

INTERNATIONAL SCHOLASTIC TALENT TEST(ISTT) 2016

STD 10

Max. Marks: 100
Time: 2 Hrs.

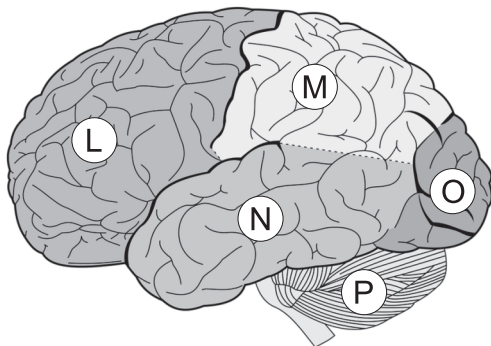
Code No: F/100/16

Name:..... Reg. No:.....

All the answers should be marked in the answer sheet only.

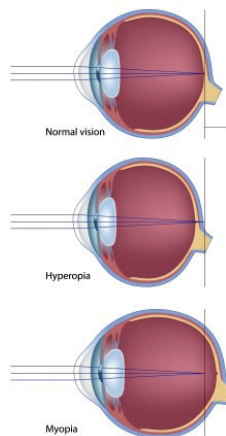
Select the most suitable answer from the following options and write A,B,C or D in the answer sheet. (All the questions carry 2 marks each)

- The 'Tiger of Mysore' Tipu Sultan fought a number of wars against British Empire and became a martyr at Seringapatnam in the year
A. 1765
B. 1799
C. 1810
D. 1770
- The present Lok Sabha is
A. the 13th Lok Sabha
B. the 14th Lok Sabha
C. the 15th Lok Sabha
D. the 16th Lok Sabha
- In which state is the Golconda fort?
A. Telengana
B. Gujarath
C. Andrapradesh
D. Karnataka
- You can watch TV later, you practise for at least half an hour.
A. even though
B. as soon as
C. on condition that
D. even if
- Write it down here, ?
A. won't you
B. wouldn't you
C. will you
D. write you
- The Sri Lankan flag consists of
A. TIGER
B. LION
C. HORSE
D. ELEPHANT
- The First Indian jute mill was set up in
A. Orissa
B. Gujarat
C. Madhya Pradesh
D. Bengal
- East India company was established in the year
A. 1500
B. 1600
C. 1700
D. 1800
- Part of the brain that maintains posture and equilibrium of the body is



- L
- M
- N
- O
- P

10. Elongation of eye balls results in



- A. Myopia
- B. Hypermetropia
- C. Presbyopia
- D. None of these

11. Which of the following can represent an ether?

- A. C_2H_4O
- B. C_2H_7N
- C. $C_2H_4O_2$
- D. C_2H_6O

12. Which of the following is a poor conductor of heat and electricity?

- A. Gold
- B. Silver
- C. Copper
- D. Lead

13. An object is placed at the centre of curvature of a concave mirror, image will be formed

- A. at infinity
- B. away from the c
- C. between f and c
- D. at c

14. Which of the following can impart images, pictures etc. to a computer?

- A. Plotter
- B. Monitor
- C. Scanner
- D. Printer

15. Fat on digestion gives

- A. Fatty acid
- B. Amino acid
- C. Glycerol
- D. Fatty acid and glycerol

16. What is the largest number that divides 245 and 1029, leaving remainder 5 in each case?

- A. 15
- B. 16
- C. 9
- D. 5

17. What is the least number that is divisible by all the natural numbers from 1 to 10 (both inclusive) ?

- A. 100
- B. 1260
- C. 2520
- D. 5040

18. If one of the zeroes of the cubic polynomial

$X^3 + ax^2 + bx + c$ is -1 , then the product of the other two zeroes is

- A. $a - b - 1$
- B. $b - a - 1$
- C. $1 - a + b$
- D. d / a

19. The graphs of the equation

$$6x - 2y + 4 = 0 \text{ and}$$

$$3x - y + 12 = 0 \text{ are two lines which are}$$

- A. Coincident
- B. Intersecting exactly at one point
- C. Parallel
- D. Perpendicular to each other

20. Who is the ex-officio chairperson of National Disaster Management Authority?

- A. President
- B. Home Minister
- C. Prime Minister
- D. Vice President

Fill in the blanks.

