

Fig. 1.1 : CELL

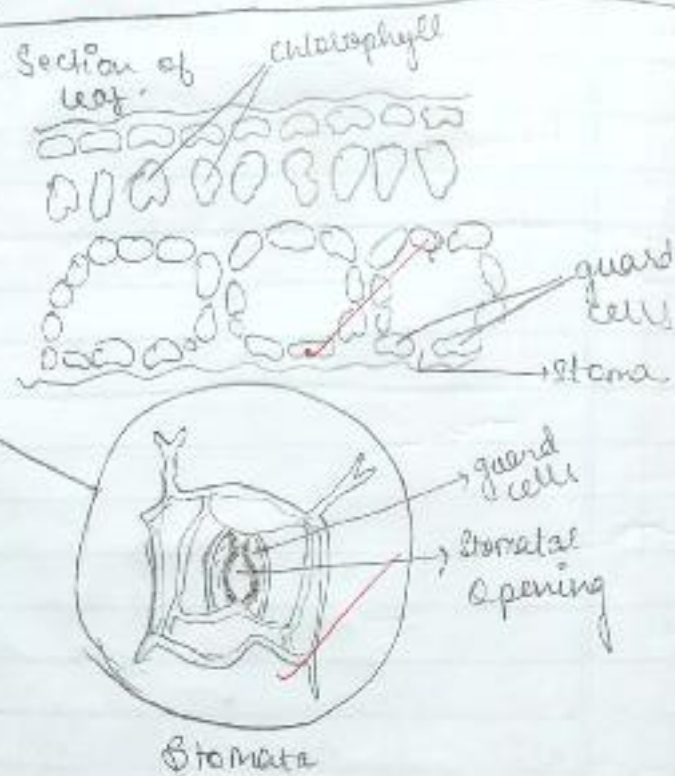
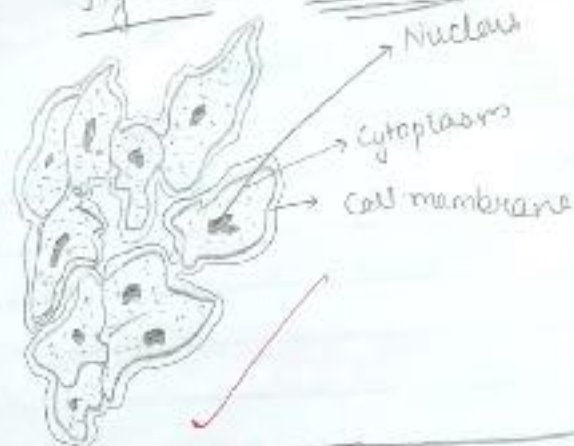


Fig. 1.2 LEAF AND PARTS

4/4/2019

Ch-1

Nutrition In Plants



Q1 Why do organisms need to take food?

Ans All organisms take food and utilize it to get energy for growth and maintenance of their bodies.

Q2 Distinguish between a parasite and a saprotroph.

