Micro-Organisms Friends and Foe

Very Short Answer Type Questions

Q.1. Name the instrument (or device) which is needed to see the micro-organisms.

Answer: Microscope is needed to see the micro-organisms.

Q.2. What is the name of micro-organisms which reproduce only inside the living cells of other organisms?

Answer: Viruses are the smallest micro-organisms which reproduce only inside the living cells of other organisms.

Q.3. What are the major groups of micro-organisms?

Answer: There are five major groups of micro-organisms. These are: Bacteria, viruses, Protozoa, some fungi and Algae.

Q.4. Name any two human diseases caused by bacteria.

Answer: Typhoid and Cholera are caused by bacteria in human beings.

Q.5. Name any two human diseases caused by viruses.

Answer: The human diseases such as common cold and influenza are caused by viruses.

Q.6. Name any two human diseases caused by protozoa.

Answer: The human diseases amoebic dysentery and malaria are caused by protozoans.

Q.7. Name any two human diseases caused by fungi.

Answer: Diseases athlete's food and ring worm are caused by fungi.

Q.8. Which micro-organism is utilized in making curd from milk?

Answer: Lactobacillus bacterium is utilized in making curd from milk.

Q.9. Name the -micro-organism which is used for the large-scale production of alcohol.

Answer: Yeast is used for the large-scale production of alcohol.

Q.10. Name any two antibiotics.

Answer: Streptomycin and erythromycin are two commonly known antibiotics which are made from fungi and bacteria.

Q.11. Name an antibiotic extracted from fungus (mould). Name the fungus.

Answer: An antibiotic Penicillin was extracted from fungus (mould) by Alexander Fleming in 1929. This antibiotic was made from the fungus called penicillium.

Q.12. Name any four diseases which can be prevented by vaccination.

Answer: Several diseases including tuberculosis, smallpox, cholera and hepatitis can be prevented by vaccination.

Q.13. Name the scientist who discovered the-vaccine for 'smallpox.

Answer: Edward Jenner discovered the vaccine for smallpox in 1978.

Q.14. Name the scientist who discovered 'penicillin'.

Answer: Alexander Fleming discovered the antibiotic “Penicillin” in 1929.

Q.15. State an important function performed by blue-green algae.

Answer: Blue green algae fix the atmospheric nitrogen to enrich soil with nitrogen and hence, increase soil fertility.

Q.16. Name one 'biological nitrogen-fixer'.

Answer: Blue green algae are known as 'biological nitrogen-fixer' as they fix the atmospheric nitrogen.

Q.17. Name two common insects which act as carriers of disease-causing micro-organisms (or disease-causing microbes).

Answer: The two common insects which act as carriers of disease-causing micro-organisms (or disease-causing microbes) are housefly and mosquito.

Q.18. Name any two diseases spread by housefly.

Answer: Diseases cholera and tuberculosis spread by housefly.

Q.19. Name the insect which is the carrier of parasite of malaria.

Answer: The carrier of parasite of malaria is Female Anopheles mosquito.

Q.20. Name the insect which carries dengue virus.

Answer: Female Aedes mosquito carries dengue virus.

Q.21. Which of the two spreads dengue: mosquito or housefly?

Answer: Female Aedes mosquito acts as a carrier of dengue virus.

Q.22. Name two diseases spread by mosquitoes.

Answer: Malaria and dengue spread by mosquitoes.

Q.23. Name the microbe which causes malaria disease.

Answer: Protozoa Plasmodium causes malaria disease.

Q.24. Name one disease which spreads by breathing in air containing micro-organisms.

Answer: Tuberculosis disease spreads by breathing in air containing micro-organisms.

Q.25. Name one disease which spreads through insect bites.

Answer: Malaria disease spreads through insect bites.

Q.26. Name one disease which spreads through infected food or water.

Answer: Cholera disease spreads through infected food or water.

Q.27.Name the causative micro-organisms of the following animal diseases:

(a) Foot and mouth disease

(b) Anthrax

Answer: (a) Foot and mouth disease is caused by a virus.

(b) Anthrax disease is caused by a bacterium.

