

MICROORGANISMS FRIEND AND FOE

NCERT Textbook Questions

Q.1. Fill in the blanks.

- (a) Microorganisms can be seen with the help of a.....
- (b) Blue green algae fix directly from air to enhance the fertility of soil.
- (c) Alcohol is produced with the help of.....
- (d) Cholera is caused by.....

Ans. (a) microscope (b) atmospheric nitrogen
(c) yeast (d) bacteria

Q.2. Tick the correct answer.

- (1) Yeast is used in the production of:
 - (a) Sugar
 - (b) Alcohol
 - (c) Hydrochloric acid
 - (d) Oxygen
- (2) The following is an antibiotic:
 - (a) Sodium bicarbonate
 - (b) Streptomycin
 - (c) Alcohol
 - (d) Yeast
- (3) Carrier of malaria-causing protozoan is:
 - (a) Female Anopheles mosquito
 - (b) Cockroach
 - (c) Housefly
 - (d) Butterfly
- (4) The most common carrier of communicable diseases is:
 - (a) Ant
 - (b) Housefly
 - (c) Dragonfly
 - (d) Spider
- (5) The bread or idli dough rises because of:
 - (a) Heat
 - (b) Grinding
 - (c) Growth of yeast cells
 - (d) Kneading
- (6) The process of conversion of sugar into alcohol is called:
 - (a) Nitrogen fixation
 - (b) Moulding
 - (c) Fermentation
 - (d) Infection

Ans. (1) (b) Alcohol (2) (b) Streptomycin

- (3) (a) Female Anopheles mosquito (4) (b) Housefly
 (5) (c) Growth of yeast cells (6) (c) Fermentation

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

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

Ans. (i) e (ii) a (iii) b (iv) c
 (v) d (vi) f

Q.4. Can microorganisms be seen with the naked eyes? If not how can they be seen?

Ans. Microorganisms cannot be seen with the help of naked eyes. They can be seen with the help of a microscope.

Q.5. What are the major groups of microorganisms?

Ans. There are following four major groups of microorganisms:

- (i) Bacteria (ii) Fungi (iii) Protozoa (iv) Algae

In addition, viruses are also considered as fifth group of microorganisms.

Q.6. Name the microorganisms which can fix atmospheric nitrogen in the soil.

Ans. Rhizobium, Clostridium and Azotobacter.

Q.7. Write 10 lines on the usefulness of microorganisms in our lives.

Ans. Following are the benefits of microorganisms in our lives:

- (i) Bacterium *lactobacillus* convert milk into curd.
- (ii) Bacteria are also involved in the making of cheese.
- (iii) Some bacteria fix atmospheric nitrogen and increase the soil fertility.
- (iv) Bacteria are used in the preparation of medicines.
- (v) Bacteria are used in the formation of pickles and many other food items.
- (vi) Yeast is used for commercial production of alcohol and wine.
- (vii) Yeast is also used in baking industry for making breads, pastries and cakes.
- (viii) *Acetobacter aceti* is used for production of Acetic acid from alcohol.
- (ix) Antibiotics are manufactured by growing specific microorganisms.

Q.8. Write a short paragraph on the harms caused by microorganisms.

Ans. Microorganisms can cause harm in various ways. For example,

- (i) Many microorganisms are disease causing. Some of the examples are:
 - Common ailments like cold, influenza (flu) and most coughs are caused by viruses.
 - Serious diseases like, polio and chicken pox are also caused by viruses.
 - Diseases like dysentery and malaria are caused by protozoan.
 - Diseases like typhoid and tuberculosis (TB) are caused due to bacteria.
 - Disease such as ring worm is caused due to fungi.
 - Disease of cattle such as foot and mouth disease is caused due to virus.
 - Disease of human and cattle such as Anthrax is caused by a bacteria.
- (ii) Some microorganisms release toxic substances when grow on food items. For example, *Clostridium*
- (iii) Some microorganisms spoil leather items, wooden-work and lenses. For example, fungi

Q.9. What are antibiotics? What precautions must be taken while taking antibiotics?

Ans. Antibiotics are the medicines that kill or stop the growth of the disease causing bacteria. The antibiotics are manufactured by growing specific microorganisms and are used to cure a variety of diseases.

It is important to remember that antibiotics should be taken only on the advice of a qualified doctor. Also, you must finish the course prescribed by the doctor. If you take antibiotics when not needed, you help bacteria in your body to develop resistance to them. Next time, when you fall ill and need these antibiotics, they would be less effective. Antibiotics, however, are not effective against cold and flu as they are caused by viruses.