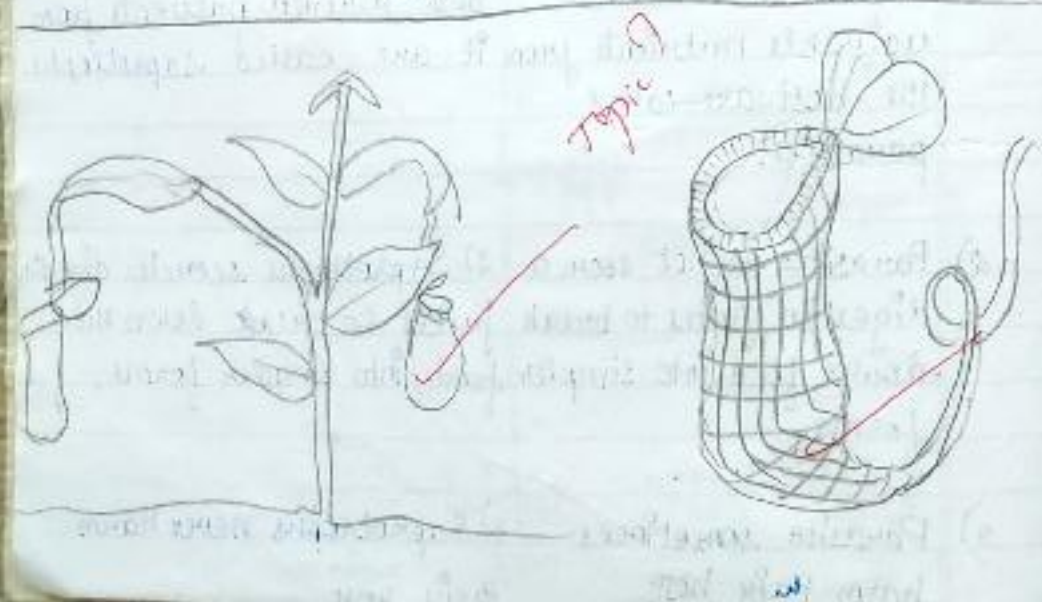
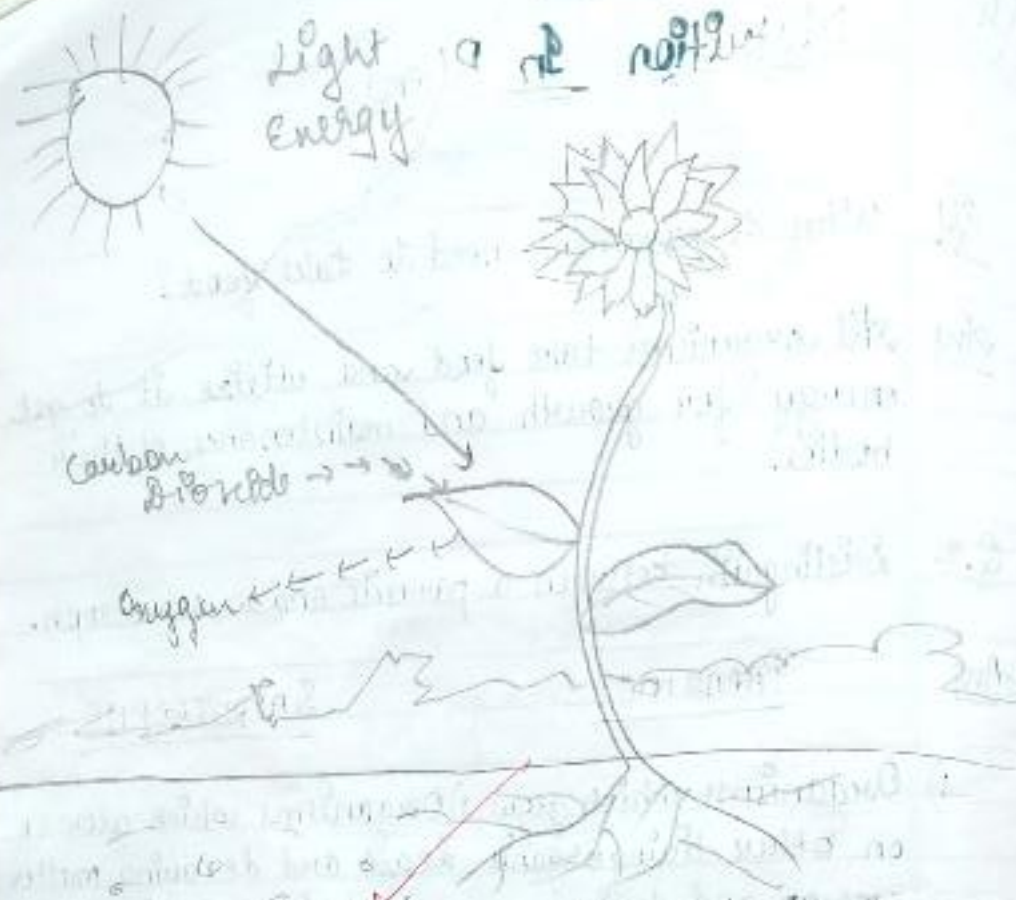
Ans

PARASITE

SAPROTROPHS

- | | |
|---|--|
| 1) Organisms which grow on other living organisms and derive valuable nutrients from the host are called parasites. | 1) Organisms which grow on dead and decaying matter and derive nutrients from it are called saprotrophs. |
| 2) Parasites do not secrete digestive juices to break down food into simpler forms. | 2) Saprotrophs secrete digestive juices to break down food into simpler forms. |
| 3) Parasite sometimes harm their host. | 3) Saprotrophs never harm their host. |

Teacher's Sign.



Q3 What are parasites?

- Ans 1) Organisms which grow on other living organisms and derive valuable nutrients from the host are called parasites.
- 2) Parasites do not secrete digestive juices to break down their food into simpler forms.
- 3) Parasites sometimes harm their host. eg. Cuscuta (Amarbel)

Q4 How plants are able to produce proteins?

