

## DISTRICT INSTITUTE OF EDUCATION AND TRAININGS BANDIPORA

Assignment for Class 7<sup>th</sup>

Chapters Nutrition in Plants and animals

**Learning Out Come:** 1.Types of Nutrition, Nutrition in human being

2. Digestion in humans

3. Types of Teeth.

**NUTRITION**( Ingestion of food by an organism and its utilization by the body)

### Types

#### Autotrophic Nutrition

( Making of food by the Organisms  
Themselves from simple substances)

#### Heterotrophic Nutrition

( Organisms depend on other Organisms for  
food to Survive).

Every organism needs food to survive so does human beings. The food taken in by humans needs to be digested for proper utilization. Digestion in Human occurs in Various Steps.

**In Mouth:** Food is mechanically broken by teeth. Saliva Secreted by the Salivary gland is mixed with the food. Saliva breaks down the Starch into sugar. The food is then pushed into the stomach through food pipe.

**Stomach:** The inner lining of stomach secretes Mucous, HCL, and digestive juices. the Mucous protects the lining of the Stomach. the acid kills bacteria that enter along with food and makes the medium in the stomach acidic. The digestive Juice break down the Protein into Simpler Substances.

**Small intestines:** The Chyme( semi digested food from Stomach) enters the small intestines which receives digestive juices from liver ( Bile Juice) and Pancrease ( Pancreatic Juice). Bile play an important role in digestion of fats. Pancreatic Juice acts on Carbohydrates which get broken down into sugars as glucose, fats into fatty acids and protein into amino acids.

Undigested food passes into large intestines to be defacated through anus.

#### Nutrition In Amoeba:

Amoeba is a single Celled organisms found in pond water. It injects its food with the help of its false feet or pseudopodia. The food is Digested in the food vacuole.

#### Nutrition in Ruminants:

The Grazing animals like Cows, Buffaloes and deer are known as ruminants. They quickly ingest, swallow there leafy food and store in the rumen. Later the food returns to the mout and the animals chew it peacefully.

**Steps of digestion:**

Ingestion ( Taking of food directly into mouth)

Digestion ( breakdown of ingested food into simple form)

Absorption: ( A Complex process in which food is absorbed into various organs)

Assimilation: ( Absorbed food is incorporated into cell components)

Egestion: Undigested food is excreted out through anus

**Tick The Correct One**

1. Amoeba is Unicellular/ Multicellular.
2. Bile acts on Proteins/ Fats.
3. Intake of food into Mouth is called Egestion/ ingestion.

Q2: Fill in the Blanks:

- a. Semi digested food which enters the small intestines from the stomach is called .....
- b. Preparation of food by themselves is called as..... nutrition.
- c. Pseudopodia is also called.....

Q3: Name the different steps involved in digestion?

Q4: Where is Bile Produced?

Q5: Name Four types of teeth in Humans?

Incisors    Canines    Premolars    Molars

**Activity**

**Prepare a chart of human digestive system :**

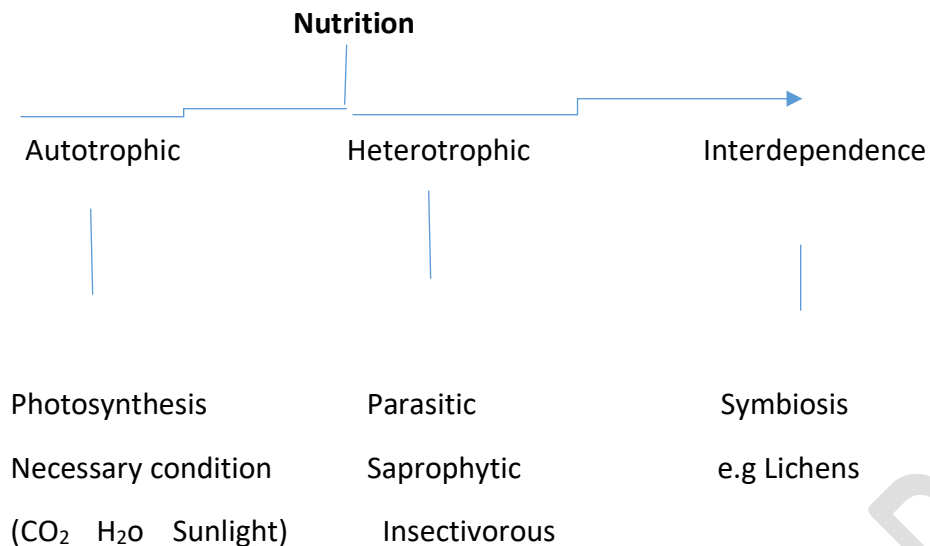
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**Nutrition in Plants:**

Nutrition is the fundamental life process ,because all other processes stem from it. All living organisms need energy to perform various life activities. They obtain this energy from the food they eat. The process of taking food by an organism and its utilization by the body is called Nutrition. The Various Components of food are Called Nutrients. These are Carbohydrates, proteins, fats Vitamins, Minerals, Roughage and Water.

