



CLASS - VIII SCIENCE NOTES JUNE

2. MICROORGANISMS: FRIEND AND FOE

I. Assertion and Reasoning Type Questions:

Note: Mark the correct choice as.

OPTION A - Both assertion and reason are true and reason is the correct explanation of assertion.

OPTION B - Both assertion and reason are true but reason is not the correct explanation of assertion.

OPTION C - Assertion is true but reason is false.

OPTION D - Assertion is false but reason is true.

1. Assertion: Fungi decompose the dead bodies of plants, animals and their waste product.

Reason: Products obtained after decomposition then escape into air and soil.

Ans: (a) Both assertion and reason are true and reason is the correct explanation of assertion.

2. Assertion: Bacteria are single celled organisms and they are omnipresent.

Reason: Disease like Malaria, Polio, Aspergillus are caused by bacteria.

Ans: (c) Assertion is true but reason is false.

II. Answer the following Questions:

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

The microorganisms cannot be seen with our naked eyes because they are very small in size. Some of these, such as fungus growing on bread, can be seen with a magnifying glass. Others cannot be seen without the help of a microscope.

2. What are the major groups of microorganisms?

Microorganisms are classified on the basis of their size into four major groups.

These groups are:

- (a) Bacteria
- (b) Fungi
- (c) Protozoa
- (d) Some algae

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

Rhizobium, Clostridium and Azotobacter.

4. Write 5 lines on the usefulness of microorganisms in our lives.

Microorganisms are useful to us in many ways. For example,

- Bacteria like Lactobacillus convert milk into curd.
- Yeast is used in the commercial production of alcohol, wine and bakery products.
- Some specific microorganisms are helpful in manufacturing of antibiotics.
- Microorganisms act as cleansing agents and decompose the waste products into manure.
- Some bacteria fix atmospheric nitrogen and increase soil fertility.

5. Write a short paragraph on the harmful effects of microorganisms.

Microorganisms are harmful to us in many ways. For example, microorganisms, called pathogens cause disease in humans, plants and animals. Pathogens or germs enter a healthy body through air, water, contaminated food and infected person by direct or indirect contact or by the carrier. Common ailments like cold, influenza (flu), cough, polio, chicken pox is caused by viruses. Foot and mouth diseases in the cattle are also caused by viruses. Typhoid, tuberculosis (TB) are caused by bacteria. Anthrax a dangerous human and cattle diseases is also caused by bacteria.

Diseases like dysentery and malaria are caused by protozoa. Ringworm is caused by fungi. Several microbes cause diseases in plants and thus reduces the yield. Citrus canker, a bacterial disease, affects trees of citrus fruit and is spread by air. Bhendi yellow vein mosaic disease is caused by a virus and is spread by insects in lady fingers. Rust of wheat is a fungal disease spread through air. Microorganisms that grow on our food sometimes produce toxic substances. These make the food poisonous causing serious illness and even death. This food-borne illness is called food poisoning.

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

Antibiotics are the medicines which kill or stop the growth of the disease-causing microbes. They are manufactured by growing specific microorganisms. They are used to cure a variety of diseases.

It is important to take antibiotic only on the advice of a qualified doctor. One must finish the course prescribed by the doctor to make the drug more effective. Antibiotics must not be taken unnecessarily because it may kill beneficial bacteria also. Antibiotics are, however, not effective against cold and flu as they are caused by viruses.