Q.28. Name two food materials which are preserved by sun-drying method in our homes.

Answer: Vegetables like methi leaves and spinach are preserved by sun-drying method in our homes.

Q.29. Name two food materials which are preserved by using common salt.

Answer: Meat and fish are preserved by using common salt.

Q.30. Name two food materials which can be preserved by using sugar.

Answer: Jams and jellies are preserved by using sugar.

Q.31. Name two food materials which are usually preserved by deep freezing.

Answer: Preservation by deep freezing means preservation of food material in the extreme cold. Low temperature inhibits the growth of micro-organisms completely. Food materials such meat and fish are usually preserved by deep freezing.

Q.32. Name some of the preservatives which are used in the preservation of fruits as jams arid jellies.

Answer: Sodium benzoate and sodium meta bisulphite are common preservatives which are used in the preservation of fruits as jams and jellies.

Q.33. Name some of the preservatives which are used in the preservation of fruits and vegetables as pickles.

Answer: Salt, oil and vinegar are some of the preservatives which are used in the preservation of fruits and vegetables as pickles.

Q.34. Name two food materials which can be preserved by using oil or vinegar.

Answer: Fish and meat are often preserved by using oil or vinegar.

Q.35. Name any two special chemicals which are used as food preservatives.

Answer: Sodium benzoate and sodium meta bisulphite are common preservatives.

Q.36. Name the micro-organisms which can fix atmospheric nitrogen in the soil.

Answer: Certain bacteria and blue green algae present in the soil fix atmospheric nitrogen and convert it into compounds of nitrogen.

Q.37. What type of plants can fix nitrogen gas of the air into compounds of nitrogen?

Answer: Leguminous plants can fix atmospheric nitrogen into nitrogen compounds.

Q.38. Name the micro-organisms present in the soil and in the root nodules of leguminous plants which can fix atmospheric nitrogen.

Answer: Some bacteria and blue green algae present in the soil and rhizobium present in the root nodules of leguminous plants can fix atmospheric nitrogen.

Q.39. Name two leguminous plants which can fix nitrogen.

Answer: Leguminous plants such as beans and peas can fix nitrogen.

Q.40 Fill in the following blanks with suitable words:

(a) Alcohol is produced with the help of .....

(b) Blue-green algae fix.....directly from air to enhance fertility of soil.

(c) Micro-organisms can be seen with help of a.....

(d) Cholera is caused by.....

(e) Common salt has been used to preserve..... and ..... for ages.

(f) The food material which is preserved by pasteurization is .....

(g) As a result of nitrogen cycle, the percentage of nitrogen in the atmosphere remains more or less…….

Answer: **(a)** yeast **(b)** nitrogen **(c)** microscope **(d)** bacteria

(e) meat; fish **(f)** milk **(g)** constant

Short Answer Type Questions

Q.41. How do viruses differ from other micro-organisms such as bacteria?

Answer: Viruses differ from other micro-organisms because they are too much smaller in comparison to other micro-organisms. They do not show most of the characteristics of the living organisms like respiration. They just reproduce. They, however, reproduce only inside the cells of the host organism, which may be a bacterium, plant or animal. Hence, viruses differ from other micro-organisms.

Q.42. What are micro-organisms? Give any two examples of micro-organisms.

Answer: The organisms which are too small to be seen by the naked eyes and can be seen only though a microscope are called micro-organisms or microbes. Bacteria and viruses are examples of micro-organisms.

Q.43. Can micro-organisms be seen with the naked eye? If not, how can they be seen?

Answer: Micro-organisms are too much smaller that they cannot be seen with naked eye. They can be seen with a magnifying glass called microscope.

Q.44 A. How do houseflies carry disease-causing microbes-(or pathogens)?

Answer: The houseflies feed on garbage, animal excreta and dead organic matter. When the housefly sits on garbage and animal excreta for feeding, then the millions of disease-causing micro-organisms present in them sticking to the body of housefly. And when this housefly sits on uncovered food, they may transfer the pathogens and food gets contaminated. When this contaminated food is consumed by a person, pathogens enter into his body and causes various diseases.

Q.44 B. State any two ways of preventing diseases spread by houseflies.