21. The National bird of Mauritius is
22. The present HRD minister of India is
23. The author of the famous book 'India Wins Freedom' is
24. The present Finance Minister of Kerala State is
25. The fastest man in the world is

Cross matching. Select from column B. Write the letter against the question number.

Column A

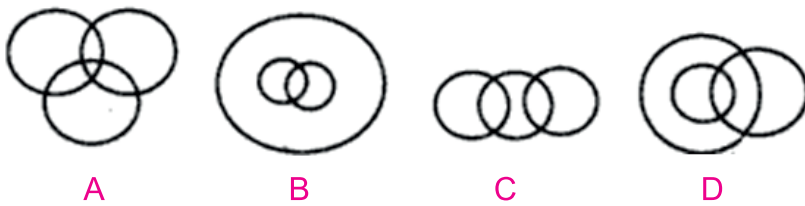
Column B

- | | | | |
|-----|----------------------------|---|--------------|
| 26. | Jim Corbett National Park | A | Andrapradesh |
| 27. | Eravikulam National Park | B | Hariyana |
| 28. | Gir Forest National Park | C | Utharakhand |
| 29. | Rajiv Ghandi National Park | D | Kerala |
| 30. | Sultanpur National Park | E | Gujarat |

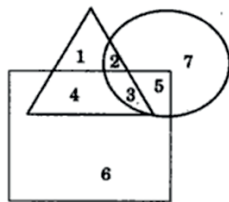
Mental Ability and Logical Reasoning.

31. Each of the six friends ,A,B,C,D,E and F has a different weight. D is lighter than only two friends. A is heavier than C and E. A is lighter than B and F . B is not the heaviest. E is not the lightest. The second heaviest among them weighs 73 kg while the second lightest is 55 kg. If the weight of A is 8kg more than that of E, which of the following may be the weight of D?
A. 76kg B. 81kg C. 59kg D. 67kg
32. There are 24 boys in a class. The average age of boys is numerically equal to the number of girls. Total weight of girls is 90 kg less than that of boys. The average weight of the class is 25 kg. How many girls are there in the class?
A. 25 B. 30 C. 32 D. 36
33. B is sister of D. M is father of D.N is sister of M. How is B related to N?
A. Sister B. Aunt C. Niece D. Mother
34. From his house Zayan moves 30 km in North –west direction, then 30km in south-West direction. Next he moves 30 km in South-East direction. Finally he turns towards his house. In which direction is he moving?
A. South- West B. South-East C. North-west D. North-East

35. Which one of the following diagrams correctly represents the relationship among the classes : Tennis fans, cricket players, students?



36. In the figure given below, triangle represents the healthy, square represents the old and circle represents the men. Find out the area of the figure which represents the men who are healthy but not old?



- A. 1
- B. 2
- C. 3
- D. 7

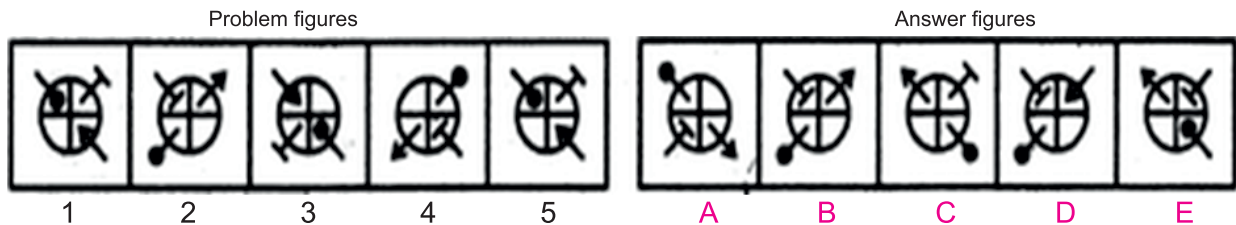
37. In a code language MASTER is written as NCVXJX. How is LOST written in the same language?

- A. MPVX
- B. NPVX
- C. MQVX
- D. MPTU

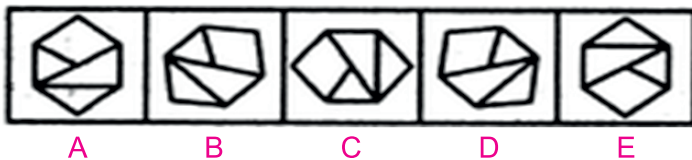
38. Which of the following words cannot be formed from the word INTERPRETATION ?

