklace (2) Ornament (3) Bangle (4) Ring

69. Rectangle, square, cube, triangle

- (1) Rectangle (2) Square (3) Cube (4) Triangle

70. Correction, Improvement, Betterment, Elevation

- (1) Correction (2) Improvement (3) Betterment (4) Elevation

(Questions: 71 to 75)

Directions: In each of the following questions, the real alphabets in a word are replaced by certain numbers according to a specific rule to form its code. Choose the most appropriate answer from the given alternatives.

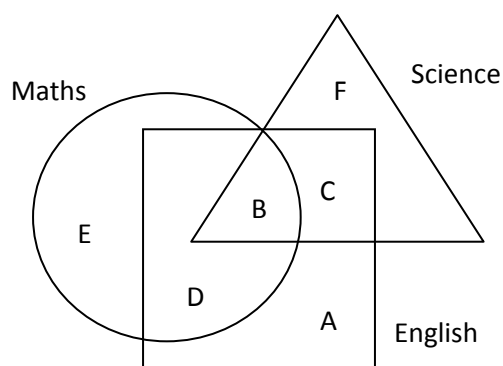
71. In a certain pattern, HARD is coded as 1357 and SOFT is coded as 2468, what will 21448 stand for?
 (1) SHAFT (2) SHOOT (3) RAFTS (4) ROOTS
72. In a certain language CHARCOAL is coded as 45164913 and MORALE is coded as 296137. How REAL is coded in that language?
 (1) 8519 (2) 6713 (3) 6513 (4) 6719
73. If MILITARY can be written as 12324567, then how is TIMLI written in that code?
 (1) 23142 (2) 42157 (3) 34516 (4) 42132
74. If POUR is written as 4156, SWARE is written as 78269, CLEAR is written as 3@926. Then what is the code for PEARL?
 (1) 429@6 (2) 4962@ (3) 4692@ (4) 4926@
75. In a certain code NASA is written as \$#@# and ISRO is written as ¥@^%. How is SARAN written in that code?
 (1) @#@#\$ (2) %¥\$\$@ (3) @#^#\$ (4) %#\$¥@
76. If the first day of the year (other than the leap year) was Friday, then which was the last day of that year?
 (1) Saturday (2) Thursday (3) Friday (4) Wednesday
77. If A is to the south of B and C is to the east of B, in what direction is A with respect to C?
 (1) North-East (2) North-West (3) South-East (4) South-West
78. Reaching the place of meeting 20 minutes before 8:50hrs Sumit found himself thirty minutes earlier than the man who came 40 minutes late. What was the scheduled time of the meeting?
 (1) 8.00 (2) 8.05 (3) 8.10 (4) 8.20
79. Pointing towards a boy, Veena said, "He is the son of only son of my grandfather". How is that boy related to Veena?
 (1) Uncle (2) Brother (3) Cousin (4) None of these.

(Questions: 80 to 85)

Directions (Questions 80 to 85): Read the following information to answer the given questions.

- (i) A, B, C, D, E, F and G are playing cards sitting around a circular table.
- (ii) D is not neighbour of C or E.
- (iii) A is neighbour of B and C.
- (iv) G, who is second to the left of D, is the Neighbour of E and F.

80. Which of the following is correct?
 (1) B is between A and D (2) D is between F and G
 (3) E is to the immediate right of G (4) F is to the immediate left of G
81. Which of the following has the pair with the second person sitting to the immediate right of the first person?
 (1) BD (2) GF (3) EC (4) AE
82. Which of the following will be D's position after E and D interchange their positions?
 (1) Neighbour of G and C (2) To the immediate left of C
 (3) To the immediate right of F (4) Neighbour of C and A
83. What is the position of C?
 (1) Second to the left of B (2) Third to the right of F
 (3) To the immediate left of A. (4) None of these.
84. Which of the following has the second person sitting between the first and third person?
 (1) DAB (2) GCE (3) BCA (4) GFD
85. Which of the following is wrong?
 (1) A is to the immediate right of B (2) B is to the immediate left of D
 (3) F is between G and D (4) E is between G and C

(Questions: 86 to 90)

In the above picture circle represent students liking Mathematics, Triangle represents Students liking Science, Square represent students like English. Now answer the following questions?

86. Which letter represents the students who like English only?
 (1) A (2) B (3) C (4) D

87. Which letter represents the students who like English and Maths but not Science?
(1) A (2) D (3) E (4) B
88. Which letter represents the students who like Maths only?
(1) E (2) F (3) C (4) A
89. Which letter represents the students who like all the three subjects?
(1) A (2) B (3) C (4) E
90. Which letter represents the students who like Maths and Science but not English?
(1) E (2) F (3) B (4) None of these

Rough Work only

**8021**

**GOVERNMENT OF PUDUCHERRY
DIRECTORATE OF SCHOOL EDUCATION**

QUESTION BOOKLET

MARCH 2022-23

**PART – II
SCHOLASTIC APTITUDE TEST**

Centre Code No.