Answer: The spreading of diseases by houseflies can be prevented by following ways:

(i) Food should always be kept covered.

(ii) Proper sanitation should be maintained in the kitchen.

Q.44 A. How do mosquitoes carry disease-causing micro-organisms and spread diseases?

Answer: 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 bits 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.

Q.45 B. Mention any three ways of preventing diseases spread by mosquitoes.

Answer: The spreading of diseases by mosquitoes can be prevented by following ways:

(i) We should not let water collect anywhere in the neighborhood**.**

(ii) We should keep our surrounding clean and dry.

(iii) Mosquito repellant creams should be applied on the exposed parts of the body.

Q.46 A. What is meant by fermentation? Name the scientist who discovered fermentation.

Answer: The process of conversation of sugar into alcohol is known as fermentation. Louis Pasteur discovered fermentation in 1857.

Q.46 B. Which micro-organism converts sugar into alcohol during fermentation?

Answer: Yeast converts sugar into alcohol during fermentation. Yeast is used for commercial production of alcohol and wine.

Q.47 A. How do micro-organisms help in increasing soil fertility?

Answer: Some bacteria like rhizobium and blue green algae like Nostoc and Anabaena present in the soil are able to fix nitrogen gas from the atmosphere to enrich soil with nitrogen and increase its fertility. These micro-organisms are commonly called biological nitrogen fixers.

Q.47 B. How do micro-organisms help in cleaning the environment?

Answer: Some micro-organisms decompose the organic matter of dead plants and animals and convert them into simple substances which mix up with the soil. These substances are again used by other plants and animals. Thus, micro-organisms decompose the harmful and smelly dead remains of plants and animals into harmless materials and thereby clean up the environment.

Q.48. What are antibiotics? What precautions must be taken while taking antibiotics?

Answer: 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.

Q.49. Why are antibiotics not effective against 'common cold' and 'flu'?

Answer: Antibiotics are not effective against 'common cold' and 'flu' as these are caused by viruses. And the viruses do not have cells but live in the cells of living beings. And the working mechanism of the antibiotics is to break the cell wall and attack on the bacteria.

Q.50. What is the full form of HIV? Name the disease caused by HIV.

Answer: The full form of HIV is Human Immunodeficiency Virus. HIV causes AIDS disease.

Q.51. Describe how, curd is made from milk. Name the bacterium which converts milk into curd:

Answer: Milk is turned into curd by bacteria. Milk contains many microorganisms. Of these, the bacterium Lactobacillus promotes the formation of curd.

When a small amount of pre-made curd is added into warm milk, then lactobacillus bacterium present in curd multiplies in milk and converts it into curd. During this process, lactobacillus bacterium acts on lactose sugar present in milk and converts it into lactic acid. This lactic acid then converts milk into curd.

Q.52. Name the micro-organism used in bread-making which makes the bread-dough rise. How does it make the dough rise?

Answer: Yeast is used in baking industry for making bread. It increases the volume of dough. When yeast is mixed in dough for making bread, the yeast reproduces rapidly and produces carbon dioxide during respiration. Bubbles of the gas fill the dough and increase its volume. This makes the dough rise. This is the basis of the use of yeast in the baking industry for making breads, pastries and cakes.

Q.53. What is food poisoning? How is food poisoning caused?

Answer: Microorganisms such bacteria and fungi that grow on our food items sometimes produce toxic substances. These make the food unfit for consumption. Consuming such food can cause a serious illness called food poisoning.

Food hygiene is essential for preventing food poisoning.

Q.54 A. What is meant by food preservation? Name any five methods of preserving food.

Answer: Food preservation: Processing of food to prevent their spoilage and to retain their nutritive value for period is called food preservation.

Food can be preserved using following methods:

(1) Preservation by Salt

(2) Preservation by Sugar

(3) Preservation by oil and vinegar

(4) Heat and cold treatment

(5) Storage and packing

Q.54 B. How do you preserve cooked food at home?

Answer: We preserve cooked food in the refrigerator at home. Low temperature inhibits the growth of micro-organisms. When cooked food is kept in a cold place, then the food does not get spoiled easily.

