

Online Class

Write the definition of the following:

- a) Pathogen: The disease causing microorganisms are known as Pathogens.
- b) Fermentation: The process of conversion of sugar in the absence of Oxygen into alcohol is known as Fermentation.
- c) Nitrogen Fixation: The process of Fixation of atmospheric Nitrogen into suitable forms is known as Nitrogen Fixation.
- d) Antibiotics: The Chemical substances produced by Microorganisms such as Bacteria and Fungi which kill or stop the growth of Microorganisms.
- e) Vaccines: The substance used to produce immunity to diseases in the living body.
- f) Immunity: the ability of a body to resist a disease by natural or artificial means.
- g) Food Preservation: The process by which spoilage of food by microorganism is prevented.
- h) Dehydration: Removal of water from the food materials.

1. What are the different types of Bacteria?

Ans.: The different types of Bacteria are : a) Rod shaped b) Spherical Shaped and spiral shaped.

2. Give one example of each of Unicellular Fungi and Multicellular Fungi

Ans.: Unicellular Fungi: Yeast

Multicellular Fungi: Mushrooms

3. Give one example of each of Unicellular Algae and Multicellular Algae

Ans. Unicellular Algae: Chlamydomonas

Multicellular Algae: Spirogyra

4. What are the features of viruses?

Ans : i) Viruses are the smallest of all microorganism

ii) They are not cells and do not contain any cell organelles

iii) They are made up of protein material and surrounded by a protein coat.

iv) They cannot multiply on their own. They need to enter a living host.

v) Outside the host they don't show any characteristics of living organism

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Q.6. How are viruses different from other Microorganisms?

A.6. i) They are the smallest of all Microorganisms and

ii) They cannot multiply on their own. They need to enter a living host.

Q.7. List the different uses of Microorganisms.

A.7. The different uses of Microorganisms are as follows :

i) It is used in the preparation of food items such as curd, bread, and cheese

ii) In Industry to Produce Alcohol, wine and vinegar

iii) In Agriculture to increase soil fertility

iv) In preparation of medicines such as antibiotics and vaccines

v) for cleaning the environment

vi) In sewage treatment

vii) As sources of food.

Q.8. How do Microorganisms enter the Human Body?

A.8. Pathogens enter the Human Body in many ways:

a) Through the air we breathe. (common cold, influenza)

b) Through the food we eat. (cholera)

c) Through the water we drink. (Cholera)

d) Through direct contact with the infected person. (Measles, Chicken Pox, Small Pox)

e) Through carriers such as insects like Mosquito

Q.9. Mention the indicators of spoilage of food.

A.9. a) Odour – Spoiled food emits foul smell

b) Taste – Bad taste or sourness develops in spoiled food.

c) Colour – Many food items show change in colour when it gets spoiled.

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Q.10. What are the different method of food preservation.

A.10. Different methods of Preservation are:

- a) Drying and Dehydration
- b) Boiling
- c) Refrigeration and Freezing
- d) Pasteurization
- e) Salting and adding Sugar
- f) Using of Chemicals
- g) Canning

Q.11. Name one water borne disease which is caused by Bacteria.

Ans.11. Cholera

Q.12.Name two air borne disease which is caused by Bacteria.

Ans.12. Typhoid and Tuberculosis

Q.13. Name three air borne disease caused by Virus.

A.13. Measles, Chickenpox, Polio

Q.14. Name one water borne disease caused by Virus.

A.14. Hepatitis B

Q.15. Mention one animal disease caused by Virus.

A.15. Foot and Mouth disease in Cattle.

Q.16 Mention one animal disease caused by Bacteria.

A.16. Anthrax disease caused in cattle.

Q.17. Mention one animal disease caused by Protozoa.

A.17. Sleeping Sickness.

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Q.18. Mention one plant disease caused by Fungi.

A.18. Rust of Wheat

Q.19. Mention one Plant disease caused By Bacteria

A.19. Citrus Canker.

Q.20. Mention two Plant disease caused by Virus

A.20. a) Yellow Mosaic disease of lady finger.

b) Tobacco Mosaic

Q.21. Why does the food get spoiled?

A.21. a) It is oxidised by air

b) It is acted upon by Bacteria and Fungi

Q.22. How does bacterium Lactobacillus help in the formation of curd?

A.22. Lactobacillus helps in the formation of curd by converting sugar called lactose present in the milk into lactic acid.

Q.23. In bread making why does the dough rises when yeast is added to it ?

A.23. In bread making when yeast is added to it the dough rises in volume due to the production of carbondioxide by the respiration of yeast cells. Bubbles of the gas fill the dough and increase its volume.

Q.24. What is the role of bacteria in increasing soil fertility?

A.24. Green Plants cannot take atmospheric Nitrogen directly. It can be used in the form of Nitrates. Some Bacteria Live in the root nodules of leguminous plants are able to fix atmospheric nitrogen and convert it into suitable form of nitrates. This Nitrogen fixation helps in increasing soil fertility.

Q.25. What is pasteurisation?

A.25. Pasteurisation is a method of preserving a milk. In this method

a) Milk is heated to 70°C for 15-30 seconds

b) It is then quickly chilled and stored in sterilized bottles.

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Q.26. How will you preserve the following food items?

- a) Milk – By Pasteurisation
- b) Jam- by adding sodium benzoate or potassium metabisulphite
- c) Cereals – by Dehydration
- d) Pickles – By adding Salt
- e) Dry fruit- By canning
- f) Cauliflower – By dehydration

Q. 27. State whether the following statement are True or False :

- a) Yeast is a fungus – True
- b) Amoeba is a unicellular protozoan- True
- c) The bacterium Lactobacillus is used in the bread making. - False
- d) Nodules are seen in the roots of pea plants.-- True
- e) Antibiotics are the substances used to produce immunity in human beings- False.
- f) Cholera is caused by a virus. - True
- g) Food preservation reduces wastage of food.- True
- h) Bacteria cause food poisoning.- True

Q.28. Fill in the blanks:

- a) Blue green algae fix Nitrogen and increase soil fertility.
- b) Bacteria are larger in size than viruses.
- c) Disease causing microbes are called pathogens
- d) Alcohol is produced using Yeast
- e) The process of conversion of sugar into alcohol is fermentation.
- f) Immunity can be induced artificially by introducing dead or weakened organisms.

Q.29. Match the two columns :

Column A

1. Aedes
2. Yeast
3. Rhizobium
4. Chlorella
5. Bacteria
6. Protozoan
7. Virus

Column B

- i) Food
- ii) Malaria
- iii) carrier of dengue virus
- iv) Polio
- v) Bread making
- vi) Decomposition
- vii) Soil fertility – fixing nitrogen

Ans . 1 - iii)

2. – v)

3. – vii)

4. – i)

5. – vi)

6. – ii)

7. –iv)