Ans Plants synthesise carbohydrates through the process of photosynthesis. The carbohydrates are made up of carbon, hydrogen and oxygen. These are used to synthesise other components of food such as proteins and fats. But proteins are nitrogenous substances which contain nitrogen. Plants cannot absorb nitrogen in gaseous form. Soil has certain bacteria that convert gaseous nitrogen into a usable form and release it into the soil. These soluble forms are absorbed by the plants along with water. Plants fulfil their requirement of

Remark

Teacher's Sign

Q26 Explain the symbiotic relationship between
 a) fungi and tree
 b) algae and fungi

Ans. a) Fungi and Tree - Certain fungi live in the roots of trees. The tree provides nutrition to the fungus and in return it receives help from it to take up water and nutrients from the soil. This association is very important for the trees.

b) Algae and Fungi - Eg. Lichens

In organisms called lichens a chlorophyll containing partner which is an algae and a fungus live together. The fungus provides shelter, water and mineral and in return the algae provides food which is prepared by photosynthesis.

Q27 What are fungi?

Ans. Fungi are non-green plants like organisms which cannot prepare their own food.

Q28 How will you test the presence of starch in leaves?

Ans. Pluck a leaf from a healthy potted plant and boil it in a beaker with water. Now, take a leaf out and put it in a test tube containing alcohol and keep the test tube in water. Take out the leaf

nitrogen along with other constituents. Plants can then synthesise components of food other than carbohydrates such as proteins and fats.

Q5 How would you test the presence of starch in leaves (Activity form)?

Ans. Aim: To test the presence of starch in leaves.
MATERIALS REQUIRED: Two potted plants and Iodine solution.

METHOD: a) Take 2 potted plants of same kind.
 b) Keep one in the dark and the other in ~~sun~~ sunlight.

c) Perform Iodine test with the leaves of both the plants.

d) Now leave the pot which was earlier kept in dark in the sunlight for 2-3 days.

e) Perform the Iodine test on its leaves.

OBSERVATION: The leaf of the plant which was kept in sunlight turned ~~blue~~ blue-black in

After 5-6 minutes, wash it with water and place it on a dish and add a few drops of iodine solution. The colour of the leaf changes to blue-black.

colour when Iodine solution was added to it. The leaves of plants kept in dark room did not turn blue-black when Iodine solution was added to it. When the same plant was shifted from the dark room to the sunlight the leaf turned blue-black when the Iodine solution was added to it.

CONCLUSION: The leaves of the plant which was kept in sunlight turned blue-black indicating the presence of starch. The leaf of the plant which was not kept under sunlight did not turn blue-black indicating the absence of starch. When the same plant was kept under sunlight the leaf turned blue-black showing the presence of starch. Hence this shows that sunlight is essential for the preparation of starch.

Q.6 Define nutrition.

Ans Nutrition is the mode of taking food by an organism and its utilisation by the body.

Q.7 What are nutrients?

Ans

Carbohydrates, Proteins, Fats, Vitamins and Minerals are the components of food. These components of food are necessary for our body and they are called as nutrients.

Q.8

What is autotrophic mode of nutrition?

Ans

The mode of nutrition in which organisms make food themselves from the simple substances is called autotrophic mode of nutrition.

eg.

Plants. Plants are autotrophs.

Q.9

What is heterotrophic mode of nutrition.

Ans

Animals and most other organisms take in ready-made food prepared by the plants. This is known as heterotrophic mode of nutrition. They are called as heterotrophs.

eg.

Animals and human beings are heterotrophs.

Q.10

What is saprotrophic mode of ^{nutri}tion?

Ans

The mode of nutrition in which the organisms take

Remark

Teacher's Sign.

In nutrition in solution form from dead and decaying is called saprotrophic mode of nutrition. Plants which use saprotrophic mode of nutrition are called saprotrophs.

eg. Fungi, that grows on pickle, leather and other articles left in hot and humid weather for a long time.

Q.11 Name the green pigment which helps the leaves in synthesis of food. What is its exact function?

Ans Chlorophyll is the green pigment which helps the leaves in the synthesis of food. It also helps to capture the energy from the sun and turn it into chemical energy.

Q.12 With the help of a sketch show that plants are the ultimate source of food.

Ans The survival of almost all living organisms directly or indirectly depend upon the food made by the plants. Besides, oxygen, which is essential for the survival of all living organisms is produced during photosynthesis. In absence of photosynthesis

Remark

Teacher's Sign.

Life would be impossible on earth.

Q.13 Why is the sun considered as the ultimate source of energy for all living organisms.

Ans As the survival of all living organisms depends directly or indirectly on plants cannot make food without trapping sunlight. Therefore, sun is called the ultimate source of energy for all living organisms.

Q.14 Do leaves, which are not green in colour, prepare food? Explain.

Ans The leaves which are not green in colour also have chlorophyll. The green colour is not visible because it is suppressed by excess amount of red, brown, yellow and other pigments. So, these plants also prepare food by the process of photosynthesis.

Q.15 Explain and give an example for each of the following:- a) Parasitic plants b) Insectivorous plants c) Symbiosis.