Q.55 A. Why should we not let water collect anywhere in the neighborhood?

Answer: All mosquitoes breed in water. Hence, one should not let water collect anywhere, in coolers, tyres, flower pot etc.

Q.55 B. Name one animal disease each caused: (i) by virus (ii) by bacteria (iii) by fungus.

Answer: (i) Yellow vein mosaic of bhindi (Okra) **(ii)** Citrus canker **(iii)** Rust of wheat

Q. 56. Where do Rhizobium bacteria live? What is their function?

Answer: Rhizobium bacterium is found in the soil. It lives in the root nodules of leguminous plants such as beans and peas, with which it has a symbiotic relationship. It is involved in the fixation of nitrogen in leguminous plants (pulses).

Q. 57. Name any two

(a) bacteria **(b)** viruses **(c)** protozoa **(d)** algae, and **(e)** fungi.

Answer: (a) Bacteria – (I) Lactobacillus bacteria (II) Rhizobium bacteria

(b) Viruses – (I) HIV (II) Tobacco Mosaic virus (TMV)

(c) Protozoa – (I) Amoeba (II) Paramecium

(d) Algae – (I) Spirogyra (II) Chlamydomonas

(e) Fungi – (I) Penicillium (II) Aspergillus

Q.58. State the beneficial effects (or usefulness) of micro-organisms in our lives.

Answer:

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.

Q.59. Describe the method of pasteurization for the preservation of milk.

Answer: The process of pasteurization for the preservation of milk is discovered by Louis Pasteur. In this process, milk is heated to about 700C for 15 to 30 seconds to kill bacteria. Next it is chilled very fast to prevent bacteria from growing. It is finally stored at low temperature. This Pasteurized milk can be consumed without boiling as it is free from harmful microbes.

Q.60. Name one plant disease each caused:

(a) by fungi **(b)** by virus **(c)** by bacteria

Answer:

(a) The plant disease, Rust of wheat is caused by fungi.

(b) Yellow vein Virus Insect mosaic of bhindi (Okra), a plant disease, is caused by virus.

(c) Citrus canker is caused by bacteria.

Q. 61. Which disease is spread by?

(a) female Anopheles mosquito?

(b) female Aedes mosquito?

Answer: (a) female Anopheles mosquito carries the parasite of malaria.

(b) Female Aedes mosquito acts as carrier of dengue virus.

Q.62. Name two fruits which are preserved:

(a) in the form of pickles

(b) in the form of jams.

Answer: (a) The fruits which are preserved in the form of pickles by using oil and vinegar as preservative are raw mango and lemon.

(b) The fruits which are preserved in the form of jams by using sugar as preservative are mango and orange.

Q.63. What is the mode of transmission of the following diseases?

(a) Rust of wheat

(b) Citrus canker

(c) Yellow vein mosaic of bhindi (Okra)

Answer:

Plant Diseases	**Mode of transmission**
(a) Rust of wheat	Air, Seeds
(b) Citrus canker	Air
(c) Yellow vein mosaic of bhindi (Okra)	Insect

Q.64. Name any two animal diseases and two plant diseases caused by micro-organisms.

Answer:

The following diseases are caused by the micro-organisms:

Animal Diseases	**Plant Diseases**
Anthrax	Citrus Canker
Foot and mouth	Rust of Vein

Q.65. State the causative micro-organisms and modes of transmission of the following human diseases:

(i) Tuberculosis **(ii)** Measles **(iii)** Chickenpox **(iv)** Polio

(v) Cholera **(vi)** Typhoid **(vii)** Hepatitis B **(viii)** Malaria

(ix) Dengue

Answer:

Diseases	**Causative micro-organisms**	**Modes of transmission**

(i) Tuberculosis	Bacteria	Air
(ii) Measles	Virus	Air
(iii) Chickenpox	Virus	Air/Contact
(iv) Polio	Virus	Air/Water
(v) Cholera	Bacteria	Water/Food
(vi) Typhoid	Bacteria	Water
(vii) Hepatitis B	Virus	Water
(viii) Malaria	Protozoa	Mosquito
(ix) Dengue	Protozoa	Mosquito

Long Answer Type Questions

Q.66 A. What is meant by communicable diseases? Name any two communicable diseases.

