Question 1 Explain nitrogen cycle in atmosphere?

Question 2 Define nitrogen cycle?

**Nitrogen Cycle**

Nitrogen is required by both,plants and animals for their growth and development.

It is an essential component of proteins which make up the bodies of plants and animals.

It is also present in chlorophyll,nucleic acid and vitamins.

The circulation of nitrogen elements through living things and non-living environment is called **nitrogen cycle**in nature.

1)The atmosphere contains nitrogen gas.The nitrogen fixing bacteria(present in the soil and in the root nodules of leguminous plants),blue green algae and lightning in the sky nitrogen gas from the atmosphere and convert it into compounds of nitrogen which go into soil.

2)The plant take compounds of nitrogen from the soil for their growth.The plants absorb the nitrogen compounds from the soil through their roots.The plants convert the compounds of nitrogen into plant proteins and other organic compounds which make up the body of plants.

3)The plants are eaten up by animal as food.Animals convert plant protein into animal protein and other organic compounds which make up their body.Some animals also eat other animals to obtain nitrogen compounds.

4)When plants and animals die,the complex nitrogen compounds present in their dead bodies are decomposed and converted into simple compounds of nitrogen by certain bacteria and fungi present in the soil.All the simple compounds of nitrogen formed in this way go into the soil.The compounds of nitrogen which were taken by the plants from the soil during their growth are returned to the soil.These nitrogen compounds are again absorbed by the new plants for their growth and this part of nitrogen cycle is repeated endlessly.

5)Some of the compounds of nitrogen are decomposed by denitrifying bacteria present in the soil to form nitrogen gas.The nitrogen gas goes back into the atmosphere.

Question 1 Name the micro-organism which can fix atmospheric nitrogen in the soil?

Question 2 What type of plants can fix nitrogen gas of the air into compounds of nitrogen?

Question 3 Name the micro-organism present in the soil and in the root nodules of leguminous plants?

Question 4 Where do Rhizobium live?

Question 5 What is the function of Rhizobium bacteria?

Question 6 What is meant by nitrogen-fixation?

Question 7 State the ways in which nitrogen gas of the atmosphere can be fixed in nature  to get nitrogen compounds in the soil?

**Nitrogen fixation**

Our atmosphere has 78% nitrogen gas.The atmospheric nitrogen gas cannot be utilised directly by the plants or animals.

The process of converting nitrogen gas of the atmosphere or air into compounds of nitrogen(which can be used by the plants)is called **nitrogen fixation.**

The nitrogen gas is the free nitrogen whereas nitrogen compounds are said to be fixed(converted into nitrogen compounds).

The nitrogen gas of atmosphere can be fixed

1)By certain nitrogen-fixing bacteria present in the soil

2)By Rhizobium bacteria present in the root nodules of leguminous plants

3)By blue green algae

4)By lightning

The nitrogen fixing Rhizobium bacteria lives in the root nodules of leguminous plants.

Some nitrogen-fixing bacteria live freely in the soil whereas other nitrogen-fixing bacteria live in the root nodules of leguminous plants.

Nitrogen gas of atmosphere also gets fixed through the action of lightning in the sky.When lightning takes place in the sky during thunderstorm,a high temperature is produced in the atmosphere.At this high temperature,nitrogen gas of air combines with oxygen gas of air to form nitrogen compounds.these nitrogen compounds dissolve in rain water,fall to earth with rain water and go into the soil.

Question 1 Name food material which are preserved by mustard and vinegar?

Question 2 Name food material which are preserved by using chemicals as preservatives?

Question 3 Name food material which are preserved by pasteurisation?

Question 4 Name food material which are preserved in air-tight packets?

Question 5 Name some preservatives which are used in the preservation of fruits as jam and jellies?

Question 6 How do you preserve food by mustard oil and vinegar?

Question 7 How do you preserve food by using special chemicals?

Question 8 How do you preserve food by Pasteurisation?

Question 9 How do you preserve food in air tight -packets?

