MENTAL ABILITY

Directions (Q. No. 1 to 5): There is a (number/letter) series in the following questions with an item missing, marked with the question mark (?). Find the best appropriate option from the given options-
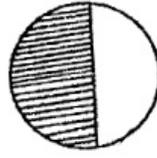
1. 0, 6, 24, 60, 120, 210, (?)

(A) 290   (B) 336   (C) 504   (D) 240

2. 3, 15, (?), 63, 99, 143

(A) 35   (B) 45   (C) 27   (D) 56

3. BZA, DYC, FXE, (?), JVI

(A) HUG   (B) UHG   (C) WHG   (D) HWG

4. Q1F, S2E, U6D, W21C, (?)

(A) Y44B   (B) Y66B   (C) Y88B   (D) Z88B

5. N5V, K7T, (?), E14P, B19N

(A) H9R   (B) H10R   (C) I10R   (D) H10S

6. If output of machine A is 20% damaged and out of the rest another 37.5% falls in lower quality grade. Which of the following figure will depict the output of the good quality?
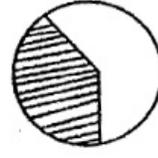

     (A)   (B)   (C)   (D)

7. The average age of A and B is 20 years. If A is replaced by C, the average age would be 19 and if B is replaced by C, the average age would be 21. What are the ages of A, B and C ?

(A) 18, 20, 22   (B) 18, 22, 20   (C) 22, 20, 18   (D) 22, 18, 20

8. If LEAP is written as PEAL then how is 8326 written?

(A) 2368   (B) 6283   (C) 6328   (D) 2683

9. ELLIPSE is related to CURVE in the same way as SQUARE is related to

(A) POINT   (B) CIRCLE   (C) POLYGON   (D) ROUND

10. Which letter-number combination will replace the question mark (?)

PO / 31 : NM / 27 : : IH / 17 : ?

(A) GM / 16   (B) GT / 14   (C) GV / 16   (D) GF / 13

11. Discover the pattern in the following question and select the best appropriate option from the given choices-

A D C F

C F E H

E H G J

O R ? ?

(A) LK   (B) MN   (C) ST   (D) QT

Directions (Q. No. 12 to 15):

Study the following bar graph carefully and answer the questions given below.
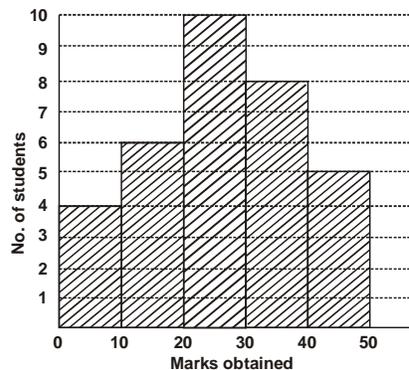

12. Total number of students involved in data-

(A) 10   (B) 32   (C) 33   (D) 43

13. Maximum number of students lie in which interval-

(A) 10 – 20   (B) 20 – 30   (C) 30 – 40   (D) 40 – 50

14. Minimum number of students lie in which interval-

(A) 0 – 20   (B) 10 – 20   (C) 30 – 40   (D) 40 – 50

15. Ratio of the number of students, who obtained marks in first and last interval-

(A) 4 : 6   (B) 4 : 5   (C) 5 : 6   (D) 3 : 4

Directions (Q. No. 16 to 18):

Seven villages A, B, C, D, E, F and G are situated as following

(a) E is 2 km to the west of B

(b) F is 2 km to the north of A

(c) C is 1 km to the west of A

(d) D is 2 km to the south of G

(e) G is 2 km to the east of C

(f) D is exactly in the middle of B and E

16. Which two villages are farther from one another ?

(A) F – E   (B) G – E   (C) D – C   (D) F – B

17. How far is E and F ?

(A) 5 km   (B) $\sqrt{26}$ km   (C) 4 km   (D) $\sqrt{20}$ km

18. A is in the middle of which two villages-

(A) E – G   (B) E – C   (C) G – C   (D) F – G

19. 2880 is divided by which smallest number so that we get a perfect square number?

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

20. Find the value of the following-

$(40 \times 40 \times 40 - 31 \times 31 \times 31) \div (40 \times 40 + 40 \times 31 + 31 \times 31)$

(A) 34209   (B) 71   (C) 9   (D) 36410

21. From the given alternatives select two such signs, when these are mutually interchanged, the following equation becomes correct.

$36 \div 12 \times 6 + 9 - 6 = 38$

(A) –, x   (B) ÷ , x   (C) –, +   (D) ÷ , +

22. Find the correct group of letters in place of ? in the following series.

FNHLJ, WOUQS, BNEKH, ?, DTHPL

(A) NBKEH   (B) NVPTR   (C) NFLHJ   (D) NDRZV

23. How many triangles are there in the following figure-
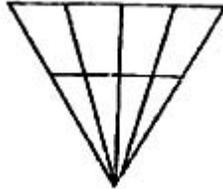
(A) 20   (B) 18   (C) 22   (D) 17

Directions (Q. No. 24 to 27): Choose the correct water image of the given words/numbers from amongst the alternative.

24. ANSWER

(A) ∀∩SMEЯ   (B) Я∧MƧE∀   (C) Я∧MƧƎ∀   (D) Ǝ∀ЯM∩Ƨ

25. REFLECTION

(A) EЯ∃ECTION   (B) ЯELⱢ∃CⱢION   (C) ЯƎⱢƎCTION   (D) ЯEⱢⱢECTION

26. T3P2Y5

(A) ⱢƐꟼ2Y5   (B) ⱢƐꟼƧY9   (C) ⱢƐꟼƧY9   (D) ⱢƐꟼƧY9

27. RJ6MA7

(A) ЯⱢ9MA⁊   (B) ЯⱢ6MA⁊   (C) ЯⱢ6MA⁊   (D) ЯⱢ6MA⁊

Directions (Q. No. 28 to 29): The information about the students wearing T-shirts having number 7, 8, 9 and 10 is given below. Read the given information and answer the following questions.

