

## CHAPTER –2 : Microorganisms

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### Short answers

Qu.1 Match the microorganisms given in the Column A to the group to which they belong in Column B.

Column A	Column B
(a) <i>Lactobacillus</i>	(i) Algae
(b) <i>Aspergillus</i>	(ii) Protozoa
(c) <i>Spirogyra</i>	(iii) Fungi
(d) <i>Paramecium</i>	(iv) Bacteria

Qu.2 Classify the following into friendly and harmful microorganisms. Yeast, malarial parasite, *Lactobacillus*, bread mould, *Rhizobium*, *Bacillus anthracis*

Friendly	Harmful
_____	_____
_____	_____
_____	_____
_____	_____

Qu. 3 Write a short note on bacteria.

**Answer:** Bacteria are microscopic organisms which have cell walls but do not have nucleus. Some bacteria are autotrophs but most are heterotrophs. Bacteria are found in different shapes; like rod-shaped, spiral, spherical and comma-shaped. Examples: *Rhizobium*, *E. coli*, *Pseudomonas*, *Streptococcus*, etc.

Qu.4 What are viruses?

**Answer:** Viruses are also microscopic but they are not considered as living beings. They are considered as a borderline case between living and non-living. A virus behaves as non-living when it is outside a host cell, i.e. a virus does not carry on nutrition, respiration or reproduction when it is outside a host. But once it is inside a host, it behaves like a living being, i.e. it carries on nutrition, respiration and reproduction when it is inside a host. Examples: HIV, Tobacco Mosaic Virus (TMV), etc.

Qu..5 What is a vaccine? How does it work?

**Answer:** A vaccine is made by a weak or killed strain of a disease-causing microbe. When a vaccine is inoculated in the body, the body prepares antibodies against it. Thus, the

body learns and remembers how to fight with that microbe in future. Thus, vaccination helps in preventing against a particular disease.

Qu.6:- How do the microbes help in cleaning the environment?

**Answer:** Many microbes feed on dead remains of plants and animals. Thus, these microbes play the role of decomposers. Thus, microbes help in clearing organic waste from our surroundings. Dead cattle, waste from meat and fish shop, waste from vegetable market, etc. are decomposed because of microbes.

Qu 7: What do you understand by food poisoning?

**Answer:** Some bacteria produce a toxic substance in food. Consuming a food item with toxic substance can result in food poisoning. Food poisoning is a serious case and needs immediate hospitalization. Lack of timely care in case of food poisoning may prove fatal.

Qu 8: How does salt help in food preservation?

**Answer:** When a food item is kept in plenty of salt, water from food comes out because of osmosis. It results in dehydration of the food item. Absence of moisture helps to prevent the growth of microbes. Fish, meat and pickles are preserved by adding salt.

Qu 9: What do you understand by pasteurization?

**Answer:** Pasteurization is a method of food preservation. Milk is pasteurized before being packed. Pasteurization involves heating the milk to 70 °C for about 15 to 30 minutes and is then quickly cooling down the milk. Pasteurization helps in killing the microbes which may be present in milk.

Qu10: Explain chemical method of food preservation.

**Answer:** Some chemicals prevent the growth of microorganisms in food. These chemicals are used in pickles and jams to preserve them. Salt, acids and oil are also used as food preservatives. Examples: sodium benzoate and sodium metabisulphate.

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