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Register No.

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INSTRUCTIONS

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SCIENCE

1. The Hydraulic lift works on the _____ principle
(1) Conservation of Mass (2) Pascal's Law (3) Newton's III Law (4) Snell's Law
2. If two plane mirrors are inclined to each other at 120° angle, find the number of images formed.
(1) 2 (2) 3 (3) 4 (4) 1
3. Formation of land breeze and sea breeze is due to
(1) Sublimation (2) Deposition (3) Vapourisation (4) Convection
4. The S.I unit of Specific Heat Capacity is
(1) $\text{J Kg}^{-1}\text{K}^{-1}$ (2) JK^{-1} (3) JKg^1K^1 (4) JKg^{-1}
5. The Characteristics of sound that enables us to distinguish between two sounds that have the same pitch and amplitude
(1) Audibility (2) Quality (3) Wavelength (4) Sonic Boom
6. In automobiles, to prevent Iron from rusting _____ is coated on it
(1) Lead (2) Copper (3) Zinc (4) brass
7. The amplitude of the sound wave decides its _____
(1) Speed (2) pitch (3) loudness (4) frequency
8. Assertion: The Earth's magnetic field is due to iron present in its core.
Reason: At a high temperature a magnet loses its magnetic property
(1) Both Assertion and Reason are true (2) Both Assertion and Reason are false
(3) Assertion is true and Reason is false (4) Assertion is false and Reason is true
9. The valency of Carbon in Methane is.
(1) 4 (2) 3 (3) 2 (4) 1
10. Every litre of sea water contains _____ grams of dissolved salts.
(1) 30 (2) 35 (3) 40 (4) 45
11. Which of the following oxides upon dissolving with rain, causing Acid Rain?
(1) Silicon dioxide (2) Sodium dioxide (3) Sulphur dioxide (4) Nitrogen dioxide
12. The _____ discovered the presence of water molecules in the lunar soil
(1) Mangalyaan (2) Chandrayaan-I (3) Apollo-11 (4) Chandrayaan-2

13. The chemical name for Bleaching powder is
(1) Calcium Carbonate (2) Calcium oxide
(3) Calcium hydroxide (4) Calcium oxy chloride
14. The branch of science that deals with chemical reactions involving light is
(1) Photolysis (2) Thermolysis (3) Photochemistry (4) Seismology
15. Aerated water is made by dissolving _____ gas in water under pressure.
(1) Nitrogen (2) Oxygen (3) Carbondioxide (4) Hydrogen
16. The highest Latent Heat of Fusion of Ice is _____
(1) 540 calories/g (2) 336 calories/g (3) 100 calories/g (4) 80 calories/g
17. Acids react with metals to form their metal salts and release _____ gas
(1) Nitrogen (2) Oxygen (3) Carbondioxide (4) Hydrogen
18. Which part of the rocket system has radars?
(1) Structural system (2) Payload system (3) Guidance system (4) propulsion system
19. Which of the following bacteria has no flagella?
(1) Vibrio Cholera (2) Corynbacterium diptherae (3) Pseudomonas (4) E.Coli
20. _____ show both living and non living characteristics.
(1) Virus (2) Bacteria (3) Protozoa (4) Fungi
21. Which algae is used to decompose the human urine in space travel?
(1) Chlorella Pyranoydosa (2) Laminaria (3) Sargassum (4) Ulva
22. The world's fastest growing sea-weed is _____
(1) Riccia (2) Funaria (3) California-giant kelp (4) Anthroceros
23. _____ is used in the treatment of tuberculosis.
(1) Phyllanthus amarus (2) Solanum trilobatum (3) Aegle marmelos (4) Acalypha indica
24. The first true land plants with xylem and phloem are
(1) Algae (2) Pteridophytes (3) Fungi (4) Bryophytes
25. The masculinizing hormone is
(1) Progesterone (2) Androgen (3) Estrogen (4) Oxytoxcin