(1) The player having number 7 and 9 play football as well as cricket.

(2) The fat player having number 8 participates in all games except kho-kho and football.

(3) The player carrying number 9 is very short. He is expert in kabaddi. The player having number 10 is very slim. He participates in all games except the football.

(4) The player having number 7 is very tall.

28. Which game can be played by one and only one player-

(A) Kabaddi   (B) Kho-Kho   (C) Cricket   (D) Football

29. Name the game, which is played by the slim player but cannot be played by the fat player-

(A) Cricket

(B) Football

(C) Kho-Kho

(D) Kabaddi

30. In a certain examination, 77% candidates passed in English and 34% failed in Mathematics. If 13% failed in both the subjects and 784 candidates passed in both the subjects then the total number of candidates that appeared in examination

(A) 1200

(B) 1400

(C) 1600

(D) 1800

Direction (Q. No. 31 to 35): Read the following information and answer the questions.

Seven managers Mr. Sharma, Mr. Mishra, Mr. Singh, Mr. Kulkarni, Mr. Rao, Mr. Joshi and Mr. Nair are to conduct interviews simultaneously either alone or in pairs at four different locations- Surat, Chandigarh, Delhi and Lukhnow. One wants to travel by rail, two prefer travelling by car and the rest travel by air.

(1) Mr. Sharma is going to Lukhnow but neither by car nor by air.

(2) Mr. Mishra prefer to travel by car.

(3) Neither Mr. Joshi nor Mr. Nair is going to Delhi.

(4) Only those going to Surat travel by road.

(5) Mr. Kulkarni will assist his friend Mr. Mishra.

(6) The two managers who go to Delhi will travel by air.

31. Where will Mr. Kulkarni conduct the interviews?

(A) Surat

(B) Lukhnow

(C) Chandigarh

(D) None of these

32. Who goes to Delhi?

(A) Mr. Mishra – Mr. Kulkarni

(B) Mr. Rao – Mr. Singh

(C) Mr. Kulkarni – Mr. Joshi

(D) Data inadequate

33. Which of the following is true?

(A) Mr. Kulkarni travels by air

(B) Mr. Nair will assist Mr. Rao

(C) Mr. Sharma conducts interviews alone

(D) Mr. Joshi goes to Chandigarh

34. Who will conduct interviews at Chandigarh?

(A) Mr. Nair

(B) Mr. Singh

(C) Mr. Rao

(D) None of these

35. Which of the following pair is different from the other three with regard to mode of travel?

(A) Mr. Sharma – Mr. Mishra

(B) Mr. Rao – Mishra

(C) Mr. Nair – Mr. Rao

(D) Mr. Kulkarni – Mr. Joshi

Directions (Q. No. 36 to 40): In the diagram below circle respresents wheat, triangle represents sugarcane, rectangle represents rice and square respresents millet producing areas. Study the diagram carefully and answer the questions given below.
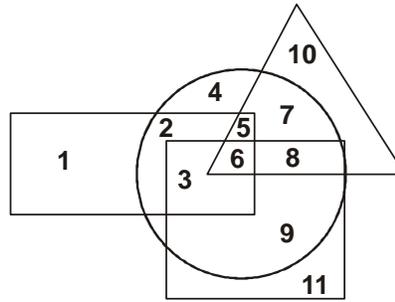
36. Which area has the cultivation of all the four commodities mentioned?

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

37. Which area gives millet, sugarcane and wheat?

    (A) 6   (B) 9   (C) 5   (D) 8

38. Which area grows sugarcane and wheat only?

    (A) 7   (B) 8   (C) 6   (D) 5

39. Which area grows only wheat and rice?

    (A) 6   (B) 8   (C) 2   (D) 7

40. Which area grows wheat only?

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

Directions (Q. No. 41 to 45):

(i) P, Q, R, S, T and U are travelling in a bus.

(ii) There are two reporters, two technicians, one photographer and one writer in the group.

(iii) The photographer P is married to S, who is reporter.

(iv) Lady writer is married to Q who is of the same profession as that of U.

(v) P, R, Q, S are two married couples and no body in the group has same profession.

(vi) U is brother of R.

41. Which of the following is a pair of technicians?

    (A) RS   (B) SU   (C) PT   (D) QU

42. Which of the following is pair of reporters?

    (A) PQ   (B) RT   (C) ST   (D) SU

43. How is R related to U?

    (A) Brother   (B) Sister   (C) Uncle   (D) Cannot say

44. Which of the following pair is a couple?

    (A) PQ   (B) QR   (C) QS   (D) PT

45. Which of the following is a pair of husbands?

    (A) PQ   (B) PR   (C) QS   (D) Cannot say

Directions (Q. No. 46 to 48): Two sets of the figures are given. One set is of question-figures and another set is of answer figures. Question figures are arranged in a sequence. One figure from the answer figures is to be selected such that it can be placed in the 5th place of the question figures, find the best appropriate alternative from answer figures.

46.

