

SANJEEVANI PUBLIC SCHOOL
SCIENCE ASSIGNMENT (II)
CLASS VIII

CH-2. MICROORGANISMS: FRIEND AND FOE

I. MCQ.

1. Yeast helps in the production of
 (a) sugar (b) alcohol (c) oxygen
2. Pasteurisation of milk destroys its
 (a) vitamins (b) fat content (c) bacteria
3. The bread or dosa dough rises because of the action of
 (a) heat (b) growth of yeast cells (c) kneading or grinding.
4. Salting the food helps to preserve it by
 (a) extracting water from the cell (b) lowering its temperature (c) increasing its acidity.
5. The process of conversion of sugar into alcohol is called
 (a) fermentation (b) decomposition (c) nitrogen fixation
6. Which of the following is a chemical preservative?
 (a) Streptomycin (b) Alcohol (c) Sodium benzoate
7. Carrier of malaria causing pathogen is
 (a) housefly (b) cockroach (c) female Anopheles
8. The micro-organism Which lives in the root nodules of leguminous plants is a
 (a) bacterium (b) virus (c) fungus

II FILL IN THE BLANKS :

1. Microorganisms can be seen with the help of a microscope.
2. Virus are smaller in size than bacteria.
3. The disease-causing microorganisms are called Pathogens
4. Alcohol can be produced with the help of Yeast
5. Soil fertility can be increased by using bacteria and blue-green algae
6. The process of conversion of sugar into alcohol is known as Fermentation

III MATCH THE STATEMENT IN COLUMN A AND B

COLUMN A	COLUMN B
(i) Bacteria	(a) A disease
(ii) Malaria	(b) Protozoa
(iii) Measles	(c) Curd making
(iv) Fermentation	(d) Houseful
(v) Carrier	(e) AIDS
(vi) virus	(f) Yeast

IV WRITE 'TRUE' OR 'FALSE' AGAINST THE STATEMENTS GIVEN BELOW :

- | | |
|---|----------|
| (i) Malaria is caused by a virus. | F |
| (ii) Germ theory of disease was given by Leeuwenhoek. | F |
| (iii) Plague is caused by the bite of infected fleas. | T |
| (iv) Milk is preserved by pasteurization. | T |
| (v) Yeast is used in the production of vinegar. | F |

V. NAME THE FOLLOWING

1. A bacterium that helps in the curdling of milk.
Ans. Lactobacillus
2. A fungus used in the preparation of antibiotics.
Ans. penicillium
3. A microbe used in bread industry.
Ans Yeast
4. A microorganism used in the production of alcohol.
Ans. Yeast
5. Two diseases each caused by bacteria, fungi protozoa and viruses.

Ans. Bacteria – Cholera, typhoid
Fungi - Ring worm, food poisoning
Protozoa - Malaria, dysentery
Viruses – Polio, Chicken pox
6. The scientist who discovered penicillin.

Ans. Alexander Fleming
7. Two food items prepared by using yeast.

Ans. Bread, Dosa
8. A nitrogen-fixing bacterium.

Ans. Rhizobium
9. Malaria-causing microorganism.

Ans. Protozoa.

VI. ANSWER THE FOLLOWING :

1. What are microorganisms? Mention the different kinds of microorganism.

Ans. Small organisms which cannot be seen with the naked eye;
Algae, fungi, bacteria, protozoa, viruses.

2. Mention the different habitats in which microorganisms are found.

Ans. The different habitats in which micro-organisms are found are given below.

In air, water, soil, in hot springs, deserts, saline water, ice cold water, marsh lands, inside our bodies and other animals and even bottom of sea.

3. What beneficial role do microorganisms play in the life of human beings?

Ans. Microorganisms are used for a number of purposes, such as

- (i) Preparation of curd, bread, cake, idli, dosa, cheese,
- (ii) In agricultural – to increase soil fertility
- (iii) In industry – to produce alcohol, wine and vinegar (acetic acid)
- (iv) In medicines – to produce antibiotics and vaccines
- (v) Cleaning the environment
- (vi) Food

4. Mention the ways in which the following microorganisms are harmful to mankind:
Bacteria, protozoa and viruses.

Ans. (i) All these cause diseases in humans, animals and plants.

(ii) Some bacteria cause food poisoning

5. How are viruses different from other microbes?

Ans. (i) Viruses are the smallest of all microorganisms.

(ii) They live on the borderline of living and non living things, i.e. they are living as well as non – living.

6. Why do farmers cultivate plants of pea family?

Ans. Farmers cultivate plants of pea plants to increase the fertility.

7. Draw the diagrammatic sketch of root nodules as found in leguminous plants.

Ans. See Fig 2.7 page no. 17

8. Mention the role of nitrogen fixing bacteria in soil.

Ans. All plants and animals need nitrogen, the gas that makes up 78% of the air. Some of the air. Some bacteria are blue- green algae are the only organisms that can take nitrogen from the air. These microbes, called biological nitrogen fixers, convert the elemental nitrogen to compounds of nitrogen which can be observed by the soil. In this manner, soil is enriched with nitrogen compounds and its fertility is increased.

Nitrogen Fixation—The process of converting atmospheric nitrogen into compounds of nitrogen is peas and beans and the bacteria is a symbiotic one.

9. Mention some advantages of food preservation.

Ans. Methods of Food Preservation.

[i] By **Sun drying** – Drying in the sun reduces the moisture contents of food materials. Removal of water from food materials like vegetables (spinach, cauliflower and methi) and fruits is called **dehydration**. Micro—organisms cannot grow in dry condition . Sun drying is generally used in case of vegetables like spinach,

cauliflower and methi leaves.

- (ii) By **Heating**—heating kills germs. Milk, home, is prevented from spoilage by boiling.
- (iii) By **Smoking**—Smoking is used for dehydrating food items like meat, fish and their products. In this method, small pieces of fish or meat are dried with heat and smoke of the fire lit below.
- (iv) By **Salting and Sugar**—Fruit and vegetables are commonly preserved by using salt or sugar. The food items are made into jams, sugar is used. In pickles, salt is used. Salting is used to preserve raw mangoes, amla, tamarind etc. Even in case of meat and fish, salt is used for preservation. Sugar and salt remove water from the cells, thereby, preventing growth of micro—organisms.

10. Define pasteurisation.

Ans It is the heating of milk to about 70° C for 15 to 30 seconds. Followed by cooling Very fast (chilling)