ISFO Science Sample Paper

GRADE 9

LEVEL 1

International Society for Olympiad
LONDON · DUBAI · DELHI · SINGAPORE · NEPAL

Eupheus Learning | 100 YEARS

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.
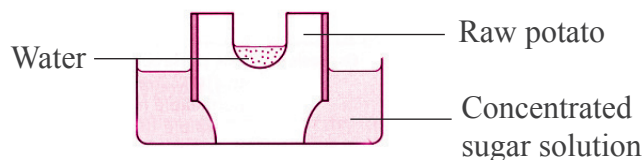8. Shade your answer clearly as per the given example:

CORRECT	INCORRECT
Ⓐ ● Ⓒ Ⓓ	Ⓐ̶ ⊗ ◉ Ⓓ

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

Roll No.:
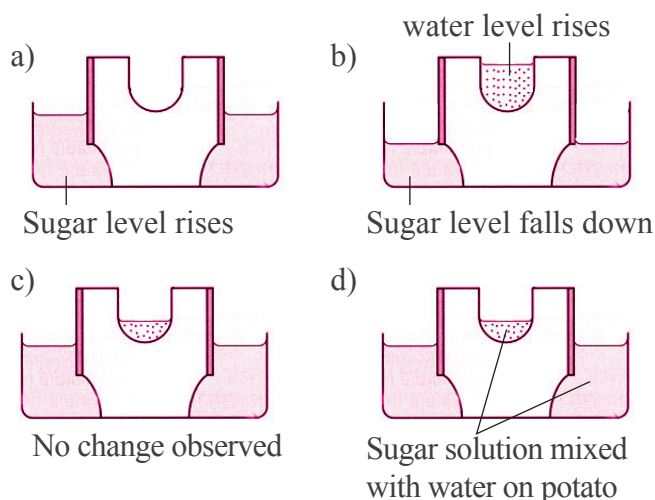
Student's Name:

1. A group of students conducted an experiment to observe the process of osmosis. They made the set up as shown below.

What would they observe?

a)

Sugar level rises

b) water level rises

Sugar level falls down

c)

No change observed

d)

Sugar solution mixed with water on potato

2. If body travels with an acceleration a_1, for time t_1 and acceleration a_2 for time t_2; if t_1 and t_2 are successive time intervals, then the average acceleration of the body is

a) $\dfrac{a_1 t_1 + a_2 t_2}{2(t_1 + t_2)}$

b) $\dfrac{a_1 t_1 + a_2 t_2}{(t_1 + t_2)}$

c) $\dfrac{(a_1 + a_2)}{t_1 + t_2}$
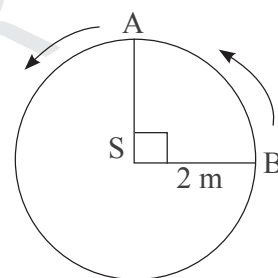
d) $\dfrac{a_1 t_1 - a_2 t_2}{(t_1 - t_2)}$

3. A very old painting has been sprayed accidently with new paint. The solubility of the old paint and new paint in different solvents are given below.

Solvent	Old Paint	New Paint
P	Insoluble	Insoluble
Q	Insoluble	Soluble
R	Soluble	Insoluble
S	Soluble	Soluble

Which solvent could be used to remove the new paint without damaging the original paint?

a) P

b) Q

c) R & S

d) P & Q

4. A source situated at the centre of a circle is producing sound. What will be the change in frequency (*f*) of sound heard by two persons at Point 'A' and Point 'B' if they move with velocities 20 m/s and 10 m/s respectively along the circular path as shown in figure? (Velocity of sound is 330 m/s)

a) 2f

b) f

c) Zero

d) None of these

5. The formulae of the ions of four elements are -

$$O^{-2} \quad F^{-} \quad Li^{+} \quad Mg^{+2}$$

Which of the following statements is correct about these ions?

a) They all have more electrons than protons.

b) The all have same number of electrons in their outer most shell.

c) They all have same electronic structure as a noble gas.

d) They all have more number of protons in their nuclei.

6. A parachutist speeds up as he falls down towards ground, until he reaches a constant speed. How would you describe the force of air resistance that acts on him?

a) It decreases as he goes faster until it is less than the weight of the parachutist.

b) It decreases as he goes faster until it is equal to the weight of the parachutist.

c) It increase as he goes faster until it is equal to the weight of the parachutist.

d) It increase as he goes faster until it is greater than to the weight of the parachutist.

SECTION C: LOGICAL REASONING

7. If $56 \times 11 = 9$, $37 \times 13 = 6$, $42 \times 12 = 3$ then find the value of $87 \times 77 = ?$

   a) 1   b) 3   c) 4   d) 5

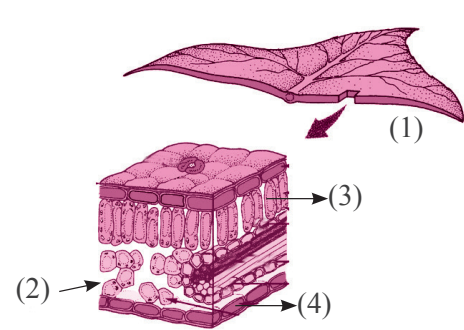8. Two trains are running in opposite directions towards each other with speeds of 54 kmph and 48 kmph respectively. If the length of one train is 250 m and they cross each other in 18 seconds, the length of the other train is

   a) 250 m   b) 270 m

   c) 260 m   d) 280 m

SECTION D: BRAINBOX

9. Why broilers are fed with protein rich diet with adequate fats?

   a) For increase in growth rate

   b) For increase in reproduction

   c) For increase in egg production

   d) For increase in feathers

10. Observed the given diagram of internal structure of a leaf. Which identifies a cell, a tissue and an organ?

   a) 1-cell, 2-tissue, 3-organ

   b) 1-organ, 2-tissue, 4-cell

   c) 1-organ, 2-cell, 4- tissue

   d) 1-organ, 2-cell, 3-tissue

● ● ●

ANSWERS

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