ISFO Science Sample Paper

MAXIMUM TIME: 60 MINUTES　　　　　　　　　　　　　　**MAXIMUM MARKS: 100**

INSTRUCTIONS

1. Please DO NOT OPEN the contest booklet until you are asked to do so.
2. The question paper comprises of 4 sections (Total 50 questions):

   Section A: Scientific Reasoning　　25-Questions (2 marks each)

   Section B: Everyday Science　　15-Questions (1 mark each)

   Section C: Logical Reasoning　　5-Questions (2 marks each)

   Section D: BrainBox　　5-Questions (5 marks each)
3. All questions are compulsory. There is no negative marking.
4. No electronic devices capable of storing and displaying visual information such as calculator and mobile are allowed during the course of the exam.
5. Fill all your detail properly on the OMR sheet.
6. There is only ONE correct answer of each question.
7. To mark your choice of answers by darkening the circles on the OMR Sheet, use an HB Pencil or a Blue/Black Ball Point Pen only.
8. Shade your answer clearly as per the given example:

CORRECT	INCORRECT
Ⓐ ● Ⓒ Ⓓ	Ⓐ̶ ⊗ ● Ⓓ

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE ASKED TO DO SO

Roll No.:

Student's Name:

SECTION A: SCIENTIFIC REASONING

1. Digestive juices are necessary for digestion of food. They can not be found in _____ .

   a) Mouth

   b) Oesophagus

   c) Stomach

   d) Intestine

2. The colour of various indicators and the pH value at which the colour changes are given in the table :

Indicator	Colour in strong acid	pH at which colour change	Colour in strong alkali
Litmus	Red	7	Blue
Phenophthalein	Colourless	9	Pink
Methyl orange	Red	4	Yellow
Bromothymol Blue	Yellow	7	Blue

   Choose the correct statement.

   a) Vinegar will turn pink when phenophthalein indicator is added.

   b) Ammonia solution will turn yellow when bromothymol indicator is added.

   c) Salt water will remain colourless when phnophthalein indicator is added.

   d) Sugar solution will turn red litmus blue.

3. Study the given diagram. It is a velocity-time graph for the motion of an object. Find the displacement of the object in the first 7 seconds with the help of the given graph.

   a) 104 m

   b) 145 m

   c) 155 m
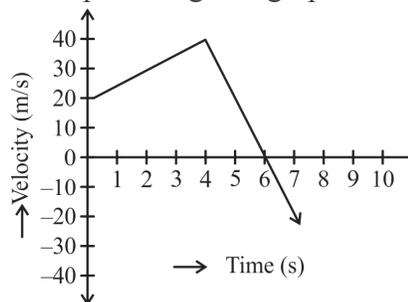
   d) 105 m

4. A camera makes use of converging lens to produce an image. If the camera captures a distant object, then which of the following sets of characteristics of the image is correct?

   a) Real, inverted, diminished

   b) Real, erect, diminished

   c) Virtual, erect, diminished

   d) Virtual, inverted, same size of the object

SECTION B: EVERYDAY SCIENCE

5. When we chew food in our mouth, the tongue is used to _____

   a) Crush the food into small pieces.

   b) Digest the food.

   c) Cover the windpipe so that food do not enter the windpipe.

   d) Mix the food and form it into a ball.

6. Pitcher plant is green in colour. It makes its food by the process of photosynthesis, but it eats insects because

   a) It grows in nitrogen deficient area.

   b) It needs nitrogen to grow properly.

   c) Both a and b

   d) It needs more oxygen and carbon dioxide to grow.

7. Choose the image that completes the pattern

a)

b)

c)

d)
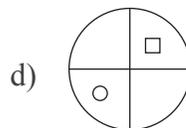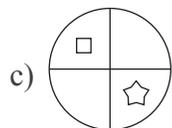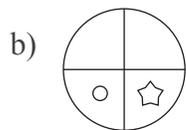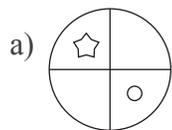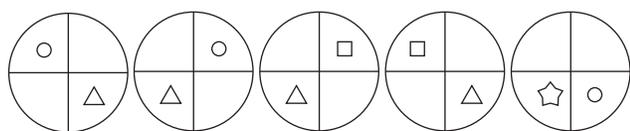
8. The given figure constitutes of
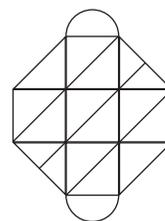
a) 16 △, 5 □, 6 ▭, 2 ◠
b) 18 △, 8 □, 6 ▭, 2 ◠
c) 16 △, 7 □, 5 ▭, 2 ◠
d) 18 △, 5 □, 6 ▭, 2 ◠

SECTION D: BRAINBOX

9. Two groups of students wanted to find out if the oxygen gas is released during photosynthesis process.


Group A   Group B
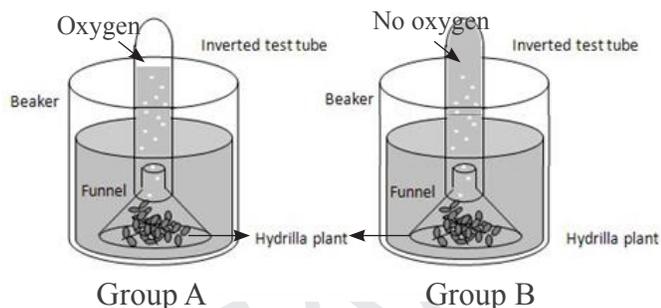
The students of group 'B' found that their experiment was unsuccessful as no oxygen gas was released. What can be the one possible reason for this?

a) They did not use tap water.
b) They used too much water.
c) The Hydrilla didn't get enough roots to take in water.

d) The Hydrilla leaves may covered with a layer of mud.

10. Study the given diagram of a simple electrical system.
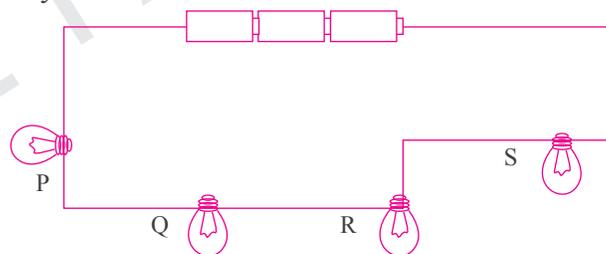
Which bulb will light up and why?
a) Bulb 'P' and 'S', as they are closer to the batteries.
b) Only bulb 'R' as its metal cap is connected with wire.
c) Bulbs 'Q' and 'R' as they both are connected in a series.
d) All the bulbs will glow up as all are connected and circuit is closed.

● ● ●

ANSWERS

1. (B)	2. (C)	3. (B)	4. (A)	5. (D)	6. (C)	7. (B)	8. (D)	9. (C)	10. (B)