**Preservation of food by mustard oil and vinegar,chemicals,Pasteurisation,air-tight packets**

**1)Preservation of food by mustard oil and vinegar**

They are used as preservative for the preservation of fruits and vegetables in the form of pickles.The use of mustard oil or vinegar prevents the spoilage of fruits and vegetable because food-spoiling bacteria cannot live in such an environment.

They are used as preservative for preserving fruits such as raw mango,amla and lemon in the form of their pickles.

**2)Preservation of food by using special chemicals as preservatives**

The three special chemicals which are used as preservative in the preservation of food are:Sodium meta bisulphite,sodium benzoate and citric acid.

They are used to preserve jams,jellies,juices and squashes

so as to save the food from spoilage.

Citric acid is used as a preservative in confectionary.These special chemicals kill the food spoilage bacteria but they do not harm us.

**3)Preservation of food by Pasteurisation**

The method of pasteurisation is used for the preservation of milk in big diaries.It involves the process of heating followed by quick cooling.

First the milk is heated for 15 to 30 sec to kill most of the bacteria present in it.This hot milk is cooled very quickly to a low temperature to prevent any remaining bacteria from growing further.And then milk is stored in cold.

Pasteurised milk can be consumed without boiling because it is free from harmful micro-organism.The milk that comes in packets also does not get spoiled for a fairly long time.This is because it is pasteurised milk.

**4)Preservation of food by Air-tight packets**

Dry fruits and even vegetables are sold in sealed,air-tight packets to prevent the attack of micro-organism on them.This helps the dry fruits and vegetable to remain unspoiled for a longer time.

Question 1 Name food material which can be preserved by heating?

Question 2 Name food material which can be preserved by cooling?

Question 3 Name food material which can be preserved by sun-drying?

Question 4 How do you preserve food by heating?

Question 5 How do you preserve food by cooling?

Question 6 How do you preserve food by dehydration?

**Preservation by sun-drying,heating,cooling**

**1)Preservation by sun-drying or dehydration**

Drying means removal of water from food materials which are to be prepared.It reduces the water content of food material and makes them dry.In the absence of moisture,the food does not get spoiled because the micro-organism which spoil food do not grow in dry food.

The vegetables like spinach,methi leaves,cauliflower,peas are preserved in our homes by the sun-drying method.These dries vegetables can be stored safely for a long time and used whenever required.

**2)Preservation of food by heating**

Heating kills many micro-organism and prevents the food from spoilage.

For Ex:We boil milk to prevent it from spoilage.When we heat the milk during boiling,then the food-spoiling bacteria present in it gets killed.so the boiled milk remains good for a longer time.

**3)Preservation of food by cooling**

Low temperature inhibits the growth of micro-organism.The food spoiling bacteria do not grow and multiply in cold condition.When food is kept in a cold place then the food does not get spoiled easily.The food material like milk,kneaded flour,cooked food and fresh fruits and vegetables are kept in a cool place like refrigerator to prevent their spoilage.

Question 1 Name food material which can be preserved by using sugar?

Question 2 Name food material which can be preserved by using common salt?

Question 3 Name food material which can be preserved by deep freezing?

Question 4 How do you preserve food by deep freezing?

Question 5 How do you preserve food by using common salt?

Question 6 How do you preserve food by using sugar?

**Preservation by Deep freezing,common salt,sugar**

**1)Preservation by Deep freezing**

Preservation of food by deep freezing means preservation of food by excessive cold.Deep freezing of food can be done by placing it in the freezer compartment of our refrigerator.When the food is kept in deep freezer then food gets frozen.

At the very low temperature in deep freezer,the growth of food-spoiled micro-organism is prevented completely.Due to this,the frozen food remains unspoiled and fresh for long periods.

Deep freezing method is used for the preservation of food like meat,fish,fruits and vegetables.

**2)Preservation of food by common salt**

Common salt prevents the growth of food-spoiling micro-organism due to which it is used to preserve a number of food material.It is used to preserve meat and fish.They are covered with dry salt to prevent the growth of bacteria.Such meat and fish do not get spoiled easily.

