

## Chapter 02 Micro organism Cordova Science

### A. Tick the correct options:

1. Who was the first scientist to describe microorganisms?

- (a) Edward Jenner    (b) Louis Pasteur    (c) Alexander Fleming    (d) Antonie Van Leeuwenhoek (✓)

2. Which of the following is not responsible for spoilage of food?

- (a) Algae    (b) fungi    (c) bacteria    (d) Chemicals (✓)

3. Which of the following is a biological nitrogen fixer?

- (a) housefly    (b) fungi    (c) Rhizobium(✓)    (d) protozoa

4. Edward Jenner discovered the vaccine for

- (a) cholera    (b) smallpox (✓)    (c) tuberculosis    (d) polio

5. Chlamydomonas belongs to a group called

- (a) bacteria    (b) viruses    (c) algae (✓)    (d) fungi

6. The microbes that help make idli and dosa are

- (a) bacteria    (b) yeast(✓)    (c) viruses    (d) algae

7. The smallest microorganisms are

- (a) bacteria(✓)    (b) viruses    (c) algae    (d) fung

### B. tick the correct options:

1. curd is formed only in lukewarm milk

- (a) Cold milk    (b) lukewarm milk    (c) Hot milk    (d) None of these

2. curd is not formed in Hot milk because bacteria are

- (a) active    (b) inactive(✓)    (c) killed    (d) none of these

### C. Fill in the blanks:

1. Microorganisms may be unicellular or Multicellular.

2. Lactobacillus bacteria help to make curd from milk.

3. Disease causing microorganisms are called pathogen.

4. Ammonium salt in the soil is converted first into nitrites by -- Nitrifying ----- bacteria.

5. Casein coagulation takes place only when milk is hot .
6. Salting draws out water from food.
7. Nitrate in the soil are converted by ammonifying bacteria into nitrogen gas.
8. The process of preventing food spoilage by chemical or physical methods is called food preservation.

#### **D. Very Short Answer Questions:**

1. Name any two antibiotics.

Ans. Penicillins, streptomycin, tetracycline

2. Give the names of any two communicable diseases.

Ans. Malaria , Typhoid

3. What are the two common food preservatives used at our homes:

Ans. Salt, sugar, oil

4. Name two microbial diseases which spread through air,

Ans. Common cold, flu, tuberculosis, influenza, small pox

5. Name any one unicellular algae.

Ans. Cyanobacteria

6. Name any disease caused by virus in humans

Ans. HIV

#### **E. Short Answer Type I Questions:**

1. What is pasteurization?

Ans. The process of heating milk at 70 degree for about 15 min and then cooling it for quickly is called pasteurization. This kill the most of the bacteria without affecting flavor.

2. How do leguminous plants increase the soil fertility:

Ans. leguminous plants provide shelter to Rhizobium bacteria that help in converting atmospheric nitrogen present in soil into useable form that is taken by plants to make plant protein.

3. What is meant by nitrifying bacteria?

Ans. Bacteria which help to convert ammonia present in soil into nitrates is called nitrifying bacteria.

4. How does female Anopheles mosquito spread malaria?

Ans. Female Anopheles mosquito carries the malaria germ. When it bites a healthy person, he/she can get infected with malaria.

5. How do antibiotics work?

Ans. Antibiotics kill or stop the growth of disease causing microbes

### **F. Short Answer Type-II Questions:**

1. (a) How do viruses differ from other microorganisms? (b) What is meant by fermentation?

Ans. (a) A virus is a microorganism which exhibits characteristics of living as well as non-living things.

(b) The conversion of sugar into alcohol in absence of oxygen using yeast is called Fermentation.

2. Explain the formation of curd from milk.

Ans. Milk contains a sugar called lactose, when milk is heated to a temperature of 30-40 °C and a small amount of sour curd added to it, the lactobacillus starts to grow and convert the lactose into lactic acid and thus milk converted into curd.

3. What is vaccine? How does it work?

Ans. Vaccines are substance used to produce immunity to diseases in the living body.

Vaccine consist of dead or weaken microbes .When these swallowed or injected into body of patient, the body produce antibodies to fight them. Antibodies remain in bodies and protect it from any future attack disease causing microorganism

### **Value Corner**

4. Microorganisms decompose dead organic waste of plants and animals and help in keeping the environment clean.

(a) What would happen, if microorganisms do not perform this function?

(b) Being a student, how can you contribute in keeping the environment clean! Give two ways.

Ans.(a) air , water and soil get polluted if microorganisms do not decompose dead organic waste of plants and animals

(b) (ii)Always follow 3R – Reduce ,reuse and recycle (b) Avoid wastage of natural resources and use them wisely and carefully.

## G. Long Answer Questions:

1. Explain two methods of food preservation. Also, discuss the advantages of food preservation.

Ans. Food can be preserved in the following ways:

(i) Heating: Heating food to a high temperature kills microorganism e.g water and milk.

(ii) Salting: Salt prevents food spoilage by checking the growth of bacteria. Salt forces microorganisms to lose wafer by a process called osmosis.

The advantages of food preservation are

(i) Food last for longer period (ii) Food preservation prevents the food from being spoiled by the action of enzymes and microorganisms. (iii) It increases the availability of out of season foodstuffs.

2. Draw a neat diagram to show nitrogen cycle and explain the process of nitrification and denitrification.

Ans. Nitrification is the process of conversion of ammonia into nitrates .It is carried out by nitrifying bacteria. Denitrification is the process of conversion of nitrates into free nitrogen gas. It is carried out by denitrifying bacteria.

3. Describe the principle on which the following methods of food preservation are based:

(a) boiling (b) canning (c) freezing (d) dehydration

Ans. (a) boiling: Heating to food at high temperature kill bacteria.

(b) Canning: canning stop the supply of oxygen to bacteria and stop its growth.

(c) freezing: it lower the temperature that reduce the growth of bacteria

(d) Dehydration: it force bacteria to loose water by osmosis and stop growing further.

## H. HOTS (Higher Order Thinking skills) Questions:

1. Why do we say that if a person suffers from chickenpox once, he/she is not likely to be attacked by the same disease in future?

Ans. when one suffers from chickenpox the body makes the antibodies that remain in body and prevent any future attack.

2. Why should we always wash our hands before handling food items?

Ans: We should always wash our hands before eating to prevent the germs in our hands from entering the food so that we are prevented from getting diseases.

Note: If you found any mistake Pls inform me at [jsuniltutorial@gmail.com](mailto:jsuniltutorial@gmail.com) for correction