47. Question – Figures
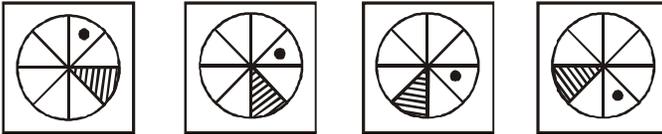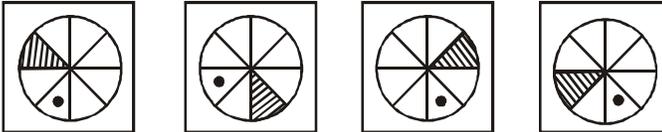
Answer – Figures

(A)　　　　(B)　　　　(C)　　　　(D)

48. Question – Figures
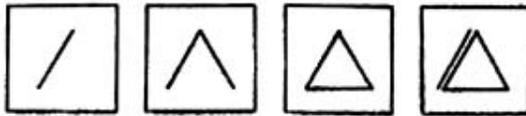
Answer – Figures

(A)　　　　(B)　　　　(C)　　　　(D)

Directions (Q. No. 49 to 50): Which option from the answer figure will continue the series given in the question figures?

49. Question – Figures
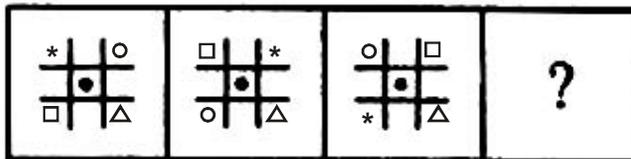
Answer – Figures

(A)　　　　(B)　　　　(C)　　　　(D)

50. Question – Figures

Answer – Figures

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

LANGUAGE COMPREHENSIVE (LCT)

Instructions for (Q. No. 51, 52 & 53):

The following five sentences come from a paragraph/dialogue. The first and last sentences are given; choose the order in which the three sentences (PQR) should appear to complete the paragraph/dialogue.
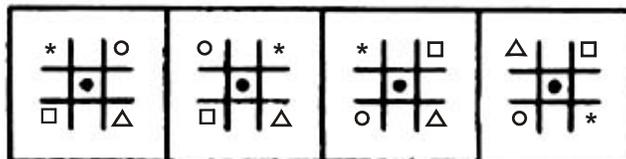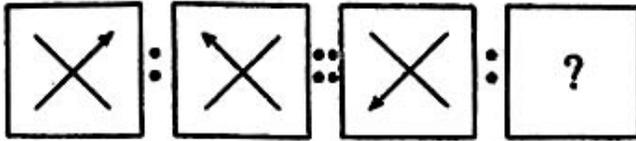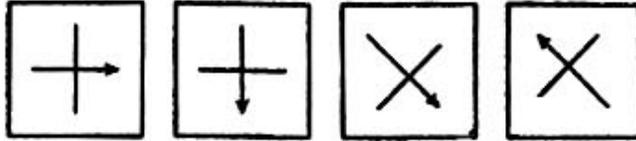
51. S1. Marie Curie was born in Poland on November7, 1867.

S2. ....

S3. ....

S4. ....

S5. In 1911, Marie curie was awarded the Nobel Prize for Chemistry for the discovery of Radium and Polonium.

P. She and her husband were awarded the Nobel Prize for Physics in 1903.

Q. She got married to Pierre Curie in 1895.

R. Marie and her husband discovered the radioactive material in 1902.

Choose from the options below-

(A) POR   (B) QRP   (C) RQP   (D) RQP

52. S1. Mother-Where are you going, Rahul?

S2. ....

S3. ....

S4. ....

S5. Mother-When will you be back from Rahim's house ?

P. Rahul – Yes Mom I have.

Q. Mother-Have you finished your home work?

R. Rahul – I am going to Rahim's house, Mom.

Choose from the options beiow-

(A) PQR   (B) QPR   (C) RQP   (D) PRQ

53. S1. Boil the water first.

S2. ....

S3. ....

S4. ....

S5. Lastly add sugar to taste.

P. Add tea leaves to the boiling water.

Q. Filter the decotion.

R. Then add milk to the decotion.

Choose from the options below-

(A) RPQ   (B) QPR   (C) POR   (D) PRQ

Instructions for (Q. 54 to 56):

The following questions have the second sentence missing. Choose the appropriate sentence from the given options to complete it.

54. 1. Kiran loves to colour.

2. ....

3. The walls of her room are filled with pictures.

(A) Kiran lives in Australia with her grandmother.

(B) Her dad lives in Mumbai and works for a Multinational company.

(C) Every time Kiran finishes a picture, she tapes it on her wall.

(D) Kiran is fond of dancing and has many friends.

55.
   1.   Get a small shovel to dig some holes.
   2.   ……
   3.   Water them regularly and wait for them to grow.
   (A) Bring the seeds home and decide where to plant them.
   (B) Pick the flowers and put them in a vase.
   (C) Go to the store to buy some flower seeds.
   (D) Put seeds in the hole and cover with dirt.

56.
   1.   Put the letter into an envelope when you have completed.
   2.   ……
   3.   Put the stamp on the envelope and mail it.
   (A) Get a paper, a pen or pencil, an envelope, and a stamp.
   (B) Take some paper and make an envelope.
   (C) Go to post office and buy an envelope.
   (D) Write the address on the envelope of the person you are sending it to.

Instructions for (Q. 57 to 61):
   Choose the word which best fills the blank from the four options given below:

57.   She carefully ………….. the tea into the cups.
   (A) put   (B) kept   (C) poured   (D) placed

58.   The ….. spread around the stadium included numerous paper cups, tickets stubs and wrappers
   (A) shops   (B) paper   (C) dustbin   (D) debris

59.   You are too close friends to ……… on such small issues.
   (A) play   (B) quarrel   (C) read   (D) speak

60.   More food was needed for the flood …….. .
   (A) victims   (B) crowd   (C) people   (D) mob

61.   I ……… with you. This movie is really boring! Let's change the channel.
   (A) accord   (B) agree   (C) meet   (D) join

Instructions for (Q. 62 to Q. 66):
   Choose the correct meanings for the given idioms/phrases.