It is used to preserve fruits such as raw mangoes,lemon,amla and tamarind.Common salt does not allow bacteria or fungus to grow on fruits and vegetable present in it.

**3)Preservation of food by sugar**

Sugar is used as a preservative in making jams and jellies from fruits.It reduces the moisture content from the fruits which inhibits the growth of micro-organism like bacteria which spoil the fruits.

The fruits which are preserved in the form of jams and jellies by using sugar as preservative are apple,mango,orange,strawberry,pineapple,guava etc.

Question 1 What is meant by food preservation?

Question 2 Name methods of preserving food?

**Preservation of food**

The food material like milk,fruits,vegetables,meat,fish and cooked food get spoiled easily.This is because they contain a lot of water due to which the food-spoiling micro-organism can grow in them easily.

The process in which the food materials are given a suitable physical or chemical treatment to prevent their spoilage is called **food preservation**.

**Methods of preserving food are:**

1)Sun-drying or dehydration

2)Heating

3)Cooling

4)Deep freezing

5)Addition of common salt

6)Addition of sugar

7)Addition of mustard oil and vinegar

8)Use of special chemical preservatives

9)Pasteurisation

10)Packing food in air-tight packets

Question 1 Name the causative micro-organism of animal disease foot and mouth?

Question 2 Name the causative micro-organism of animal disease Anthrax?

Question 3 Name the causative micro-organism of animal disease Aspergillosis?

**Disease causing micro-organism in animals**

Some of the examples of diseases caused in animals by micro-organism are:**Foot and mouth disease,Anthrax and Aspergillosis.**

1)Foot and mouth disease of animal is caused by a **virus.**The causative micro-organism is virus.The cattle suffering from this disease get blisters on feet and mouth.

2)Anthrax is a dangerous disease of animals which is caused by a**bacterium**.The causative micro-organism is bacterium(Bacillus anthracis).

3)Aspergillosis is a disease of animals(like poultry)which is caused by a **fungus**.The causative micro-organism is fungus.

Question 1 Name one plant disease caused by fungi?

Question 2 Name one plant disease caused by virus?

Question 3 Name one plant disease caused by bacteria?

Question 4 What is the mode of transmission of disease rust of wheat?

Question 5 What is the mode of transmission of disease citrus canker?

Question 6 What is the mode of transmission of disease yellow vein of bhindi?

**Disease causing micro-organism in plants**

Some of the common plant diseases caused by micro-organism are:**Rust of wheat, citrus canker,yellow vein mosaic of bhindi**

1)The plant disease called rust of wheat is caused by **fungi**.Thus the causative micro-organism of rust of wheat disease is fungus.It is transmitted through **air and seeds**.It occurs in **wheat plant.**

2)The plant disease called **citrus canker** is caused by **bacteria**.So the causative micro-organism of citrus canker disease are bacteria.It is transmitted through **air**.It occurs in citrus trees such as lemon,lime,orange etc.

3)The plant disease called yellow vein mosaic of bhindi is caused by a virus.The causative micro-organism of this plant disease is **virus**.It is transmitted through **insects.**

The disease of plants caused by micro-organism reduce the yield and quality of various crops.The plant disease can be controlled by the use of certain chemicals which kill the disease-causing micro-organism.

Question 1 Name any 2 diseases spread by housefly?

Question 2 Name 2 insects which act as carrier of disease causing micro-organism?

Question 3 Name the insect which acts as carriers of parasite of malaria?

Question 4 Name the insect which carries dengue?

Question 5 Name the diseases spread by mosquito?

Question 6 Name the microbe which causes malaria disease?

Question 7 How do houseflies carry disease causing micro-organism?

Question 8 State the ways of preventing diseases spread by houseflies?

Question 9 How do mosquitoes carry disease causing micro-organism and spread diseases?

Question 10 Mention the ways of preventing disease spread by mosquito?