**Modes Of Nutrition in Plants:**

Plants are the only Organisms that can prepare food for themselves by using water, CO<sub>2</sub>, and minerals. These raw materials are present in our surrounding.



### Modes of Nutrition

- a. **Autotrophic Nutrition:** Auto Self trophos nourishment  
**The mode of nutrition** in which organisms make their own food from simple inorganic substances is called autotrophic nutrition. e.g Green plants
- b. **Heterotrophic Nutrition:** Hetero other; trophos nourishment  
**The Mode of nutrition** in which organism obtain their food from plants directly or indirectly. They take in ready made food prepared by the plants. All animals and non Green Plants are Heterotrophs.

#### Photosynthesis:

The Process by which Green Plants make their Own food From CO<sub>2</sub> and water in presence of sunlight and chlorophyll is called Photosynthesis. (photo light; Synthesis to combine)

The process of photosynthesis can be represented by an equation:



#### Site and Raw Material For Photosynthesis:

Leaves are the food Factors of Plants. The Synthesis of food in the Plants occurs in Leaves. Therefore all the raw material must reach there. Water and Mineral in the soil are absorbed by the roots and transported to the leaves Through Tissue. CO<sub>2</sub> from the air is taken in from the pores called Stomata. the leaves have green pigment called chlorophyll. it helps leaves to capyure sunlight. and is used to synthesise food from CO<sub>2</sub> and water.

#### Nutrition in Plants do not Contain Chlorophyll:

- a. **Parasitic Plants:** Plants that live on another plant for their nutrition are called parasites. The plants on which these parasitic plants survive are called parasite. e.g Cascuta ( Amarbel) is a parasitic plant.

- b. Insectivorous Plants:** Some plants depend upon insects for the food and are thus called insectivorous plants. e.g. pitcher plant.
- c. Saprotrophs:** Some organisms survive on dead and decaying matter and get food from there. Such plants are known as saprotrophs. And mode of nutrition is called saprotrophic nutrition. e.g. Fungi
- d. Symbiotic Relationship:** Some organisms live together and share shelter and nutrients. This is called Symbiotic relationship. E.g. Lichens is association between algae and fungi.

**Q1.** Distinguish between saprotroph and a parasite.

**Q2.** What are insectivorous plants? Give one example.

**Q3:** What are lichens?

**Q4:** What is photosynthesis and what are the necessary raw materials required for the synthesis of food. Also write down the chemical equation.

**Q5:** Fill in the Blanks

- a. During photosynthesis plants release.....and taken in.....
- b. Ambarbel is an example of .....
- c. Pitcher plant is an .....
- d. Solar energy is converted into.....during photosynthesis.

**Q6: Multiple Choice Questions:**

1. Which one of the following is insectivorous plant.

- a. Lichen    b. Venus fly trap    c. mushrooms    d. Yeast

2. Tiny Pores on the surface of leaves are

- a. Lamina    b. Stomata    c. Chlorophyll    d. Leaf Scale

3. Which of the following is a green colour pigment in leaves:

- a. Protoplast    b. Chloroplast    c. Chlorophyll    d. Anthocyanin

4. The plant which traps and feeds on insects is:

- a. Cuscuta    b. China rose    c. Pitcher plant    d. Rose

## Assignment Work For Class 7<sup>th</sup> Subject Science

### Chapter Heat and Fibre to Fabric

#### Multiple Choice Questions

1. The unit of measurement of temperature is.  
a. Meter b. Kilogram c. **Degree Celsius** d. second
2. The liquid metal used in thermometer is.  
a. **Mercury** b. Silver c. Gold d. Copper
3. The process by which heat flows from hotter end to colder end of an object is called.  
a. **Conduction** b. Convection c. Radiation d. Vaporization
4. What is the use of kink in thermometer?  
a. **It prevents mercury level from falling on its own**  
b. It raises the mercury level.  
c. It makes the thermometer to look beautiful.  
d. It acts as a joint to the glass tube that is used for mercury and a glass.
5. Which of the following does not yield wool.  
a. Yak b. camel c. Goat d. **Wooly dog**
6. Which of the following disease is caused due to wool Industry.  
a. Typhoid b. Cholera c. Tetanus d. **Anthrax**

#### Very Short Answer Type questions

1. The two main effects of heat are: it raises the temperature and changes state.
2. Temperature is the measure of the degree of hotness of an object.
3. The materials which allows heat to pass through them easily are called insulators.
4. The rearing of Silkworms for obtaining silk is called **Sericulture**.
5. The fleece of the sheep along with a thin layer of skin removed from the body of sheep is called **Shearing**.

