



# INDIAN SCHOOL AL WADI AL KABIR



<b>CLASS: VIII</b>	<b>DEPARTMENT OF SCIENCE-2023-24</b>	<b>DATE: 26.10.2023</b>
<b>TEXTBOOK Q &amp; A</b>	<b>TOPIC: MICROORGANISMS: FRIEND AND FOE</b>	<b>NOTE: A4 FILE FORMAT</b>
<b>NAME OF THE STUDENT:</b>	<b>CLASS &amp; SEC:</b>	<b>ROLL NO.</b>

1. Fill in the blanks.

- a) Microorganisms can be seen with the help of a **Microscope**
- b) Blue-green algae fix **Nitrogen** directly from the air and enhance the fertility of soil.
- c) Alcohol is produced with the help of **Yeast**
- d) Cholera is caused by the **Bacteria- *Vibrio cholerae***

2. Tick the correct answer.

- (a) Yeast is used in the production of
  - (i) sugar **(ii) alcohol** (iii) hydrochloric acid (iv) Oxygen
- (b) The following is an antibiotic
  - (i) Sodium bicarbonate **(ii) Streptomycin** (iii) Alcohol (iv) Yeast
- (c) Carrier of malaria-causing protozoan is
  - (i) female Anopheles mosquito** (ii) cockroach (iii) housefly (iv) butterfly
- (d) The most common carrier of communicable diseases is
  - (i) ant **(ii) housefly** (iii) dragonfly (iv) spider
- (e) The bread or idli dough rises because of
  - (i) heat (ii) grinding **(iii) growth of yeast cells** (iv) kneading
- (f) The process of conversion of sugar into alcohol is called
  - (i) nitrogen fixation (ii) moulding **(iii) fermentation** (iv) infection

3. Match the organisms in Column A with their action in Column B.

A	B
(i) Bacteria	(a) Fixing nitrogen
(ii) Rhizobium	(b) Setting of curd
(iii) Lactobacillus	(c) Baking of bread
(iv) Yeast	(d) Causing malaria
(v) A protozoan	(e) Causing cholera
(vi) A virus	(f) Causing AIDS
	(g) Producing antibodies

Ans:

A	B
(i) Bacteria	<b>(e) Causing cholera</b>
(ii) Rhizobium	<b>(a) Fixing nitrogen</b>
(iii) Lactobacillus	<b>(b) Setting of curd</b>
(iv) Yeast	<b>(c) Baking of bread</b>
(v) A protozoan	<b>(d) Causing malaria</b>
(vi) A virus	<b>(f) Causing AIDS</b>

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

Ans: **Microorganisms cannot be seen by the naked eye because they are very small. They can be seen by using a microscope.**

5. What are the major groups of microorganisms?

Ans: **The major groups of microorganisms are as follows**

- 1. Bacteria**
- 2. Fungi**
- 3. Protozoans**
- 4. Algae**

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

Ans: **Rhizobium**

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

Ans: The uses of microorganisms are listed below

- They help clean up the environment. For example, organic wastes (vegetable peels, remains of animals, faeces, etc.) are broken down into harmless and usable substances by bacteria.
- Curd contains several microorganisms. Of these, the bacterium, *Lactobacillus* promotes the formation of curd. It multiplies in milk and converts it into curd.
- Bacteria are also involved in the making of cheese, pickles and many other food items.
- Bacteria and yeast are also helpful for the fermentation of idli and dosa batter.
- Yeast reproduces rapidly and produces carbon dioxide during respiration. Bubbles of the gas fill the dough and increase its volume. This is the basis of the use of yeast in the baking industry for making breads, pastries and cakes.
- Microorganisms are used for the large-scale production of alcohol, wine and acetic acid (vinegar).
- Antibiotics are being produced from bacteria and fungi.
- Microorganisms help to produce vaccines against disease-causing agents.
- Some bacteria can fix nitrogen from the atmosphere to enrich the soil with nitrogen and increase its fertility.
- Microorganisms decompose dead organic waste of plants and animals to convert them into simple substances. These substances are again used by other plants and animals. Thus, microorganisms can be used to degrade harmful and smelly substances and thereby clean up the environment.

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

Ans: 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 colds, influenza (flu), cough, polio, and chicken pox are caused by viruses. Foot and mouth diseases in cattle are also caused by viruses. Typhoid, and tuberculosis (TB) are caused by bacteria. Anthrax a dangerous human and cattle disease 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 reduce the yield. Citrus canker, a bacterial disease, affects trees of citrus fruit and is spread by air. Bhindi yellow vein mosaic disease is caused by a virus and is spread by insects in lady's fingers. The rust of wheat is a fungal disease spread through the 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.

**8. What are antibiotics? What precautions must be taken while taking antibiotics?**

**Ans: Chemical agents that kill or stop the growth of disease-causing microorganisms are called antibiotics. It is important to take antibiotics 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 they may kill beneficial bacteria. Antibiotics are, however, not effective against cold and flu as they are caused by viruses.**

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<b>CHECKED BY HOD SCIENCE</b>
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