Question 11 what are causative micro-organism organism?

**Carriers of disease causing micro-organism**

There are some insects in our environment which transfer disease causing microbes into our body and spread diseases.

The insect which transmits disease causing micro-organism to humans is called a**carrier.**

The two most common carriers of disease causing micro-organism are:

**1)Housefly**

**2)Mosquito**

**Role of housefly in spreading diseases**

The houseflies lay eggs on garbage dumps.They feed on garbage, animal excreta,dead organic matter,exposed human food.The body and legs of housefly bear a lot of fine hair.When the housefly sits on a garbage heap,human excreta or other filth and refuse,then millions of disease causing micro-organism present in them stick to the hairy legs and other body parts of the houseful.And when this housefly now sits on our uncovered food,then micro-organism sticking to  the hair on its legs and other body parts are transferred to food.In this way our food get contaminated with disease causing micro-organism.When this contaminated food is consumed by a person,then the disease causing micro-organism enter into his body and cause various diseases.

For Ex:Cholera,Tuberculosis,Typhoid,Diarrhoea.

**Prevention of diseases spread by houseflies**

1)We should not leave household garbage here and there.

2)The food should always be kept covered so that flies cannot sit on it.

3)We should avoid eating uncovered food items from road-side stalls.

4)The flies should be killed by using insecticides spray.

5)Some of the diseases spread by houseflies can be prevented by vaccination.

**Role of mosquitoes in spreading diseases**

Mosquito acts a **carrier of disease** **causing micro-organism** and spreads diseases from one person to another.They carries microbes inside its body.Mosquitoes breed in stagnant water of ponds,dirty drains,pools,ditches and shallow lakes etc.

The most common disease spread by mosquitoes is **malaria**.The **female anopheles**mosquito which carries the parasite of malaria.The malarial parasite called **Plasmodium**causes malaria disease.

1)When a female anopheles mosquito bites a person suffering from malaria disease,it sucks the blood of that person which contains the malarial parasite microbes.

2)When this infected female anopheles mosquito bites a healthy person to suck his blood,it transfers the malarial microbes into his blood stream along with saliva.

3)By receiving malarial parasite microbes in blood,the healthy person also gets malarial disease.

Another disease spread by mosquitoes is **dengue.**It is caused by virus.The **female aedes**acts a carrier of dengue virus and spread the dengue from person to person.

**Prevention of diseases by mosquitoes**

1)The pools of stagnant water around the houses should be drained out so that mosquitoes may not breed in them.

2)We should not let water collect in coolers,tyres,flower pots.

3)The window and doors of the house should have fine iron wire mesh so that mosquitoes cannot enter the house.

4)Oil should be sprayed on the surface of water in dirty water drains to kill the larvae of mosquitoes.

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

The micro-organism which cause a disease is known as **causative micro-organism** of that disease.

Question 1 Define the term food poisoning?

Question 2 How is food poisoning caused?

Question 3 What are the various symptoms of food poisoning?

Question 4 Name 2 bacteria which cause food poisoning?

Question 5 Name a fungus which cause food poisoning?

**Food poisoning**

If the food is not covered properly,stored properly or preserved properly,then it gets spoiled by the action of micro-organism on it.

Micro-organism that grow on our food sometimes produce toxic substance.

1)The spoiled food gives foul smell and bad taste.

2)Its colour may also change.

The disease caused due to the presence of large number of micro-organism in the food,or due to the presence of toxic substances in food formed by the action of micro-organism is called **food poisoning.**

**The major symptoms of food poisoning are**:Vomiting,diarrhoea,pain in abdomen,headache and fever.

The micro-organism which cause food poisoning come into food from the air,dirty hands,unclean food containers,flies,cockroaches,insects,rats or sick farm animals.

The two most common examples of bacteria which cause food poisoning are bacteria**Salmonella** and **clostridium botulinum.**

The fungus which cause food poisoning is **Aspergillus.**

Question 1 What are pathogens?