#### Short Answer Type Questions

1. Light coloured clothes reflect most of the heat that falls on them and therefore we feel comfortable wearing them in summer.
2. Solar Cookers are Painted Black inside, because black colour is a very good absorber of heat and due to its black colour more heat is absorbed.
3. We Can not use laboratory Thermometer to measure body temperature, because kink is absent in it. Laboratory thermometer is meant to measure immediate temperature.
4. The Uses Of Silk are :  
Silk is used to make sarees,scarves,plants and ties  
It can also be made into curtains, drapers cushion, covers,and sofa.  
It is also used in medical field for sutures and prosthetic arteries
5. The properties of wool are:  
It is hard wearing and absorbs moisture.

It is light weight and versatile.  
It does not wrinkle easily.  
It insulates against heat and Cold.

6. The properties of silk are:  
It can be easily dyed  
It is strongest natural fibre and is also lustrous.
7. Rabbit Yak, Llama, Sheep are the animals that Produce Wool.

#### **Differentiate :**

1. The process by which heat is transferred from hotter end to colder end of an object is called Conduction. In solids heat is transferred by the process of conduction.e.g Melting of wax on a metal strip when metal is heated on one side.

The process of the transfer of heat from one place to another by the movement of fluids is called convection. e.g convection taking place in water while boiling it.

2. Temperature is measured by a device called thermometer.The thermometer that measures our body temperature is called Clinical thermometer.it consists of long ,narrow uniform glass tube.the clinical thermometer reads temperature from 35<sup>0</sup> degree celsius to 42<sup>0</sup> degree celsius.

A laboratory thermometer is a tool used in laboratories to measure temperature with high accuracy. It reads temperature generally from – 10<sup>0</sup> C to 110<sup>0</sup> C.

3. Silk is fine strong lustrous fibre used since time immemorial from the royalty of the past to commoners of the present for its elegance hence known as “ queen of fibres”.

Where as wool is hard wearing and absorbs moisture. It is resistant to dirt and wear and tear.it does not burn over a flame but smoulders instead. It leaves a brittle black bead when Burnt.

## District institute of Education and Training Bandipora.

### Assignment Work for Class 8<sup>th</sup> Subject Science

#### Chapters Micro Organisms and Coal And Petroleum

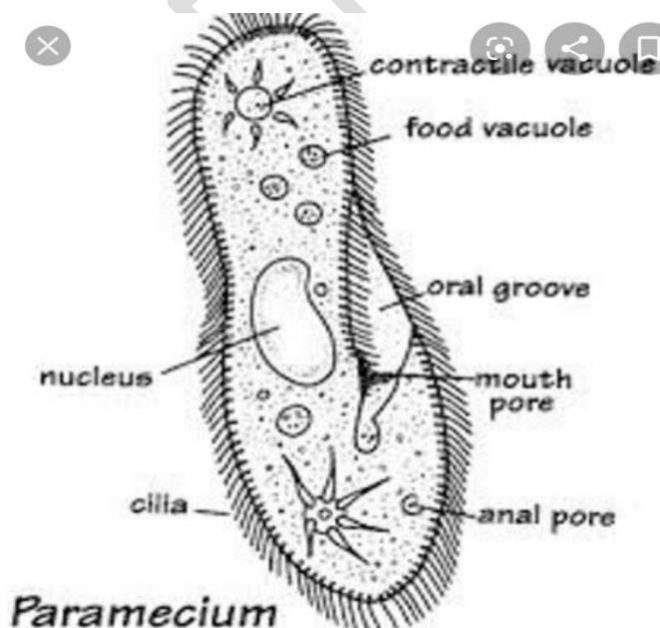
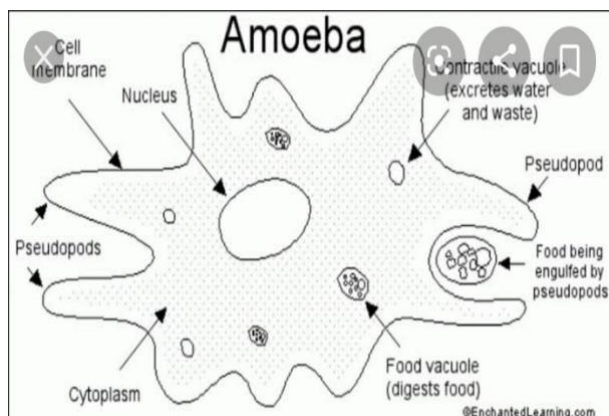
1. Choose the correct Option
  - i. Which of the following is antibiotic.
    - a. Sodium bicarbonate
    - b. **Streptomycin**
    - c. Alcohol
    - d. Yeast
  - ii. The Process of Conversion of Sugar into alcohol is Called.
    - a. Nitrogen Fixation
    - b. Moulding
    - c. Fermentation
    - d. Infection
  - iii. The Major Component Of Natural Gas is .
    - i. Nitrogen
    - b. ethane
    - c. Water vapour
    - d. methane
  - iv. An Exhaustible Natural Resource Is.
    - i. Water
    - b. Air
    - c. Sunlight
    - d. **Coal**
2. Draw labelled diagram of:
  - a. Amoeba
  - b. Paramecium
3. Give Reasons for the Following:
  - a. We Should Use Fossil Fuels only when absolutely necessary.
  - b. Micro organisms are beneficial to us in many ways.
  - c. LPG is better fuel than coal.
4. VALUE BASED
  - a. What will happen if yeast powder is put in sugar solution and kept for few hours? Name the Process?
  - b. Why Smelling Agent is added to LPG?
  - c. When a disease carrying microbe enters our body, the body produces antibodies to fight the invader or chemical like antibiotic is used to kill the organism. Name the antibiotic and its source discovered by Alexander Flemming.
5. HOTS
  - a. Name the products Obtained when Coal is heated in absence of air. write any two uses.
  - b. Write some harmful causes of micro organisms.
  - c. Why Coal and Petroleum should be used judiciously? What ill effects can be caused if they are used non judiciously.
  - d. Write the Full Form Of  
CNG      LPG              ONGC      PCRA ( Petroleum conservation Research Association)