- A. PARTNER
- B. PORTER
- C. REPEAT
- D. REPORTER

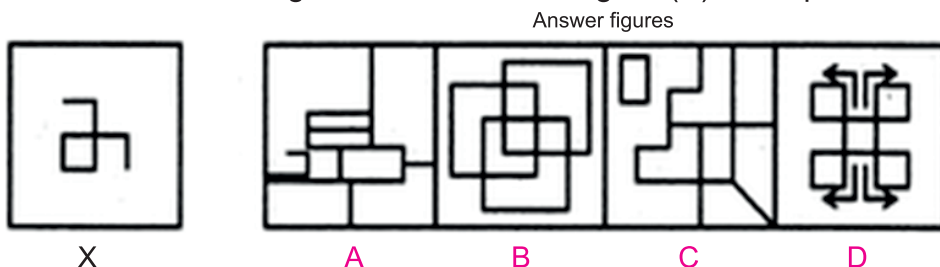
39. Select a figure from amongst the Answer Figures which will continue the same series as established by the five Problem Figures.



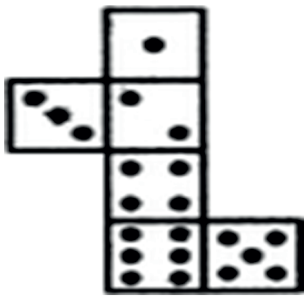
40. Choose the figure which is different from the rest.



41. Find out the alternative figure which contains figure (X) as its part.

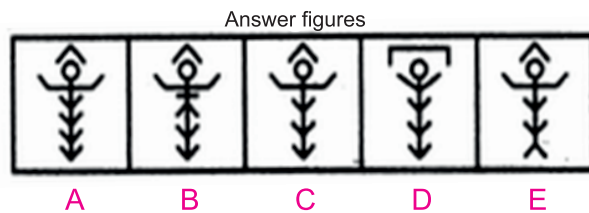
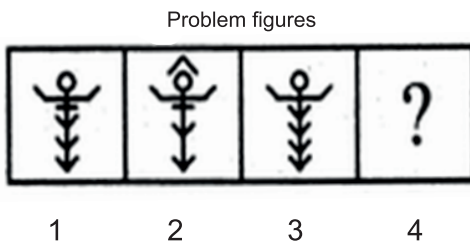


42. When the following figure is folded to form a cube, how many dots lie opposite the face bearing five dots?



- A. 1
- B. 2
- C. 3
- D. 4

43. Select a suitable figure from the Answer Figures that would replace the question mark (?).



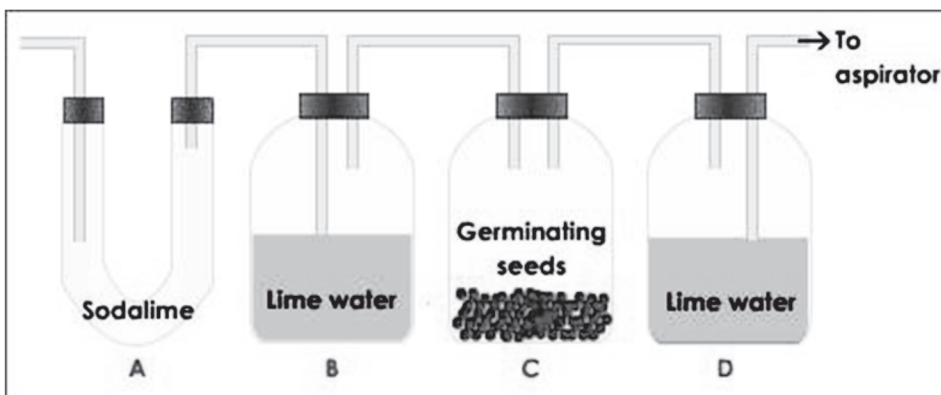
44. Identify the figure that completes the pattern.



Activity.

Saleem conducted the following experiment to see that all gases are generated during the germination of seeds. The experiment is set up as shown. Bottle C is covered with a black cloth.

On opening the stop cork near the aspirator, the lime water in D turns milky after sometime. However, the lime water in B does not turn milky.