Question 2 What are communicable diseases?

Question 3 Name one disease which spreads by breathing in air contaminated by micro-organism?

Question 4 Name one disease which spreads through insect bite?

Question 5 Name one disease which spreads through infected food or water?

**Harmful micro-organism**

Those micro-organism which cause diseases are called **pathogens**.They can be bacteria,fungi,virus or protozoa.

Micro-organism cause diseases such as cholera,typhoid,tuberculosis,malaria,smallpox, chickenpox etc.Some micro-organism spoil food,clothing and leather objects.

1)Pathogens enter our body through the air we breathe,the water we drink,or the food we eat.

2)The disease causing micro-organism can also get transmitted by direct contact with an infected person or carried through an insect.

Those microbial diseases which can be spread from an infected person to a healthy person through air,water,food or physical contact are called **communicable diseases.**

For Ex:Common cold,cholera,chicken pox,tuberculosis,malaria,AIDS etc.

A person suffering from common cold is infected by common cold virus.When the person suffering from common cold sneezes,fine droplets of moisture carrying thousands of common cold viruses are spread in the air around him.When a healthy person breathes in this contaminated air containing common cold virus,the virus enters his body and he also gets common cold disease.

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

1)By breathing of of air containing micro-organism

2)By taking infected food or water

3)Through insect bites

4)By sharing infected needles

5)By physical contact with an infected person

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Some micro-organism decompose the organic matter present in the dead plants,dead animals  and animal wastes,and convert them into simple substances which mix up with the soil.

Since micro-organism decompose the harmful and smelly dead remains of plants and animals,and animal wastes into harmless materials,they clean the environment.

The micro-organism also help in recycling the nutrients(present in dead plants,dead animals and animal waste)in nature which can then be used as food by green plants.

If there were no micro-organism (decomposers)then the nutrients present in dead plants, dead animals and animal waste would never be released for use by new plants.

Question 1 State one important function performed by rhizobium and blue green algae?

Question 2 Name one biological nitrogen fixer?

Question 3 Name the micro-organism which can fix atmospheric nitrogen in the soil?

Question 4 How do micro-organism help in increasing soil fertility?

**Increasing soil fertility**

Some of the micro-organism present in the soil can fix nitrogen gas from the atmosphere to form nitrogen compounds.

These nitrogen compounds mix with the soil and increase the fertility of soil.

Some bacteria like **rhizobium** and **blue green algae** are able to fix nitrogen gas from the atmosphere to enrich the soil with nitrogen compounds and increase its fertility.

The nitrogen-fixing bacteria and blue green algae are called **biological nitrogen fixers.**

Question 1 Name any 2 antibiotics?

Question 2 Name diseases which can be prevented by vaccination?

Question 3 Name the scientist who discovered the vaccine for small pox?

Question 4 Name the scientist who discovered penicillin?

Question 5 What are antibiotics?

Question 6 What precautions must be taken while taking antibiotics?

Question 7 Why antibiotics are not effective against common cold?

Question 8 What is a vaccine?

Question 9 How does a vaccine work?

Question 10 Why are children given vaccination?

Question 11 Name the diseases that can be cured by vaccination?

**Medicinal use of micro-organism**

A medicine which stops the growth of,or kill the disease causing micro-organism is called**antibiotics.**

The source of antibiotic medicine is micro-organism.The antibiotic are manufactured by growing specific micro-organism.

For Ex:Penicillin,Streptomycein,Erythromycin,tetracycline etc.

The first antibiotic penicillin was discovered by chance and extracted from the tiny fungus called penicillium.In 1929,**Alexander Fleming** discovered it.

Antibiotic are very effective in curing diseases caused by micro-organism such as bacteria and fungi.Antibiotics are not effective against diseases caused by virus.

**Some of the precautions to be observed in the use of antibiotics are as follow:**

1)They should be taken only on the advice of a qualified doctor.

2)They should be taken in proper dose.

3)A person must complete the full course of antibiotics prescribed by the doctor.