## Points to learn.

1. Micro organisms are tiny living organisms invisible to the naked eye and can be seen with help of microscope.
2. Microbes are of five major kinds bacteria, fungi, algae, Protozoa and viruses.
3. Micro organisms are used in the production of dairy products . Bacteria are the key player here. Micro organism like bacteria cause the decay of dead plants and animals.without such bacteria the earth would soon be covered with material from dead organisms. Bacteria also play an important part in the digestive processes of people and animals.they are used in making valuable medical, agricultural and industrial products. Yeast is used in the preparation of products like wines and beers from fruit juices or barley. Some algae like blue green algae can fix atmospheric nitrogen.these algae are used to increase the soil fertility.
4. Micro organisms are harmful in many ways. Some saprophytic bacteria cause decay of our food producing toxins in food to cause food poisoning. Bacteria cause large number of human diseases,animal disease and plant disease. Spores of many fungi reach throat,lungs and cause allergy.Algae produces toxic substances which effects the fishes in water.
5. Antibiotic is a chemical substance which is a metabolic product and has a killing effect on another living organisms.the penicillin drug was made in 1929 from penicillium notatum by Alexander Fleming.
6. If we add sugar to  $\frac{1}{2}$  kg of flour along with warm water and a small amount of yeast powder to make a soft dough. After Some time we will find dough will rise as the yeast reproduces rapidly and produces carbondioxide during respiration.If we add 2-3 spoons of sugar in half filled beaker measuring 500ml and a spoon of yeast in it and waiting for few hours. We will find a different smell in it. This is smell of alcohol.The conversion of sugar into alcohol with the help of micro organisms is called Fermentation.
7. Resources that are obtained from nature are called natural resources.e.g air, water,soil. They are of two types exhaustible and inexhaustible resource. Those resources which are exhausted with continuous exploitation are exhaustible resources. Where as those which occurs in abundance and are unlikely to get exhausted with time is called inexhaustible resources.
8. Natural gas consists mainly of methane with small quantities of of ethane and propane.tthis is used in the form of CNG( **compressed Natural Gas**) and LPG ( **Liquid petroleum gas**). It is used as a fuel in homes and industry.the advantage of CNG is that it is directly used for burning in our homes.LPG is oderless in natural state so the smelling agent methyl mercaptan is added to LPG to produce strong odour to check leakage.
9. The places in our country where petroleum is being produced from the oil wells are: Gujrat, Assam, Bombay High, Deltas of Krishna and Godavari rivers. Exploration for more oil is going on under the supervision of **Oil and Natural Gas corporation**.



10. The process of separating petroleum into more useful fractions by fractional distillation is known as refining. Various constituents of petroleum are petroleum gas used in homes. Petrol used in motor fuel. Kerosene used in stoves, lamps. Diesel used in electric generators. Paraffin wax used for making candles, Vaseline. Bitumen used in paints, road surfacing.
11. Coal and petroleum are fossil fuels produced from living beings. They are energy rich compounds of carbon. They are formed under the earth over a long period of time of million of years ago. They should be used judiciously as they are limited and exhaustible ones. They also pollute our environment.
12. If coal is heated in presence of air then coal burns to produce  $\text{CO}_2$  gas. When coal is heated in absence of air coke is obtained. Coke is used as a fuel and reducing agent in smelting iron ore in a blast furnace.
13. Amoeba and Paramecium.



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