62.   Talk of the town:
   (A) Another name of the town
   (B) The subject of much discussion in the town
   (C) The way people talk in the town
   (D) a place where people assemble and talk in the town

63.   Monkey business:
   (A) an intelligent behaviour   (B) a mischievous behaviour
   (C) an illegal behaviour   (D) a focused behaviour

64.   Make big:
   (A) to become at   (B) to be angry   (C) to be famous   (D) to be successful

65.   By hook or crook
   (A) To get adjusted in every situation   (B) To do something by all means
   (C) To understand everything well   (D) To hang on something

66.   To keeps one's temper:
   (A) To become hungry   (B) To stay calm
   (C) To preserve ones energy   (D) To be aloof from

Find out the alternatives which are most opposite in meanings to the words given.

67. Dispensable:
(A) dependable   (B) superfluous   (C) essential   (D) outdated

68. Overwhelmed:
(A) unhappy   (B) complete   (C) mouthful   (D) annoyed

69. Agile:
(A) feeble   (B) swift   (C) slow   (D) lively

70. Preface
(A) foreword   (B) forward   (C) introduction   (D) conclusion

Instructions for (Q. 71 to Q 73):

Select the most appropriate options to fill in the blank from the following alternatives given below:

71. …………… done the homework?
(A) Has you   (B) Have you   (C) Will he   (D) Should they

72. He would starve to death rather than …………… for a loan.
(A) have ask   (B) to have asked   (C) to ask   (D) ask

73. Compare the answers ………….. your partner.
(A) by   (B) of   (C) with   (D) to

Instructions for Q. No. (74 to 76):

Choose the alternative which can be substituted for the sentence:

74. A disease that spreads over a large area:
(A) Epidemic   (B) Academic
(C) Incorrigible   (D) Invincible

75. That which cannot be avoided:
(A) incomparable   (B) Indisputable
(C) irreparable   (D) inevitable

76. Government by rich:
(A) aristocracy   (B) oligarchy
(C) plutocracy   (D) pantisocracy

Instructions for (Q. No. 77 to 85):

In the following passage there are some numbered blanks. Fill in the blanks by selecting the most appropriate word from the options.

When Ramesh got off the train 77 walked out of the left gate 78 the railway station. The bus stop was 79 outside the left gate. He waited 80 bus No. 64 to Raweli arrived. When he bought 81 tick he told the conductor 82 he would get off at Lal Bazar. He asked the conductor 83 long it would take to reach there. The conductor 84, "Half an hour sir". He was exited 85 reach there as his friend Rehan was waiting there to meet him.

77. (A) she   (B) he
(C) it   (D) they

78. (A) in   (B) on
(C) of   (D) with

79. (A) just   (B) between
(C) on   (D) by

80. (A) for   (B) till
(C) to   (D) near

81.	(A) my	(B) our
	(C) her	(D) his
82.	(A) which	(B) and
	(C) that	(D) if
83.	(A) what	(B) how
	(C) why	(D) when
84.	(A) opened	(B) say
	(C) said	(D) tell
85.	(A) for	(B) to
	(C) in	(D) by

Instructions for (Q. No. 86 to 90):

Read the passage and choose the best alternative for the questions given below-

A material is what something is made of. There are five basic materials. Most things are made with these materials. They are metal, glass, wood, cloth and plastic. There are some other materials also. But they are not used as much as these five materials.

Let's talk about metal first. Metal is very heavy. And it is very hard and strong. It usually feels cool if you touch it. We use metal to make lots of things. We use it for forks and knives. We use it for keys. We use it for cars. We use it for these things because it is very strong.

Next, let's talk about glass. Glass is very smooth. It feels cool to touch. It is not as heavy as metal. It is hard. But it is not strong. It breaks very easily. Then why do we use it? We use it because it is clear. You can see through glass. That's why we use it for windows.

Now, let's talk about wood. Wood is lighter than metal and glass. It is not as strong as metal, But it is much stronger than glass. We use wood to make lots of things. Things made from wood are usually light and hard and strong. Chairs and tables are made from wood. Pencils are made from wood.

Now let's talk about cloth. Cloth is very light. It is much lighter than wood. And it is very soft. We use cloth to make lots of things. For example, it is used to make clothing. And it is used to make blankets.

Last, let's talk about plastic. Plastic is also very light. But it is different from cloth. Sometimes it is soft. And sometimes it is hard. Plastic can be used to make thin plastic bags. These are light, soft, and strong. But plastic can also be used to make helmets. These are light, hard, and strong. A helmet and a bag seem different but they are both made from plastic.

86. Which sentence from the passage best describes the main idea?

(A) "We use cloth to make lots of things." (B) "There are five basic materials"

(C) "Metal is very heavy." (D) "A helmet and a bag seem different."

87. According to the passage, which of these things is a material?

(A) chairs (B) clothing (C) windows (D) wood

88. According to the passage, how does glass feel?

(A) sharp and heavy (B) warm and soft (C) light and hard (D) smooth and cool

89. In paragraph 4, the passage says, "Wood is lighter than metal and glass. "What is the main purpose of this sentence?

(A) to explain something (B) to recommend something

(C) to demonstrate something (D) to compare something

90. Which material would you use if you wanted to make something that was strong and very light?

(A) glass (B) plastic

(C) metal (D) wood

Read the passage and choose the best alternative for the questions given below-

Did you know that some people don't do their reading assignments? It's shocking but it's true. Some students don't even read short texts that they are assigned in class. There are many reasons for this. They may be distracted or bored. They may be unwilling to focus. They may be unconfident readers. Whatever the reason, it has to stop today. Here's why.