4)They should not be taken unnecessarily.

Antibiotics are even mixed with the feed of live stock and poultry birds to control microbial diseases in animals.They are used to control many plant diseases.

**Vaccine**

A vaccine is a special kind of preparation which provides immunity against a particular disease.

Vaccine are given to healthy person so that they may not get certain diseases throughout their life.

When the vaccine containing dead or weakened but alive micro-organism of a disease(which are harmless and do not actually give a disease).

When the vaccine containing dead or alive micro-organism is introduced into the body of a healthy person orally by mouth or by injection,the body of that person responds by producing some substances called antibiotics in its blood.These antibiotics kill any alive disease causing micro-organism present in the vaccine.

Some of the antibiotics remain in the blood of the person for a very long time and fight against the same micro-organism and kill them if they happens to enter the body naturally at a later date.

A vaccine develops immunity from a disease.

**Vaccination** is a process of giving a vaccine orally or by injection which provides protection against a particular disease.

The diseases which can be prevented by vaccination of children at proper age are:Polio,smallpox,chicken pox,cholera,measles, hepatitis,tuberculosis,rabies, diphtheria,pertussis.

**Edward Jenner** discovered the vaccine for small pox.

Question 1 Which micro-organism is used for the large scale production of alcohol?

Question 2 Define the term fermentation?

Question 3 Name the scientist who discovered fermentation?

Question 4 Describe how sugar is converted into alcohol?

Question 5 What is vinegar?

**Commercial use of micro-organism**

They are used for the large scale production of **alcohol and acetic acid(vinegar)**

1)**Yeast** is the micro-organism which is used for large production of alcohol.This alcohol is then used in making of wine,beer,whisky as well as industrial spirit.

2)Yeast is capable of converting sugar into alcohol.The sugar for making alcohol comes from substances such as cane juice and fruit juice,or from substances such as maize,barley,rice etc.

The process of conversion of sugar into alcohol by action of yeast is called **fermentation.**

Fermentation was discovered by **Louis Pasteur** in 1857.

A dilute solution of acetic acid is called **vinegar.**Bacteria can turn alcohol into acetic acid.

First alcohol is made by using yeast.The acetobacter bacteria are added to alcohol and air is bubbled through it.In the presence of oxygen,bacteria converts alcohol into acetic acid.

Question 1 What is the name of micro-organism which reproduce only inside the living cells of other organism?

Question 2 What are the major groups of micro-organism?

Question 3 Name any 2 diseases caused by bacteria?

Question 4 Name any 2 diseases caused by virus?

Question 5 Name any 2 diseases caused by algae?

Question 6 Name any 2 diseases caused by fungi?

Question 7 Name any 2 diseases caused by protozoa?

Question 8 What is the full form of HIV?Name the disease caused by HIV?

Question 9 Name any 2 bacteria?

Question 10 Name any 2 virus?

Question 11 Name any 2 fungi?

Question 12 Name any 2 protozoa?

Question 13 Name any 2 algae?

**Groups of micro-organism**

Micro-organism are classified into 5 major groups:

1)Bacteria

2)Viruses

3)Protozoa

4)Algae

5)Fungi

**Bacteria**

They are very small,single-celled micro-organism which have cell wall but do not have an organises nucleus and other structures.

For Ex:Lactobacillus,Rhizobium.

Some of the diseases cause by bacteria are cholera,typhoid,tuberculosis,diphtheria etc.



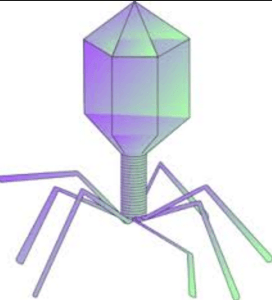
**Viruses**

They are the smallest micro-organism which can develop only inside the cells of the host organism .

Viruses can reproduce and multiply only inside the cells of other organism .They are the agents of diseases.

The diseases caused by virus are common cold, influenza,measles,polio,chicken pox,small pox etc.

