

NCERT QUESTIONS AND ANSWERS

Class: 8th

CHAPTER – MICROORGANISMS : FRIEND AND FOE (EXERCISE QUESTIONS)

Subject: Science

(TO BE WRITTEN IN NOTEBOOK)

Question 4:

Can microorganisms be seen with the naked eye? If not, how can they be seen?

ANSWER:

Micro-organisms are too small to be seen through naked eyes. They can be seen with the help of a magnifying glass or microscope.

For example, fungus that grows on bread is so small that it can be seen only with the help of a magnifying glass or microscope.

Question 5:

What are the major groups of microorganisms?

ANSWER:

There are four major groups of micro-organisms:

(i) **Bacteria** – They are single celled disease-causing micro-organisms. They can be spiral or rod-shaped.

(ii) **Fungi** – They are mostly multicellular disease-causing microbes. Bread moulds are common examples of fungi.

(iii) **Protozoa** – They mainly include organisms such as *Amoeba*, *Plasmodium*, etc. They can be unicellular or multicellular.

(iv) **Algae** – They include multicellular, photosynthetic organisms such as *Spirogyra*, *Chlamydomonas*, etc.

Question 6:

Name the microorganisms which can fix atmospheric nitrogen in the soil.

ANSWER:

Bacteria such as *Rhizobium* and certain blue-green algae present in the soil can fix atmospheric nitrogen and convert it into usable nitrogenous compounds. These nitrogenous compounds can be easily utilized by plants for the synthesis of plant proteins and other compounds.

Question 7:

Write 10 lines on the usefulness of microorganisms in our lives.

ANSWER:

Micro-organisms are too small to be seen through naked eyes. However, they are vital to plants and the environment.

Importance of micro-organisms:

They are used in winemaking, baking, pickling, and other food making processes.

Alcoholic fermentation by yeast is widely used in the preparation of wine and bread. A bacterium *Lactobacillus*, promotes the formation of curd.

Microbes are used to reduce pollution. For example, decomposers such as bacteria and fungi break down dead bodies and excreta to form inorganic compounds, which can be absorbed by plants.

They are used to increase the soil fertility by fixing the atmospheric nitrogen with the help of bacterium *Rhizobium* and some other blue-green algae.

Microbes also play an important role in the preparation of medicines. Antibiotics are chemicals produced by micro-organisms to kill bacteria. Streptomycin, for example, is an antibiotic.

Certain microbes are also used in the biological treatment of sewage and industrial effluents.

Question 8:

Write a short paragraph on the harms caused by microorganisms.

ANSWER:

Harmful effects of micro-organisms:

Micro-organisms cause diseases in animals. For example, in humans, bacteria cause diseases such as tuberculosis, cholera, typhoid, etc. In cattle, the foot and mouth disease is caused by a virus. Also, several microbes cause diseases in plants. For example, the productivity of wheat, orange, apple, etc. is reduced due to microbial diseases in plants. Certain microbes, on entering into our body, produce toxic substances. This leads to food poisoning. Some micro-organisms such as fungus spoil our food. For example, bread when left unused under moist conditions gets spoiled by fungus, producing a white cotton-like growth on the bread.

Question 9:

What are antibiotics? What precautions must be taken while taking antibiotics?

ANSWER:

Antibiotics are medicines produced by certain micro-organisms to kill other disease-causing micro-organisms. These medicines are commonly obtained from bacteria and fungi.

Streptomycin, tetracycline, penicillin, etc. are common antibiotics.

Precautions to be taken while using antibiotics:

- (i) Antibiotics should be taken under the supervision of a well qualified doctor.
- (ii) Course (intake) of antibiotics should be completed as per the prescription given by the doctor.
- (iii) Antibiotics should be taken in the right amount and at the right time. A wrong dose of antibiotics makes the drug ineffective. Also, excessive consumption of drugs may kill the useful bacteria present in our body.