



परमाणु ऊर्जा शिक्षण संस्था
Atomic Energy Education Society
 ANSWER KEY

CLASS—VIII

MAX.MARKS—80

I. Choose the correct answer:

(10 x 1M=10M)

1. (a) microorganisms
2. (d) both (a) and (c)
3. (a) pathogens
4. (b) unicellular
5. (a) algae
6. (a) antibiotic
7. (c) fermentation
8. (b) Yeast
9. (c) Alexander Fleming
10. (c) blue-green algae

II. Answer the following in short:

11. Viruses (10 x 1M=10M)
12. Lactobacillus
13. Yeast is used in the production of alcohol, wine, beer and other beverages.
14. Disease-causing microorganisms are known as pathogens. They are also called germs.
15. Food preservation is the method of preserving food from being spoiled by the microbes.
16. Streptomycin and Erythromycin
17. A substance which is used in the production of immunity against various diseases in the living body is termed as vaccine.
18. Rust of wheat and citrus canker (any 2)
19. Rhizobium
20. Bacteria and fungi

III. Answer the following questions:

(10 x 2M=20M)

21. Communicable diseases are microbial diseases that can spread from an infected person to a healthy person through air, water, or other physical contacts; e.g., cholera, chicken pox, tuberculosis, common cold, etc.

22.

Viruses	Other microbes
(i) They show the characteristics of living organisms or reproduce only by entering the host organisms.	(i) They do not need to enter any host organism to reproduce or show any characteristics of life.
(ii) They are non-cellular microbes.	(ii) They are cellular microbes.

23. By adding sugar in the food item, we reduce its moisture content and hence, it stops the growth of the microorganisms
24. Carriers take with them many harmful microorganisms or pathogens. They play a great role in transferring these pathogens to a healthy person, by sitting on the food items, or directly transferring the pathogens inside the body of a person. Hence, they are harmful to us.
25. The process of putting a vaccine inside the body of a person to produce immunity against some disease is called vaccination.
26. Some bacteria, which are present in the root nodules of leguminous plants or free-living fix the atmospheric nitrogen in the soil which is ultimately used up by the plants. Hence, they increase the fertility of the soil. For example, Rhizobium, Azotobacter etc.
27. Pasteurisation can be defined as the partial sterilisation of foods at a temperature that destroys harmful microorganisms without major changes in the chemical property of the food.
28. Immunity is the ability of a body to develop resistance against diseases.
29. Small organisms that cannot be seen through the naked eyes and can only be seen under a microscope are called microorganisms or microbes, e.g., Amoeba, Paramecium, Volvox, Spirogyra, etc.
30. Rhizobium.

IV. Answer the following questions:

(5 x 3M=15M)

31. (a) Algae – Spirogyra, Chlamydomonas
(b) Fungi – Aspergillus, yeast
(c) Protozoa – Paramecium, Amoeba
32. Three ways because of which pathogens are transmitted are as follows:
- When a person sneezes or coughs, tiny droplets containing a number of disease-causing microorganisms come out of the mouth and are released in the air. They are transmitted to a healthy person while breathing.
 - By making direct contacts with an infected person, pathogens are transferred to a healthy person.
 - Carriers of pathogens also help in their transmission. For instance, when a fly sits on animal excreta or garbage, harmful disease-causing microbes stick to its legs. And when this fly sits on the food items, pathogens get transferred to them. This contaminated food items cause serious diseases when it is eaten by a healthy person.
33. Most of street hawkers sells food items in an open area which always get contaminated with the dust and flies carrying germs with them. Such an unhygienic condition led to spoilage of food which when consumed can lead to serious illness.
34. Curd did not set because she kept the mixture in fridge. Lower temperature of fridge retarded the growth of Lactobacillus in the mixture.
35. For fermentation of idli and dosa yeast or old batter is added. Fermentation makes idli fluffy and dosa crispy and change the flavour.

V. Answer the following questions in detail:

(5 x 5M=25M)

36. (a) The methods used for prevention of spoiling of food by the action of microbes is called food preservation.

(b) The food will get spoil and emit bad smell with changed colour or taste.

(c) Refrigeration retards or slow down the growth of microorganisms and enzyme activity on food. Thus, it prevents spoilage of food.

37. a) We should keep a handkerchief on nose and mouth while sneezing or coughing because fine drop-lets carrying thousands of viruses or bacteria spread in the air.

(b) Air, water, food, carriers and physical contact.

(c) Yes, because cough and cold spreads through air and there are chances that other students may also get infected.

38.(a) Mosquito acts a carrier of disease-causing micro-organism and spreads diseases from one person to another. They carry disease-causing micro-organisms (microbes) inside its body. Female Anopheles mosquito is a carrier of malarial parasite. When it bites a person suffering from malaria, it sucks the blood of that person which contains the malarial parasite microbes. When this infected mosquito bites a healthy person, it transfers the microbes into his blood stream, hence the healthy person also gets malarial disease.

(b) The spreading of diseases by mosquitoes can be prevented by following ways:

1. We should not let water collect anywhere in the neighbourhood.
2. We should keep our surrounding clean and dry.
3. Mosquito repellent creams should be applied on the exposed parts of the body.

39. Medicines which kill or stop the growth of the disease-causing micro-organisms are called antibiotics. Streptomycin, tetracycline and erythromycin are some of the commonly known antibiotics which are made from fungi and bacteria.

Some of the precautions should be taken while taking antibiotics which are as follows:

- Antibiotics should be taken only on the advice of a qualified doctor.
- A person must finish the full course of antibiotics prescribed by the doctor.
- Antibiotics should not be taken unnecessarily.

40. Microorganisms are used for various purposes such as:

- They are used in the preparation of curd, bread and cake.
 - They are used in the preparation of alcohol, wine and acetic acid (vinegar).
 - They are also used in cleaning up of the environment.
 - In agriculture, they are used to increase soil fertility by fixing nitrogen.
 - The antibiotics are manufactured by growing specific microorganisms and are used to cure a variety of diseases. Penicillin is an antibiotic made from Penicillium.
 - Certain microbes are also used in the biological treatment of sewage and industrial effluents. Yeast is used in making idlis, bhaturas, bread, pastries and cakes.
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