For Ex:HIV(Human Immuno deficiency) virus causes AIDS, Common cold virus.



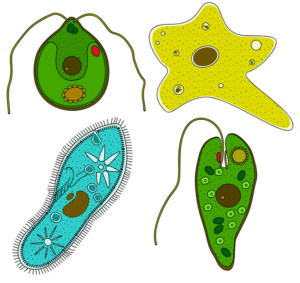
**Protozoa**

They are a group of single-celled micro-organism which are classified as animals.

For Ex:Amoeba,paramecium,Entamoeba,plasmodium etc.

Diseases like dysentery and malaria are caused by protozoa.

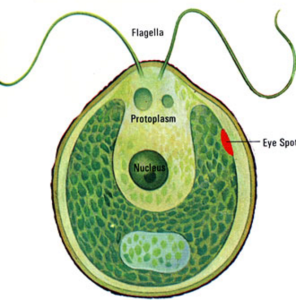
Plasmodium is a protozoan which cause a disease called **malaria .**



**Algae**

Algae is a large group of simple,plant like organism.They contain chlorophyll and produce food by photosynthesis.

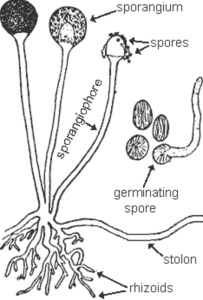
For Ex:Chlamydomonas,Spirogyra,blue-green algae.



**Fungi**

They are a large group of organism which do not have chlorophyll and do not photosynthesise.

For Ex:Yeast,mould, penicillium,aspergillus etc.



Question 1 which micro-organism is utilised in making curd from milk?

Question 2 How do micro-organism convert milk into curd?

Question 3 Name the micro-organism used in baking industry?

Question 4 How yeast help in making of making of bread?

Question 5 Name the sugar present in milk?

**Making of curd**

Milk is turned into curd by bacteria.

Curd contains several micro-organism including **Lactobacilli bacteria**.

It promotes the formation of curd from milk.

When a little of pre-made curd is added to warm milk,then Lactobacilli bacteria present in curd multiply in milk and convert the lactose sugar into lactic acid.

This lactic acid then converts milk into curd.

Curd is added in making idlis and bhaturas to make them soft and spongy.

Bacteria are also involved in the making of cheese,pickles and many other food items.

**Making of bread**

Yeast is used in the baking industry for making bread.

When yeast is mixed in dough for making bread,the yeast reproduces rapidly and gives out carbon dioxide gas during respiration.The bubbles of carbon dioxide gas fill the dough and increases its volume.

It is also used in making cakes and pastries.

**Useful micro-organism**

1)They are utilised in the making of curd,bread and cake.

2)They are used in the production of alcohol,wine,acetic acid.

3)They are used in the preparation of medicines called antibiotics.

4)They are used in agriculture to increase the fertility of soil.

5)They clean up the environment by decomposing the organic matter of dead plants,dead animals and animal waste into harmless and simple substances.

**Where do micro-organism live**

1)Micro-organism are found in air,water,soil.

2)They can live and survive in all kinds of environment such as hot springs,ice-cold water,saline water,desert soil,marshy land etc.

3)They also occur in dead and decomposed organic matter.

4)They are present inside the human body and that of other animals.

5)They also live as parasites on other living things,including us.

Question 1 Name the instrument which is needed to see micro-organism?

Question 2 What are micro-organism?

**Micro-organism**

Many living organism are present in soil,water and animal.Some of the micro-organism are so small that we can not see them with naked eyes.

Those organism which are too small to be seen without microscope are called **micro-organism.**

Micro-organism like bacteria and fungi make our food go bad.

The micro-organism also cause diseases in humans,other animals and plants.

Some of the micro-organism grow on food and cause food poisoning.

Some of the micro-organism are also useful to us like certain bacteria help in making food products such as curd and cheese.They are also useful in making bread,cakes,pastries,alcohol,medicine etc.