26. The Azadiractin is used as a good
 (1) Insect-repellant (2) plant-fertilizer (3) bio-indicator (4) bio-predator
27. a. Deforestation has a negative effect on the environment
 b. Reforestation has a very good effect on the nature
 c. Afforestation is practiced to bring more area under forest
 (1) only a is correct (2) only b is correct
 (3) only a and c are correct (4) all a,b,c are correct
28. Grizzled Squirrel wildlife sanctuary is situated in
 (1) Kanchipuram (2) Virudhunagar (3) Thirunelveli (4) Theni
29. Which of the following is not a Logical Operator?
 (1) AND (2) OR (3) FOR (4) NOT
30. The smallest bone found inside the human ear is
 (1) Femur (2) Humerus (3) Stapes (4) Tibia
31. The fibrous cords of tissue that attach muscle to bone is
 (1) ligaments (2) tendons (3) Cartilage (4) Antagonist muscle
32. _____ cells are specialized cells that can be transformed into any kind of cells
 (1) Bone (2) Nerve (3) Heart (4) Stem
33. During inhalation process in human, the diaphragm goes _____.
 (1) outward (2) upward (3) downward (4) inward
34. The Red Data Book of India contains
 (1) food habit status of birds in India (2) Conservation status of animals and plants in India
 (3) habitat status of birds in India (4) Endangered species lists in India
35. _____ is responsible for maintaining the biological clock of human body
 (1) Eyes (2) Heart (3) Lungs (4) Spleen

SOCIAL SCIENCE

36. What method is used to find out the age of the excavated materials?
 (1) Carbon di oxide method (2) Chemical di oxide method
 (3) Radio Carbon Dating method (4) none of the above
37. Collection of resources directly from nature is called
 (1) Primary activities (2) Secondary activities
 (3) Tertiary activities (4) none of the above
38. The lowest unit of administration during the Sangam Age was
 (1) Mandalam (2) Nadu (3) Ur (4) Pattinam
39. was the ambassador of Seleucus Nicator.
 (1) Ptolemy (2) Kautilya (3) Xerxes (4) Megasthenese
40. The birth place of democracy is ____
 (1) China (2) America (3) Greece (4) Rome
41. was the land gifted to temples.
 (1) Vellanvagai (2) Shalabhoga (3) Brahmadeya (4) Devadana
42. belt is known as the “Ring of Fire”.
 (1) Circum – Pacific (2) Mid – Atlantic (3) Mid – Continental (4) Antarctic
43. Who was the teacher and guardian of Shivaji?
 (1) Dadaji Kondadev (2) Kavi Kalash (3) Jijabai (4) Ramdas
44. In which district Courtallam waterfalls is located?
 (1) Dharmapuri (2) Tirunelveli (3) Namakkal (4) Theni
45. Raksha safe drive is a device useful for
 (1) Pedestrians (2) motorists (3) car drivers (4) passengers
46. In 1453 Constantinople was captured by
 (1) The French (2) The Turks (3) The Dutch (4) The British
47. Nalanda, the oldest university in India was located in
 (1) Uttar Pradesh (2) Maharashtra (3) Bihar (4) Punjab

48. ----- rocks are useful for construction works.
 (1) Sedimentary (2) Metamorphic (3) Igneous (4) Basalt
49. To become a well matured soil it takes about ----- years.
 (1) 300 (2) 30 (3) 3000 (4) 30000
50. There are ----- basic minerals commonly found all over the earth.
 (1) 22 (2) 32 (3) 12 (4) 42
51. Only -----percentage of rain reaches seas and oceans.
 (1) 25 (2) 15 (3) 45 (4) 35
52. Mauna loa Volcano is located in -----
 (1) Andaman Island (2) Lakshadweep Island
 (3) Hawaii Island (4) Narcondam Island
53. El-Nino means ----- in Spanish.
 (1) Altitude (2) Temperature (3) The Christ child (4) Lightning
54. The Average air pressure at the sea level is ----- millibars.
 (1) 1008 (2) 1020 (3) 1033 (4) 1013
55. In India, Tsunami warning Centre has been set up at -----
 (1) Chennai (2) Mumbai (3) Kolkata (4) Hyderabad
56. -----tide occurs during the Full moon days and New Moon days
 (1) High (2) Spring (3) Low (4) Neap
57. Generally the average Ocean salinity is ----- gram per kilogram.
 (1) 45 (2) 35 (3) 55 (4) 25
58. ----- are those which join the places of equal sunshine
 (1) Isohyet (2) Isotherm (3) Isohel (4) Isobar
59. The Panjia split into ----- major plates.
 (1) 5 (2) 7 (3) 6 (4) 8
60. The Constitution Day is celebrated on
 (1) 26 January (2) 15 August (3) 26 November (4) 9 December