Answer: Microbial diseases that can spread from an infected person to a healthy person through air, water, food or physical contact are called communicable diseases. Cholera and tuberculosis are examples of communicable diseases.

Q.66 B. What are the various ways in which communicable diseases can occur and spread?

Answer:

The communicable diseases can occur and spread in the following ways:

- Through air we breathe
- Through water we drink
- Through food we eat, and
- Through carriers such as mosquito.

Q.67 A. Name any five human diseases caused by micro-organisms. Also name the causative micro-organisms and mode of transmission for each of these diseases.

Answer:

Diseases	Causative micro-organisms	Modes of transmission
(i) Tuberculosis	Bacteria	Air

(ii) Chickenpox	Virus	Air/Contact
(iii) Polio	Virus	Air/Water
(iv) Cholera	Bacteria	Water/Food
(v) Malaria	Protozoa	Mosquito

Q.67 B. State the various ways of preventing the occurrence and spreading of communicable diseases.

Answer: There are various ways of preventing the occurrence and spreading of communicable diseases. These are as follows:

● Maintain personal hygiene and good sanitary habits.

● Drink boiled drinking water.

● Spray insecticides and control breeding of mosquitoes by not allowing water to collect in the surroundings.

● Keep the infected person separated from others & advise him/ her to keep a handkerchief on the nose and mouth while sneezing.

● Timely vaccination against diseases should also be taken.

● Food must be kept covered.

Q.68 A. What is a vaccine? How does a vaccine work?

Answer: A vaccine is a special kind of preparation which provides immunity against a particular disease. Vaccine consists dead and weakened microbes which are harmless and do not cause any disease. Vaccine works as follows:

● When the vaccine containing dead or weakened microbes is introduced into the body of a healthy person, the body fights and kills the microbes by producing some substance called antibodies.

● Some of the antibodies remain in the body for a long time and protect it from any future attack of disease germs. Thus, a vaccine develops the immunity from a disease.

Q.68 B. Why are children given vaccination?

Answer: Vaccination is the process of giving a vaccine orally or by injection which gives protection against a particular disease. Vaccination protect the children from number of diseases. Several diseases, including cholera, tuberculosis, smallpox and hepatitis can be prevented by vaccination.

Since the immune system of children is not strong and they are more likely to catch any disease very easily, so all the children should be vaccinated at the proper ages to provide them immunity from certain diseases.

Q.69. What is meant by 'nitrogen fixation'? State two ways in which nitrogen gas of the atmosphere can be 'fixed' in nature to get nitrogen compounds in the soil.

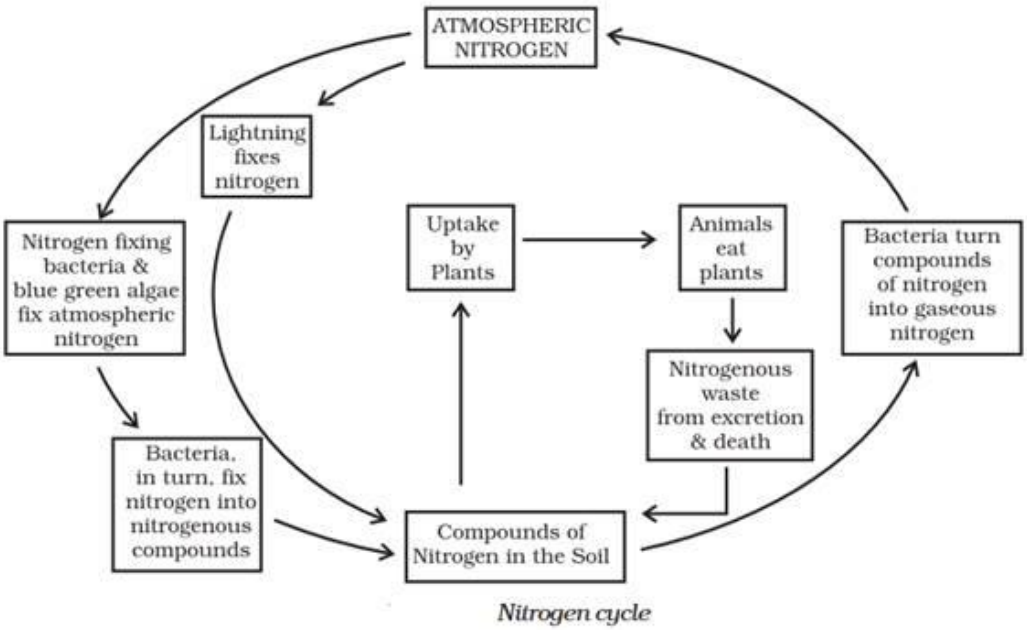
Answer: The process of converting atmospheric nitrogen into compounds of nitrogen is called nitrogen fixation. The two ways in which in which nitrogen gas of the atmosphere can be 'fixed' in nature to get nitrogen compounds in the soil are:

(i) Nitrogen fixation by lightning: Lightning also helps in fixing atmospheric nitrogen into the soil. The temperature and pressure during lightning convert atmospheric nitrogen into oxides of nitrogen. These nitrogen compounds combine with rainwater to form nitric and nitrous acid which mix with the soil.

(ii) Nitrogen fixation by certain bacteria and blue-green algae: Certain bacteria and blue-green algae present in the soil fix nitrogen from the atmosphere and convert it into compounds of nitrogen.

Q.70. Draw a neat, labelled diagram of nitrogen cycle in nature. Which natural phenomenon occurring in the sky is responsible for nitrogen fixation?

Answer: A neat, labelled diagram of the nitrogen cycle in nature is shown below:



Nitrogen cycle

Lightning is a natural phenomenon which occurs in the sky and responsible for nitrogen fixation. The temperature and pressure during lightning convert atmospheric nitrogen into oxides of nitrogen. These nitrogen compounds combine with rain water to form nitric and nitrous acid which mix with the soil. These acids are utilized by various organisms.

Multiple Choice Questions (MCQs)

Q.71. The bread dough rises because of:

Answer: Yeast is used in baking industry for making bread. It increases the volume of dough.

When yeast is mixed in dough for making bread, the yeast reproduces rapidly and produces carbon dioxide during respiration. Bubbles of the gas fill the dough and increase its volume.

Q.72. Yeast is used in the production of:

Answer: Yeast is used for commercial production of alcohol and wine.

Q.73. The process of conversion of sugar into alcohol is called:

Answer: The process of conversion of sugar into alcohol is known as fermentation. Louis Pasteur Discovered fermentation in 1857.

Q.74. Which of the following is an antibiotic?

Answer: Streptomycin, tetracycline and erythromycin are some of the commonly known antibiotics which are made from fungi and bacteria.

Q.75. The most common carrier of communicable diseases is:

Answer: Housefly is most common carrier of communicable diseases. The houseflies feed on garbage, animal excreta and dead organic matter. Diseases cholera and tuberculosis spread by housefly.

Q.76. The carrier of malaria causing protozoan is:

Answer: The carrier of malaria causing protozoan called plasmodium is female anopheles mosquito.

Q.77. The vaccine for smallpox was discovered by:

Answer: Edward Jenner discovered the vaccine for smallpox in 1978.

Q.78. Alcohol can be converted into vinegar by the action of micro-organisms called:

Answer: The dilute solution of acetic acid is called vinegar. Alcohol can be converted into vinegar by the action of micro-organisms called bacteria. In this process, first alcohol is produce by using yeast. The acetobacter bacteria is then added to alcohol. Acetobacter bacteria convert alcohol into acetic acid (or vinegar).

Q.79. The first antibiotic called penicillin was extracted from:

Answer: An antibiotic Penicillin was extracted from fungus (mould) by Alexander Fleming in 1929. This antibiotic was made from the fungus called penicillium.

Q.80. Which of the following is not a communicable disease?

Answer: Cholera, chickenpox and malaria are communicable disease while cancer is not a communicable disease.

Q.81. Which of the following increases the fertility of soil?