Reading stimulates your mind. It is like a workout for your brain. When people get old, their muscles begin to deteriorate. They get weaker and their strength leaves them. Exercise can prevent this loss. The same thing happens to people's brains when they get older. Brain power and speed decline with age. Reading strengthens your brain and prevents these declines.

You can benefit from reading in the near-term too. Reading provides knowledge. Knowledge is power. Therefore, reading can make you a more powerful person. You can learn to do new things by reading. Do you want to make video games? Do you want to design clothing? Reading can teach you all this and more. But you have to get good at reading, and the only way to get good at something is to practice.

Read everything that you can at school, regardless of whether you find it interesting. Reading expands your vocabulary. Even a "boring" text can teach you new words. Having a larger vocabulary will help you better express yourself. You will be able to speak, write, and think more intelligently. What's boring about that?

Do not just discard a text because it is unfamiliar to you. Each time you read, you are exposed to new ideas and perspectives. Reading can change the way that you understand the world. It give you a broader perspective on things. It can make you worldlier. You can learn how people live in faraway places. You can learn about cultures different from your own.

Reading is good for your state of mind. It has a calming effect. It can lower your stress levels and help you relax. You can escape from you troubles for a moment when read, and it's a positive escape. The benefits of reading far outweigh those of acting. So do yourself a favor: the next time you get a reading assignment, take as much as you can from it. Squeeze it for every drop of knowledge that it contains. Then move on to the next one.

91. Which best expresses the main idea of the second paragraph?

(A) Reading is exciting.   (B) Age affects the body in many ways.

(C) Reading strengthens your mind.   (D) Working out keeps your body in shape.

92. Why does the author think that you should read books that are boring?

(A) You will eventually grow to love them if you read them enough.

(B) You will get better grades in reading class.

(C) You will make your teacher very happy.

(D) You will learn new words.

93. Which best expresses the main idea of the third paragraph?

(A) Reading can benefit you

(B) You can learn amazing things and become a better person by reading.

(C) You can learn to program video games or design clothing by reading.

(D) Knowledge is power.

94. Which is not a reason given by the author why students fail to complete reading assignments?

(A) Students may be bored.   (B) Students may be tired.

(C) Students may be unwilling to focus.   (D) Students may be distracted.

95. Which best expresses the author's main purpose in writing this text?

(A) He is entertaining readers with facts about the mind and body.

(B) He is teaching people how to become better readers.

(C) He is explaining why people don't do their reading work.

(D) He is trying to persuade students to do their reading work.

96. Which best describes the author's tone in the first three sentences?

(A) Surprised   (B) Sarcastic   (C) Informative   (D) Irate

97. Which of the following is not one of the author's main points?

(A) Reading broadens your perspective and makes you a better person.

(B) Reading helps you perform on test and get into selective schools.

(C) Reading is a relaxing activity with positive mental side effects.

(D) Reading keeps your mind in shape and prevents losses due to age.

98. Why does the author believe that reading is good for your mind state?

(A) It has a calming effect   (B) It can lower your stress levels

(C) It can help you relax   (D) All of these

99. Which is not one of the author's arguments in the fifth paragraph?

(A) Reading gives you a broader perspective on the word

(B) Reading helps prepare you for your job in the real world

(C) Reading teaches you about distant lands and cultures

(D) Reading changes the way that you understand the words

100. Which title best expresses the main idea of this text?

(A) Reading : Improves Your Vocabulary   (B) Reading : The Key to speak better

(C) Reading : Its Importance   (D) Reading : Improves Your Writing Skills

ANSWERS

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

*NOTE – The question was not readable in the original question paper.
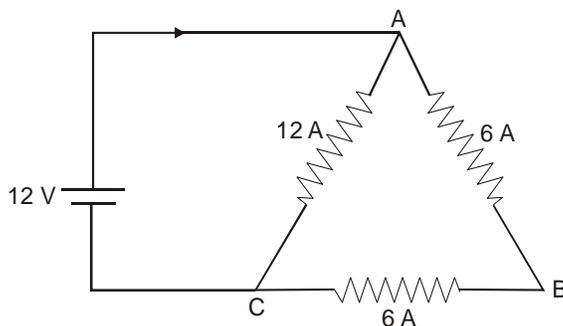
SCHOLASTIC APTITUDE TEST (SAT)

1. A body is thrown vertically upward with velocity U. Then maximum height attained by the body will be-

   (A) $\frac{1}{2}gt^2$ (B) $\frac{U^2}{2g}$ (C) $\frac{-U^2}{2g}$ (D) None of these

2. Which of the following is the smallest unit-

   (A) Fermi   (B) Micron   (C) Millimeter   (D) Kilometer

3. The current in the given dielectric circuit is-

   (A) $\frac{1}{2}$ A   (B) 1 A   (C) 2A   (D) 3A

4. A body of volume V and density d is completely immersed in a liquid of density ρ then the apparent weight of the body will be-

   (A) vdg   (B) $v\rho g$ (C) $v(\rho - d)g$ (D) $v(d - \rho)g$

5. The co-efficient of cubical expansion of a metal is 7.2×10^{-5} C^{-1} Then its superficial expansion will be-

   (A) $2.4\ ^\bullet C^{-1}$ (B) $4.8\ ^\bullet C^{-1}$ (C) $7.2\ ^\bullet C^{-1}$ (D) None of these

