



| Total Questions - 50  | Maximum Mark - 150         | Duration - 1 hr |
|---|----------------------------|-----------------|
|  | Pattern and Marking Scheme |                 |
| No. of Questions  | 50                         | -               |
| Marks Per Question  | 3                          |                 |

| Syllabus | International Science Olympiad (ISO) 2022-23 SET - AH 7  |
|----------|--|
| Grade 7  | Nutrition in Plants, Nutrition in Animals, Fibre to Fabric, Heat, Acids, Bases and Salts, Physical and Chemical Changes, Weather, Climate and Adaptations of Animals to Climate, Winds, Storms and Cyclones, Soil, Respiration in Organisms, Transportation in Animals and Plants, Reproduction in Plants, Motion and Time, Electric Current and its Effects, Light, Water, A precious resource, Forests, Our life line, Waste water story |



### Guidelines for the Candidate

1. You will get additional ten minutes to fill up information about yourself on the OMR Sheet, before the start of the exam.
2. Write your Name, School Code, Class, Roll No. and Mobile Number clearly on the OMR Sheet and do not forget to sign it. We will share your marks / result and other information related to Olympiad exams on your mobile number.
3. The Question Paper comprises sections: reasoning, subjective, achievers' section
4. All questions are compulsory. There is no negative marking. Use of calculator is not permitted.
5. There is only ONE correct answer. Choose only ONE option for an answer.
6. To mark your choice of answers by darkening the circles on the OMR Sheet, use HB Pencil or Blue / Black ball point pen only
7. Rough work should be done in the blank space provided in this booklet.
8. Return the OMR Sheet to the invigilator at the end of the exam.
9. Please fill in your personal details in the space provided on this page before attempting the paper.

**1. The microorganisms present in the soil require moisture (water) and nutrients for growth and survival. Choose from the options below the habitat (place) where the soil has plenty of water and nutrients.**

- a. Desert
- b. Forest
- c. Open field
- d. Cricket ground

**2. The most suitable material for making the core of an “Electromagnet” is \_\_\_\_\_.**

- a. Iron
- b. Brass
- c. Aluminium
- d. Steel

**3. Nichrome wire is used in \_\_\_\_\_.**

- a. CFL
- b. Electric fuse
- c. Hair dryer
- d. MCB

**4. The gas we use in the kitchen is called liquefied petroleum gas (LPG). In the cylinder, it exists as a liquid. When it comes out of the cylinder, it becomes a gas (change – A) then it burns (change – B). The following statements pertain to these changes. Choose the correct one.**

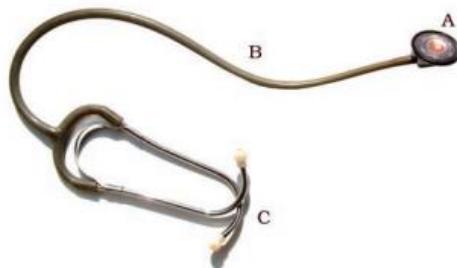
- a. Process – A is a chemical change.
- b. Process – B is a chemical change.
- c. Both processes A and B are chemical changes.
- d. None of these processes is a chemical change.

**5. Arrange the following statements in a proper order to form a meaningful paragraph.**

- (a) Which in turn decreases the seepage of rain water into the ground.
- (b) This decreases the number of open areas like park, and playgrounds.
- (c) Increasing population creates demand for construction of houses, shops, offices, roads and pavements.
- (d) This results in depletion of the water table and creates scarcity of more water.

- a. (c), (b), (a), (d)
- b. (b), (c), (a), (d)
- c. (a), (b), (c), (d)
- d. (c), (a), (d), (b)

6. Which of the following statements is INCORRECT about the given instrument?



**Statement 1:** This instrument is used to hear heartbeat

**Statement 2:** 'A' is called the chest piece whereas 'C' is used to measure the diaphragm.

- a. Only statement 1
- b. Only statement 2
- c. Both statement 1 and 2
- d. Neither statement 1 nor 2

7. Observe the figures carefully.



The given figures show the path of light through lenses of two different types, represented by rectangular boxes A and B. What is the nature of lenses A and B?

- a. A- convex lens; B-concave lens
- b. A- concave lens; B-convex lens
- c. A-convex lens; B-plane lens
- d. A-plane lens; B- convex lens

8. Which of them is or are the adaptive features of a polar bear?

- a. Layer of fat under the skin.
- b. Layer of fat under the skin and long, curved and sharp claws.
- c. Layer of fat under the skin, long curved and sharp claws and slippery body.
- d. Layer of fat under the skin, long curved and sharp claws and thick white fur.

9. Which gas present in air is essential for aerobic respiration?

- a. Oxygen
- b. Nitrogen
- c. Carbon dioxide
- d. All of these

**10. Read the following environmental conditions of tropical rain forests.**

- Hot and humid climate
- Unequal lengths of day and night
- Abundant rainfall
- Abundant light and moisture

Identify the conditions from the above list that are responsible for the presence of a large number of plants and animals in tropical rainforests.

- a. (i) and (ii)
- b. (i) and (iii)
- c. (i), (iii) and (iv)
- d. (ii) and (iv)

**Answer Keys:**

|                |     |                 |     |
|----------------|-----|-----------------|-----|
| <b>Ques. 1</b> | (b) | <b>Ques. 6</b>  | (a) |
| <b>Ques. 2</b> | (a) | <b>Ques. 7</b>  | (a) |
| <b>Ques. 3</b> | (c) | <b>Ques. 8</b>  | (d) |
| <b>Ques. 4</b> | (b) | <b>Ques. 9</b>  | (a) |
| <b>Ques. 5</b> | (a) | <b>Ques. 10</b> | (c) |

S.C.

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