(A) Lactobacillus bacteria

(B) Rhizobium bacteria

(C) Spirogyra algae

(D) Blue-green algae

Answer: B and D as these two organisms are able to fix nitrogen gas from atmosphere to enrich soil with nitrogen compounds hence increasing fertility of soil

Q.82. Which of the following cannot be used as a food preservative?

Answer: sodium meta bisulphate, sodium benzoate and citric acid are used as a food preservative whereas sodium hydroxide is not used as food preservative.

Q.83. Which of the following disease is not caused by bacteria?

Answer: Cholera, typhoid and tuberculosis are caused by bacteria whereas measles is caused by a virus.

Q.84. The micro-organisms which can reproduce and multiply only cells of other organisms are:

Answer: Viruses are too much smaller in comparison to other micro-organisms. They do not show most of the characteristics of the living organisms like respiration. They just reproduce. They, however, reproduce only inside the cells of the host organism, which may be a bacterium, plant or animal.

Q.85. The dengue disease spread by Aedes mosquito is caused by:

Answer: Dengue disease is caused by a virus. Female Aedes mosquito acts as carrier of dengue virus.

Q.86. Which of the following disease is not caused by viruses?

Answer: Measles, smallpox and polio are caused by viruses while cholera is caused by a bacterium.

Q.87. The micro-organism which is capable of converting sugar into alcohol and carbon dioxide is:

Answer: Yeast, a fungus is capable of converting sugar into alcohol and carbon dioxide.

Q.88. Which of the following is not a use of micro-organisms?

Answer: Some of the micro-organisms are used to preparation of medicines. Some of micro-organisms are used recycling of materials in nature and increasing the fertility of soil. The synthesis of food by photosynthesis takes place in leaves with the help of inorganic materi like carbon-dioxide and water in the presence of sunlight and chlorophyll.

Q.89. The malaria disease is caused by a:

Answer: The malaria disease is caused by a protozoan called plasmodium.

Q.90. The parasite called Plasmodium causes a disease known as:

Answer: The parasite called Plasmodium causes a disease known as malaria. Female Anopheles mosquito carries the parasite of malaria.

Questions Based on High Order Thinking Skills (HOTS)

Q.91. After consuming a dish of mutton, a person complained of nausea, vomiting, diarrhoea, and pain in the abdomen.

(a) What type if disease is he suffering from?

(b) What causes this disease?

Answer:

(a) He is suffering from food poisoning.

(b) Micro-organisms like bacteria and fungi present in the spoilt dish of mutton causes the disease, food poisoning.

Q.92. Match the micro-organism in column A with their action on 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) A protozoan	(e) Causing cholera

(vi) A virus	(f) Causing AIDS
(vii) penicillium	(g)Producing antibiotics

Answer: (i) e; **(ii)** a; **(iii)** b; **(iv)** c; **(v)** d; **(vi)** f; **(vii)** g

Q.93. To which category of micro-organisms do the following belong?

Amoeba, Lactobacillus, Chlamydomonas, Penicillium, Yeast, HIV

Answer: Amoeba – Protozoa; Lactobacillus - Bacteria; Chlamydomonas - Algae; Penicillium - Fungi; Yeast – Fungi; HIV – Virus

Q.94. Name the causative micro-organisms do the following belong?

(a) Rust of wheat

(b) Citrus canker

(c) Yellow vein mosaic of bindi (Okra)

Answer:(a) Rust of wheat – Fungi

(b) Citrus canker – Bacteria

(c) Yellow vein mosaic of bindi (Okra) – Virus

Q.95. The mosquito P is a carrier of virus and spreads a disease Q. Another mosquito R is the carrier of protozoan S and spreads s disease called T.

(a) Name (i) mosquito P, and (ii) disease Q.

(b) Name (i) mosquito R (ii) protozoan S, and (iii) disease T.

(c) What is the sex of mosquito P?

(d) What is the sex of mosquito r?

Answer: (a) (i) Female Aedes mosquito (ii) Dengue

(b) (i) Female Anopheles mosquito (ii) Plasmodium (iii) Malaria

(c) Female (d) Female