6. A mirror forms a virtual, erect and small image then kind of mirror is-

   (A) Plane   (B) Concave   (C) Convex   (D) A and B both

7. The time period of hour needle of clock is-

   (A) 1 hour   (B) 24 hour   (C) 6 hour   (D) 12 hour

8. Lightning conductor is made of-

   (A) Iron   (B) Copper   (C) Tin   (D) Wood

9. A water pump raises 50 liters of water UP to a height of 25 meter in 5 second. Then the power of water pump will be-

   (A) 2500 watt   (B) 6250 watt   (C) 1250 watt   (D) 625 watt

10. If the upper half of convex lens is wrapped with a black paper, then how the image formed by it will be effected-

    (A) The size of the image is reduced to one half
    (B) The upper part of the image is reduced
    (C) The intensity of the image is reduced
    (D) There will be no effect on image
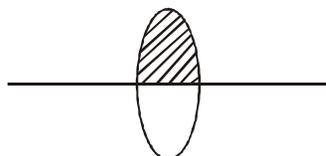
11. A circular loop carrying current I then the direction of the magnetic field at the centre with the help of magnetic lines of force will be-

(A) N (B) N (C) S (D) S
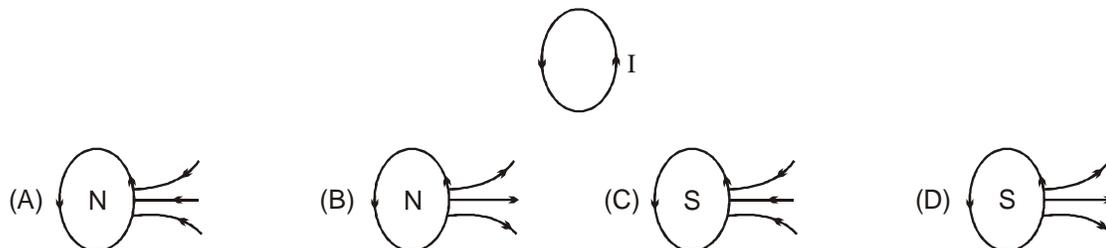
12. For making an electromagnet the most suitable material is-
(A) Stainless steel   (B) Silver   (C) Soft Iron   (D) Nickel

13. On which of the following does not exert any force when kept in uniform magnetic field-
(A) Moving magnet   (B) Moving charge   (C) Stationary magnet   (D) Stationary charge

14. The electronic configuration of an element with atomic number 19 will be-
(A) 2, 9, 8   (B) 2, 8, 9   (C) 2, 8, 8, 1   (D) 2, 10, 7

15. Aqueous solution of sodium chloride turns-
(A) Red litmus blue
(B) Blue litmus red
(C) Red litmus orange
(D) Not change the colour of either red or blue litmus.

16. Two elements showing similar properties due to same number of valence electrons are-
(A) Ca and Ga   (B) S and O   (C) C and Cl   (D) Si and S

17. In the reaction-

$$Zn + FeSO_4 \longrightarrow ZnSO_4 + Fe$$

(A) Zn gets oxidised   (B) Zn is oxidising agent
(C) Fe gets oxidised   (D) Zn and Fe both get oxidised

18. Froath floatation process for the concentration of ores is an example of the practical application of-
(A) Coagulation   (B) Absorption   (C) Adsorption   (D) Sedimentation

19. A metal which does not liberate hydrogen gas to react acids-
(A) Cu   (B) Fe   (C) Mn   (D) Zn

20. Identify A and B in the following reaction-

$$4NH_3 + 3O_2 \longrightarrow A + 6H_2O$$

$$A + O_2 \longrightarrow B$$

(A) NO and N_2 (B) NO and H_2O (C) H_2O and NO   (D) N_2 and NO

21. When KNO_3 is dissolved in water, heat is absorbed. If the temperature of the reaction is raised then according to Le-Chatelier's Principle solubility of KNO_3 will-
(A) Decrease   (B) Increase   (C) Remain the same   (D) Not be predicted

22. Identify the type of reaction occurring between ethene and hydrogen-
(A) Oxidation   (B) Dehydration   (C) Addition   (D) Substitution

23. The maximum number of covalent bonds by which the two carbon atoms can bonded to each other are-

(A) Four (B) Two (C) Three (D) No fixed number

24. Which of the following ion has smallest ionic radius-

(A) C^{4-} (B) F^- (C) N^{3-} (D) O^{2-}

25. Total number of atoms in 44g of CO_2 is-

(A) 6.02×10^{23} (B) 6.02×10^{24} (C) 1.806×10^{24} (D) 18.06×10^{22}

26. A compound has empirical formula CH_2. To which hydrocarbon series does it belong-

(A) Alkane (B) Cycloalkane (C) Alkyne (D) None of these

27. Which of the following diseases is not caused by virus-

(A) Measles (B) Polilo (C) Whooping cough (D) Rabies

28. Which of the following is essential for clotting of blood-

(A) Red Blood Corpuscles (B) White Blood Corpuscles
(C) Lymph (D) Blood platelets

29. Spinal cord is related to-

(A) Reproductive System (B) Excretory System
(C) Nervous System (D) Respiratory System

30. The type of joint found in knee is also found in which of the following-

(A) Elbow (B) Shoulders (C) Vertebrae (D) Skull

31. Urecotelic animals are those that eliminate the nitrogenous waste predominantly in the form of –

(A) Uric Acid (B) Ammonia (C) Amino Acid (D) Urea

32. Which one of the following is a Primary Consumer of any food chain

(A) Carnivore (B) Herbivore (C) Saprophyte (D) Both (B) and (C)

33. Which one of the following is not a modification of leaf-

(A) Pitcher of a pitcher plant (B) Bulb of Onion
(C) Bladder of Utricularia (D) Leaf spines of Asparagus

34. Insulin is a harmone. Chemically it is a-

(A) Protein (B) Carbohydrate (C) Fat (D) Steroid

35. Which one of the following is commonly known as malarial parasite and causes malaria in human-

(A) Plasmodium (B) Paramoecium (C) Anopheles (D) Amoeba

36. Which of the following organ is not involved in excretion-

(A) Lungs (B) Liver (C) Skin (D) Stomach

37. Which harmone is helping in cell division-

(A) Abscisic Acid (B) Cytokinin (C) Ethylene (D) Gibberalins

38. Which is a worm blooded animal-

(A) Pigeon (B) Frog
(C) Turtle (D) Sea Horse (Hippocampus)

