BCM SCHOOL BASANT AVENUE DUGRI LUDHIANA

Class -8. Subject – science

July assignment (Answer key)

Q1. **Correct Answer: (b) Absence of light**

Explanation:

When moist bread is kept in a closed container, fungus (like bread mould) starts to grow after a few days. Fungi need moisture to grow – the moist bread provides water.

Q2.When the match is struck against the rubbing surface, red phosphorus:

✅ **Correct Answer: c. Ignite antimony trisulphide**

Explanation:

The rubbing surface of the matchbox contains red phosphorus. When the match is struck, red phosphorus converts into white phosphorus, which ignites and ignites antimony trisulphide present in the match head.

Q3. Assertion and Reason

Assertion (A): Yeast is used in the baking industry.

Reason (R): Yeast produces carbon dioxide during respiration.

✅ **Answer: a) Both A and R are true and R is the correct explanation of A.**

Explanation:

Yeast respires anaerobically and produces carbon dioxide which causes the dough to rise. This is why it is used in baking.

Q4. Assertion and Reason

Assertion (A): Oxygen is necessary for combustion.

Reason (R): Oxygen supports the burning of fuels.

✅ Answer: a) Both A and R are true and R is the correct explanation of A.

Explanation:

Combustion cannot happen without oxygen. Oxygen is the supporter of combustion because it helps in the burning of fuels.

Q5.Raju saw a greenish layer on bread left outside. What was the reason?

✅ Answer:

The greenish layer was fungus (mould) growing on the bread. When bread is left in a warm and moist place, fungi like Rhizopus grow on it. These microorganisms spoil the food.

Q6.Glass plate in candle's luminous zone – what is observed?

✅ Answer:

A black circular patch (soot) is seen on the glass plate. This is due to incomplete combustion of wax in the luminous zone, which produces unburnt carbon particles (soot).

Q7.Why does a matchstick not catch fire on its own at room temperature?

✅ Answer:

Because the ignition temperature of the matchstick is higher than room temperature. A substance will only catch fire when it is heated to its ignition temperature.

Q8.Why is wood, though having high calorific value, discouraged as fuel?

✅ Answer:

1. Burning wood produces smoke, which causes air pollution.

2. Incomplete combustion releases harmful gases.

3. Deforestation: Wood is obtained by cutting trees, which leads to deforestation and environmental damage.

So, despite its high calorific value, it is not an environment-friendly fuel.

Q9. Complete the nitrogen cycle (3 marks)

Here's the completed nitrogen cycle with labels:

a → Nitrogen Fixation (by bacteria in root nodules or soil)

b → Decomposition or death of plants and animals

c → Nitrification (conversion of organic matter into nitrogenous compounds in the soil)

d → Denitrification (conversion of nitrates back into atmospheric nitrogen by denitrifying bacteria)

Q10. Case Study-Based Question (4 marks)

1. Why do you think microorganisms are used in making curd and alcohol, but not in cooking vegetables or rice?

Microorganisms are used in making curd and alcohol because they help in fermentation. Bacteria like Lactobacillus convert milk to curd, and yeast is used to ferment sugar into alcohol. Cooking vegetables or rice involves heating, which kills microorganisms and does not require fermentation.

2. If Riya had not explained the reason for her brother's illness, what wrong assumptions could her family have made? How can correct knowledge of microorganisms help in daily life?

Without Riya's explanation, the family might have thought the illness was due to allergy or poor cooking.

a.Identifying the cause of food poisoning.

b.Preventing spoilage by proper food storage.

c.Using beneficial microbes (like in curd or medicine). It promotes better hygiene and health practices at home.

3. How can Riya use her knowledge of harmful microorganisms to prevent food poisoning in the future at home?

Riya can:

a.Ensure food is stored properly in airtight containers.

b.Avoid consumption of stale or spoiled food.

c.Maintain kitchen hygiene and clean utensils.

4. Compare and contrast the roles of bacteria in curd formation and in food spoilage. What makes the same type of organism both useful and harmful?

In curd formation, bacteria like Lactobacillus are helpful as they ferment lactose into lactic acid, giving curd its taste and texture.

In food spoilage, harmful bacteria grow on stale food and produce toxins that can cause illness.

Reason for being both useful and harmful:

Different strains or species of bacteria have different properties. Beneficial bacteria support food production and digestion, while harmful ones cause decay and disease. Their impact depends on how and where they are used.