45. Why does the limewater in D turn milky while the lime water in B remain clear?
- A. Oxygen gas produced during germination of seeds turn lime water milky.
 - B. Methane gas from C turns lime water milky.
 - C. Carbon dioxide formed during germination of seeds turns lime water milky.
 - D. None of the above.
46. Why was the bottle C covered with black cloth?
- A. To prevent photosynthesis.
 - B. To prevent the decomposition of the gases formed.
 - C. Germination takes place only in darkness.
 - D. None of the above.

Comprehension

The fossil remain of the first flying vertebrates, the pterosaurs, have intrigued paleontologists for more than two centuries. How such large creatures, which weighed in some cases as much as a piloted hang glider and had wingspans from 8 to 12 meters, solved the problems of powered flight, and exactly what these creatures were-reptiles or birds- are among the questions scientist have puzzled over.

Perhaps the least controversial assertion about the pterosaurs is that they were reptiles. Their skulls, pelvises, and hind feet are reptilian. The anatomy of their wings suggests that they did not evolve into the class of birds. In pterosaurs a greatly elongated fourth finger of each forelimb supported a wing like membrane. The other fingers were short and reptilian, with sharp claws, In birds the second finger is the principle strut of the wing, which consists primarily of features. If the pterosaur walked or remained stationary, the fourth finger, and with it the wing, could only turn upward in an extended inverted V-shape along side of the animal's body.

The pterosaurs resembled both birds and bats in their overall structure and proportions. This is not surprising because the design of any flying vertebrate is subject to aerodynamic constraints. Both the pterosaurs and the birds have hollow bones, a feature that represents a saving in weight. In the birds, however, these bones are reinforced more massively by internal struts. Although scales typically cover reptiles, the pterosaurs probably had hairy coats.

T.H. Huxley reasoned that flying vertebrates must have been warm – blooded because flying implies a high internal temperature. Huxley speculated that a coat of hair would insulate against loss of body heat and might streamline the body to reduce drag in flight. The recent discovery of a pterosaur specimen covered in long, dense, and relatively thick hair like fossil material was the first clear evidenced that his reasoning was correct. Efforts to explain how the pterosaurs became air-borne have led to suggestions that they launched themselves by jumping from cliffs, by dropping from trees, or even by rising into light winds from the crests of waves.

Each hypothesis has its difficulties. The first wrongly assumes that the pterosaur's hind feet resembled a bat's and could serve as hooks by which the animal could hang in preparation for flight. The second hypothesis seems unlikely because large pterosaurs could not have landed in trees without damaging their wings. The birds call for high waves to channels updrafts. The wind that made such waves however, might have been too strong for the pterosaurs to control their flight once airborne.

Questions

47. It can be inferred from the passage that scientists now generally agree that the
- A. enormous wingspan of the pterosaurs enable them to fly great distances
 - B. structure of the skeleton of the pterosaurs suggests a close evolutionary relationship to bats.
 - C. fossil remains of the pterosaurs reveal how they solved the problem of powered flight.
 - D. pterosaurs were reptiles.
48. The author's view of the idea that the pterosaurs became airborne by rising into light winds created by waves is
- A. revolutionary.
 - B. unlikely.
 - C. unassailable.
 - D. probable.
49. According to the passage, the skeleton of a pterosaur can be distinguished from that of a bird by the
- A. size of its wingspan.
 - B. presence of hollow spaces in its bones.
 - C. anatomic origin of its wing strut.
 - D. presence of hook like projections on its hind feet.
50. The ideas attributed to T.H. Huxley in the passage suggest that he would most likely agree with which of the following statements?
- A. an animal's brain size has little bearing on its ability to master complex behaviors.
 - B. an animal's appearance dramatically over a period of time.
 - C. animals within a given family group are unlikely to change their appearance.
 - D. the origin of flight in vertebrates was an accidental development rather than the outcome.

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Answer Sheet STD 10

Name:Reg. No :

School :

- | | | |
|----------|----------|----------|
| 1. | 18. | 35. |
| 2. | 19. | 36. |
| 3. | 20. | 37. |
| 4. | 21. | 38. |
| 5. | 22. | 39. |
| 6. | 23. | 40. |
| 7. | 24. | 41. |
| 8. | 25. | 42. |
| 9. | 26. | 43. |
| 10. | 27. | 44. |
| 11. | 28. | 45. |
| 12. | 29. | 46. |
| 13. | 30. | 47. |
| 14. | 31. | 48. |
| 15. | 32. | 49. |
| 16. | 33. | 50. |
| 17. | 34. | |