39. The Prokaryotic cell does not contain-

(A) Chromosomes (B) Mitochondria
(C) Plasma membrane (D) Ribosome

40. Which one of the following is the main organ for absorption of food in human being-
(A) Large Intestine   (B) Liver   (C) Stomach   (D) Small intestine

41. Third battle of Panipat-
(A) 1526   (B) 1556   (C) 1770   (D) 1761

42. Indian National congress founded by A. O. Hume-
(A) 1885   (B) 1886   (C) 1887   (D) 1888

43. What was the original name of Mumtaz Mahal?
(A) Arjumand Bano Begum   (B) Raziya Begum
(C) Gulbadan Begum   (D) Roshan Ara Begum

44. During the invasion on India which Greek intellect accompanied Alexander?
(A) Herodotus   (B) Strabo   (C) Nearchas   (D) Arian

45. The beginning of Industrial revolution in western countries started in-
(A) America   (B) Russia   (C) France   (D) England

46. Kanchipuram-
(A) Capital of Cholas   (B) Capital of Pallavas
(C) Capital of Chalukyas   (D) Capital of Pandyas

47. First newspaper published in India was-
(A) Om Prakash   (B) Sambaddha kaumudi
(C) Rast-Goftar   (D) Bengal Gazzet

48. The Founder of Judaism was-
(A) Abraham   (B) Moses   (C) Zolwastra   (D) Augustus

49. When did the war between India & china take place?
(A) 1960   (B) 1961   (C) 1962   (D) 1963

50. What was Bastile?
(A) Biggest jail of france   (B) Biggest gym of france
(C) Biggest theatre of france   (D) Biggest garden of france

51. Also khown as "Frontier Gandhi."
(A) Abul Kalam Azad   (B) Abdul Gaffar Khan
(C) Shaukat Ali   (D) Nasir Ali

52. The partition of Bengal-
(A) 1920   (B) 1907   (C) 1905   (D) 1919

53. The founder of the Banaras Hindu University-
(A) Dr. Radhakrishan   (B) Mahatma Gandhi
(C) Madan Mohan Malviya   (D) Indira Gandhi

54. When was the Quit India movement started?
(A) 1942   (B) 1943   (C) 1945   (D) 1946

55. Wrote, "Vande Mataram" –
(A) Ravindra Nath Tagore   (B) Sharatchandra
(C) Bankim Chandra Chatterji   (D) Girish Chandra Chatterji

56. Who was the first Indian woman to reach the highest peak?
(A) Bachendri Pal   (B) Malavath Purna   (C) Harshita Sumitra   (D) Dicky Dalma

57. Nanda Devi bio-reserve is located in-
(A) Uttaranchal   (B) Delhi   (C) Punjab   (D) Orissa

58. Rainfall occurs during winter in North-Western part of India due to-
(A) Cyclonic Depression   (B) Western disturbance
(C) Retreating Monsoon   (D) South west Monsoon

59. Tropic of cancer does not pass through-
(A) Rajasthan   (B) Tripura   (C) Jharkhand   (D) Bihar

60. Which is the brightest planet-
(A) Mercury   (B) Venus   (C) Jupiter   (D) Sun

61. The longest day, 23rd September will be on-
(A) Equator   (B) $23\frac{1}{2}^{o}$ Northern Latitude
(C) Tropic of Capricorn   (D) 50° Southern Latitude

62. As we move to higher altitude, the air becomes-
(A) Light   (B) Dense   (C) Dry   (D) Moist

63. On earths orbit surface, the earth's axis is tilted at-
(A) 90° (B) $23\frac{1}{2}^{o}$ (C) 0° (D) $66\frac{1}{2}^{o}$

64. The biggest island of world is-
(A) New Guyana   (B) Borneo   (C) Greenland   (D) Sumatra

65. The capital of western Australia is-
(A) Sydney   (B) Canberra   (C) Melborne   (D) Perth

66. The highest peak of Africa is-
(A) Nyasa   (B) Kilimanjaro   (C) Kenya   (D) Elgon

67. The currency of Germany is-
(A) Mark   (B) Frank   (C) Crone   (D) Drachma

68. The famous and the largest lake along the Indian Eastean coastal piain is-
(A) Pulikat lake   (B) Chilka lake   (C) Sambhar lake   (D) Wular lake

69. Which is the most dominant type of vegetation in India is-
(A) Tropical Evergreen forest   (B) Tropical Deciduous forest
(C) Tropical Desert Forest   (D) Tidal forest

70. Which is the smallest continent in the world?
(A) Asia   (B) Australia   (C) Africa   (D) South America

71. "MNREGA" is referred to-
(A) Right to information   (B) Right to Education
(C) Right to work   (D) Right to protection of life

72. Which will be a feature of the developing country ?
(A) Agriculture as the main occupation   (B) Mass Poverty
(C) Mass illiteracy   (D) High technological development

73. According to the census of 2011, the population of India on 1st march 2011 was-
(A) 121.05 Crore   (B) 100.2 Crore   (C) 99.00 Crore   (D) 98.00 Crore

74. The Headquarter of world Bank is-

(A) Geneva   (B) Newyork   (C) London   (D) Washington D.C.

