



परमाणु ऊर्जा शिक्षण संस्था

Atomic Energy Education Society

आवशिक परीक्षण-II अभ्यास पत्र / PT-II Practice Paper (2025-26)

कक्षा / Class: VIII विषय / Subject: Science माह / Month: January अंक / Marks: 40
उत्तर कुंजी / ANSWER KEY

SECTION A

Multiple Choice Questions

Choose the correct option.

(1x10=10M)

1. c) Diabetes

Non-communicable diseases are not caused by pathogens and do not spread person to person.

2. c) Complete physical, mental, and social well-being

WHO defines health as overall well-being, not merely absence of illness.

3. b) Force / area

Pressure is the force applied per unit area (only the perpendicular component counts).

4. c) Air around us in all directions

Air molecules press on surfaces from every side.

5. b) It becomes milky

Explanation: Lime water turns milky when exposed to air because carbon dioxide in the air reacts with calcium hydroxide to form calcium carbonate, an insoluble white substance, as shown in the lime water test.

6. b) It is a compound

Explanation: Water is a compound where hydrogen and oxygen are chemically bonded in a 2:1 ratio, so physical methods like filtration cannot separate them. Only chemical processes, like electrolysis, can break it down.

7. b) Water

The component present in larger amount and determining the state (liquid) is the solvent.

8. b) Nitrogen

Nitrogen is about 78% of air and acts as the solvent; other gases are solutes.

9. b) The place and conditions where an organism lives and survives

A habitat provides food, water, shelter, space, and suitable abiotic conditions.

10. c) Tree (biotic), sunlight (abiotic)

Living organisms are biotic; non-living factors like light, air, water are abiotic.

SECTION B

Assertion and Reason questions.

(1x4=4M)

11. a) Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of Assertion (A).

12. a) Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of Assertion (A).

13. a) Both Assertion and Reason are true, and Reason is the correct explanation of Assertion.

14. a) Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of Assertion (A).

SECTION C

Case based questions.

(1x4=4M)

i) b) Mouth

Explanation: Saliva in the mouth contains amylase which begins the digestion of starch.

ii) b) Absorption of nutrients

Explanation: Villi increase surface area for absorbing nutrients into the blood.

iii) c) Liver

Explanation: Bile is produced in the liver and stored in the gallbladder.

iv) c) Water absorption from undigested food

Explanation: The large intestine absorbs water and forms solid waste.

SECTION D

Short Answer Type – I

(2X5=10M)

Answer the following questions.

1. Secondary sexual characteristics are signs that the body is preparing for adulthood, like voice changes and body hair growth.

2. The measure of hotness or coldness of an object is called temperature. It is usually measured in "degrees".

3. The average speed of a moving object is defined as the total distance covered by it divided by the total time taken.

$$\text{Average speed} = \frac{\text{Total distance covered}}{\text{Total time taken}}$$

4. Digestion is the process of breaking down complex components of food, such as carbohydrates, into simpler substances. These simpler substances are then absorbed and assimilated by the body.

5. Adolescence is the developmental stage between childhood and adulthood, typically ranging from ages 10 to 19. It is important because it is a time of significant physical, emotional, and social changes that shape an individual's identity and future.

Short Answer Type – II

(3X4=12M)

Answer the following questions.

1. - Biotic components are the living parts of an ecosystem, while abiotic components are the non-living parts. These two are closely linked and depend on each other for survival.

- For example, plants (biotic) need sunlight, water, and soil (abiotic) to grow. Animals eat plants or other animals for food, but they also depend on water, air, and temperature for survival.

- In a pond, fish (biotic) need oxygen dissolved in water (abiotic) to live. Without these interactions, life processes cannot continue, and ecosystems would not be balanced.

2. (a) Drying of a shirt in the sun.

Drying of shirt in the sun is a Physical change. Since in this change no new substance is formed.

(b) Rising of hot air over a radiator.

Since, in rising of hot air over a radiator no new substance is formed, hence it is a Physical change.

(c) Burning of kerosene in a lantern.

While burning of kerosene in a lantern carbon dioxide, and water vapour is formed, hence it is a Chemical change.

3. a) Communicable diseases are caused by pathogens like bacteria and viruses and can spread through air, water, contact, or insects. Non-communicable diseases are not caused by germs, do not spread between people, and are linked to lifestyle, environment, or body functions.

b) Communicable diseases are prevented by hygiene, safe food and water, masks in crowds, and mosquito control. Non-communicable diseases are prevented by healthy eating, exercise, enough sleep, and avoiding harmful substances. Both types benefit from awareness, early diagnosis, and proper treatment.

4. When a solute (like salt or sugar) dissolves in a solvent (like water), the following happens at the microscopic level:

- The solute is made up of tiny particles.
- The solvent particles surround the solute particles.
- The solvent breaks the solute into even smaller particles (like sugar molecules or salt ions).
- These tiny solute particles spread evenly among the solvent particles.

Because the solute particles become so small and evenly mixed, they cannot be seen even with a microscope, and light passes through the solution easily.

That's why the mixture looks clear and transparent.