61. A person moves from his own country to another country is known as
 (1) Immigrant (2) Refugee (3) Emigrant (4) Asylum seeker
62. The age of retirement of the High Court is -----
 1) 62 2) 64 3) 65 4) 68
63. Dispute between States of India comes to the Supreme Court under
 (1) Original jurisdiction (2) Appellate jurisdiction
 (3) Advisory jurisdiction (4) none of these
64. In Rajya Sabha _____ members are nominated by the president
 (1) 12 (2) 2 (3) 24 (4) 5
65. The _____ in the constitution provides facilities for the compulsory education for all children
 (1) Article 39 (2) Article 25 (3) Article 45 (4) Article 24
66. _____ is called as the father of economics.
 (1) Lionel Robbins (2) Adam Smith (3) Raghuram Rajan (4) Rangarajan
67. The budget is prepared and presented based on the _____.
 (1) Service tax (2) national income
 (3) Income tax (4) per capita income
68. _____ refers to any work undertaken for securing an Income or reward.
 (1) Capital (2) Profit (3) Organization (4) Labour
69. Production means creation of _____.
 (1) Utility (2) Interest (3) Money (4) Service
70. The Indian Rupee symbol designed by a person of ----- State
 (1) Kerala (2) Tamil Nadu (3) Andhra Pradesh (4) Delhi

MATHEMATICS

71. The cost of a notebook is Rs. $10ab$. If Babu has Rs. $(5a^2b + 20ab^2 + 40ab)$, then how many Notebooks can he buy?
 (1) $\frac{1}{2}a + 2b + 4$ (2) $\frac{1}{2a} + 4b + 8$ (3) $2a + 4b + 8$ (4) $5a + 2b + 6$
72. If 10% of a number x is 25, find the value of 20% of x
 (1) 25 (2) 50 (3) 100 (4) 75
73. Which of the following are true?
 $A = -12 + (-15)$ $B = -16 - (-12)$ $C = -14 - (-12)$
 (1) $B > C > A$ (2) $A + B > C$ (3) $C > A > B$ (4) $A < B < C$
74. If $X: 18:: 5:3$, find the value of X .
 (1) 35 (2) 30 (3) 49 (4) 45
75. The angle between the diagonals of a rhombus is
 (1) 120° (2) 180° (3) 90° (4) 100°
76. The cost of 12 kg of onion is Rs.84 find the cost of 8 kg of onion?
 (1) 49 (2) 56 (3) 42 (4) 63
77. Factorize: $16p^4 - 1$
 (1) $(4p^2+1)(4p^2+1)$ (2) $(2p^2+1)(4p^2-1)$ (3) $(2p^2-1)(4p^2+1)$ (4) $(4p^2+1)(2p+1)(2p-1)$
78. Between the squares of the consecutive nos. “ n ” and “ $(n+1)$ ” there are _____ non square nos.
 (1) n (2) $2n$ (3) $n+1$ (4) $n-1$
79. Which of the following polygon is not a regular polygon?
 (1) Rectangle (2) Parallelogram (3) Rhombus (4) None
80. The _____ will be on the vertex containing 90° in a right angled triangle.
 (1) Centroid (2) Incentre (3) Circumcentre (4) orthocentre.
81. The minimum requirement to construct a Quadrilateral are _____
 (1) 5 (2) 4 (3) 6 (4) 3
82. The _____ is not the graphical representation of the frequency for ungrouped data.
 (1) Frequency Polygon (2) Bar Graph (3) Picto Graph (4) Line Graph

83. Exclusive series is a _____ series.
 (1) Continuous (2) Discontinuous (3) Both (1) and (2) (4) None
84. How many numbers from 1 to 100 are there each of which is not only exactly divisible by 4 but also has 4 as a digit?
 (1) 7 (2) 10 (3) 20 (4) More than 20
85. If two triangles are similar, then the corresponding angles are respectively _____ and their corresponding sides are _____.
 (1) Proportional; equal (2) Equal; Proportional (3) unequal; Proportional (4) Shape; Size
86. The cost of a machine is ₹ 27000/- and it depreciates at $16\frac{2}{3}\%$ annually. Its value after 2 years will be
 (1) ₹15750 (2) ₹16750 (3) ₹ 18750 (4) ₹17750
87. If the circumference and area of a circle are numerically equal, then the diameter is equal to _____.
 (1) $\pi/2$ (2) 2π (3) 2 (4) 4
88. Find the Value of $0.01 \times 0.1 - 0.001 \div 10 + 0.01 =$ _____.
 (1) 0.0101 (2) 0.109 (3) 0.0109 (4) 0.19
89. The product of LCM and HCF of two numbers is $5460X^2Y^3$. If one of the number $60XY$ then the other number is _____.
 (1) $81XY^2$ (2) $81X^2Y$ (3) $91XY^2$ (4) $91X^2Y$
90. A family went to a hotel and spent ₹ 500 for food and paid extra 5% as GST. Calculate the SGST _____.
 (1) ₹25 (2) ₹12.5 (3) ₹17.5 (4) ₹ 8.75

FOR ROUGH WORK ONLY