75. When was Universal Human Rights day declared-

(A) 1st October 2001   (B) 10th December 1948

(C) 1st march 1950   (D) 1st April 2000

76. Who was the first secretary General of U.N.O.-

(A) Trygve lie   (B) Uthant   (C) Dr. Kurt Waldheim   (D) Kofi Annan

77. The templetown of Rameshwaram in Tamilnadu related to a great person-

(A) Dr. S. Radhakrishan   (B) Shri R. Venkatraman

(C) Dr. A.P.J. Abdul Kalam   (D) Dr. R. Chidambaram

78. Who is the author of "Log Walk to Freedom"?

(A) Nelson Mandela   (B) Levy Patrick   (C) Robert Mugabe   (D) Sam Nujomo

79. Which fundamental right was abolished by the 44th amendment act in December 1978?

(A) Right to Freedom   (B) Right to Property

(C) Right against exploitation   (D) Right to equality

80. Who was the first prime-minister of Independent India?

(A) Pt. Jawaharlal Nehru   (B) Lal Bahadur Shastri

(C) Indira Gandhi   (D) Mahatma Gandhi

81. One Rational number between $\frac{1}{5}$ and $\frac{1}{4}$ is-

(A) $\frac{18}{100}$ (B) $\frac{22}{100}$ (C) $\frac{26}{100}$ (D) $\frac{27}{100}$

82. If A : B = 2 : 3, B : C = 4 : 5 and C : D = 6 : 7 then the value of A : D will be-

(A) $\frac{2}{7}$ (B) $\frac{9}{7}$ (C) $\frac{7}{9}$ (D) $\frac{16}{35}$

83. The mean of eight number is 6. If each number is multiplied by 2, the new mean will be-

(A) 3   (B) 6   (C) 12   (D) 96

84. The probability to select a prime number from the numbers 3, 4, 5, 6, …….25 will be-

(A) $\frac{7}{23}$ (B) $\frac{8}{23}$ (C) $\frac{9}{23}$ (D) $\frac{10}{23}$

85. The total number of two digit number which are divisible by three will be-

(A) 30   (B) 31   (C) 32   (D) 33

86. Marks secured by a student in various subject are 25, 26, 27, 28 and 29. What does the mark '27' denotes?

(A) Mode   (B) Mode and median

(C) Mean and median   (D) Mean, median and mode

87. The sum of 'n' terms of series $\left(1-\frac{1}{n}\right)+\left(1-\frac{2}{n}\right)+\left(1-\frac{3}{n}\right)+.....$ will be-

(A) $\frac{1}{n}(n+1)$ (B) $\frac{1}{n}(n-1)$ (C) $\frac{1}{2}(n+1)$ (D) $\frac{1}{2}(n-1)$

88. If $x+y=7$ and $3x-2y=11$. Then the value of x will be-

(A) 5   (B) 6   (C) 7   (D) 8

89. If $x^a = y, y^b = z, z^c = x$ then the correct statement will be-
    (A) a. b. c = 1   (B) a. b. c = 0   (C) a + b + c = 1   (D) a + b + c = 0

90. Number of axis of symmetry in the following figure is-
    (A) 2   (B) 4
    (C) 1   (D) 0

91. If highest common factor of $x^2 + 3x + 2$ and $x^2 + 5x + 6$ is $x + a$, then value of 'a' will be-
    (A) 1   (B) 2   (C) 3   (D) 6

92. The value of $\sqrt{10 + \sqrt{25 + \sqrt{108 + \sqrt{154 + \sqrt{225}}}}}$ will be-
    (A) 4   (B) 6   (C) 8   (D) 10

93. Point on the X axis which is equidistant from the point (0,0) and (2, 0) is-
    (A) (0, 1)   (B) (1, 1)   (C) (1, 0)   (D) (0, 2)

94. If $3y - 2x = 4$ and $4y - px = 2$ are perpendicular to each other the value of p will be-
    (A) $\dfrac{3}{2}$ (B) $\dfrac{8}{3}$ (C) 6   (D) −6

95. Radii of three solid spheres are 3 cm, 4 cm and 5 cm respectively. They are melted and converted in to a bigger solid sphere. The radius of the new sphere will be-
    (A) 12 cm   (B) 9 cm   (C) 8 cm   (D) 6 cm

96. The perimeter of a right angles triangle is 24 cm. If the hypotenuse is 10 cm. Then area of this triangle will be-
    (A) 20 cm^2 (B) 22 cm^2 (C) 24 cm^2 (D) 26 cm^2

97. In the given figure
    PB = 24 cm OP = 25 cm, PA and PB are tangents of the circle.
    The length of PA and OB will be-
    (A) 24 cm, 7 cm   (B) 25 cm, 7 cm
    (C) 24 cm, 13 cm   (D) 25 cm, 12 cm
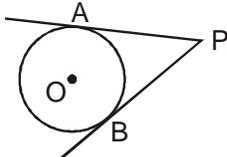
98. The length of minute needle of a watch is 7 cm. The area swept by it during 9:10 to 9:25 will be-
    (A) 154 cm^2 (B) 77 cm^2 (C) $\dfrac{77}{2}$ cm^2 (D) $\dfrac{77}{4}$ cm^2

99. The square of side 4 cm. is inscribed the circle. The area of the circle will be-
    (A) 2π cm^2 (B) 8π cm^2
    (C) 4π cm^2 (D) π cm^2
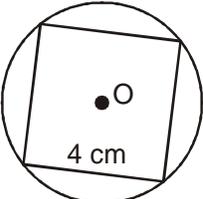
100. If $\tan\theta = \dfrac{4}{5}$ then the value of $\dfrac{5\sin\theta - 3\cos\theta}{5\sin\theta + 3\cos\theta}$ will be-
    (A) $\dfrac{5}{7}$ (B) $\dfrac{4}{7}$ (C) $\dfrac{9}{7}$ (D) $\dfrac{1}{7}$

ANSWERS

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