Ans a) Parasitic Plants - The plants which take ready

Remark

Teacher's Sign.

made food prepared by other plants on which they are climbing are called parasitic plants. The host is deprived of valuable nutrients by the parasitic plants. eg. Cuscuta (Amakihi)

b) Insectivorous plants - The plants which capture other insects and feed upon are called as insectivorous plants. These types of plants do not have nitrogen. To fulfil their need of nitrogen, they kill insects. eg. Pitcher Plant. It has both autotrophic and heterotrophic mode of nutrition.

c) Symbiosis - It is a type of ~~nutritional~~ relationship in which two different kinds of organisms depend on each other for their nutrition. In this, both the organisms are benefitted by each other.

eg. In lichens, a chlorophyll containing partner, which is an alga and a fungus live together. The fungus provides shelter, water and minerals to the alga and in return the alga provides food which it prepares by photosynthesis.

Q.16 Define cell.

Ans Cell is a structural and functional unit of life.

Q.17 Describe the structure of a cell with the help of a diagram.

Ans The cell is enclosed by a thick outer boundary called cell membrane. Most cells have a distinct centrally located spherical structure called Nucleus. The nucleus is ~~so~~ surrounded by a jelly like substance called cytoplasm.

Q.18 What is a pitcher plant? Describe its structure and function.

Ans The plants whose ^{lid} apex of leaf is modified into leaves which can open and close. The mouth of the pitcher is called pitcher plant. Inside the pitcher there are hairs which are directed downwards. When an insect lands on the pitcher, the lid closes and the trapped insect gets entangled into the hair. The insect is digested by the digestive juices ~~so~~ secreted in the pitcher. Such insect eating plants are known as insectivorous plants. The pitcher plant does not get nitrogen from the soil so to fulfil the need of nitrogen they kill insects. They have both autotrophic and heterotrophic mode of nutrition.

Remark

Teacher's Sign.

Q.18

Write a short note on stomata.

Ans

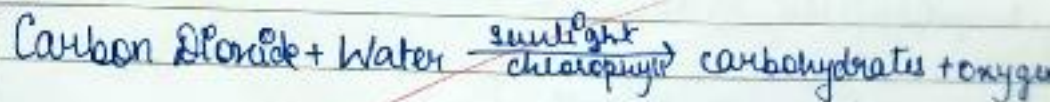
The tiny pores present on the surface of the leaves which are surrounded by guard cells are called stomata. Carbon Dioxide is taken through these tiny pores to perform photosynthesis. Plants let out extra water during through transpiration through these pores.

Q.20

Give a brief description of the process of photosynthesis in plants and also give the ~~ex~~ equation or what is photosynthesis.

Ans

The leaves that make food have a green substance ~~called~~ called ~~as~~ chlorophyll. In the presence of sunlight they use carbon dioxide and water to synthesise carbohydrates. During the process, oxygen is released. The carbohydrates ultimately gets converted into starch. Carbon Dioxide from air is ~~not~~ taken through stomata. Water and minerals are absorbed by roots and are transported to the leaves by vessels which run like pipes throughout the plant. The equation of photosynthesis is as follows:-



Remark

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Q.21 How are nutrients replenished in the soil?

Ans Crops require a lot of nitrogen to make proteins. After the harvest, the soil becomes deficient in nitrogen. Since the plants cannot use nitrogen in its free form, the 'rhizobium' bacteria living in the root nodules of leguminous plants convert the free nitrogen into soluble forms and helps to replenish the lost nutrients in the soil. This replenishment is done by ~~sp~~ spreading fertilizers (NKP) and ~~manure~~ manure containing nitrogen, phosphorous and potassium. (manure)

Q.22 Differentiate between autotrophs and heterotrophs.

Ans

AUTOTROPHS

HETEROTROPHS

i) The organisms which prepare their own food are called autotrophs.

i) The organisms which cannot prepare their own food ~~and~~ ^{and} ~~also~~ take readymade food prepared by the autotrophs are called heterotrophs.

P.T.O.

AUTOTROPHS

HETEROTROPHS

- 2) Most of the green plants are autotrophs. All animals including human beings are heterotrophs.

Q.23 Why algae are green in colour?

Ans They contain chlorophyll which gives them green colour. Algae can also prepare their own food by photosynthesis.

Q.24 How do desert plants carry out photosynthesis?

Ans Desert plants have scale or spine like leaves to reduce the loss of water during transpiration. These plants have green stems which carry out photosynthesis.

Q.25 Define host.

Ans Some plants take readymade food from the plants on which it is climbing. The plant on which it climbs is called host. eg. *Cuscuta* (Amrabi) derives food from the host plants.

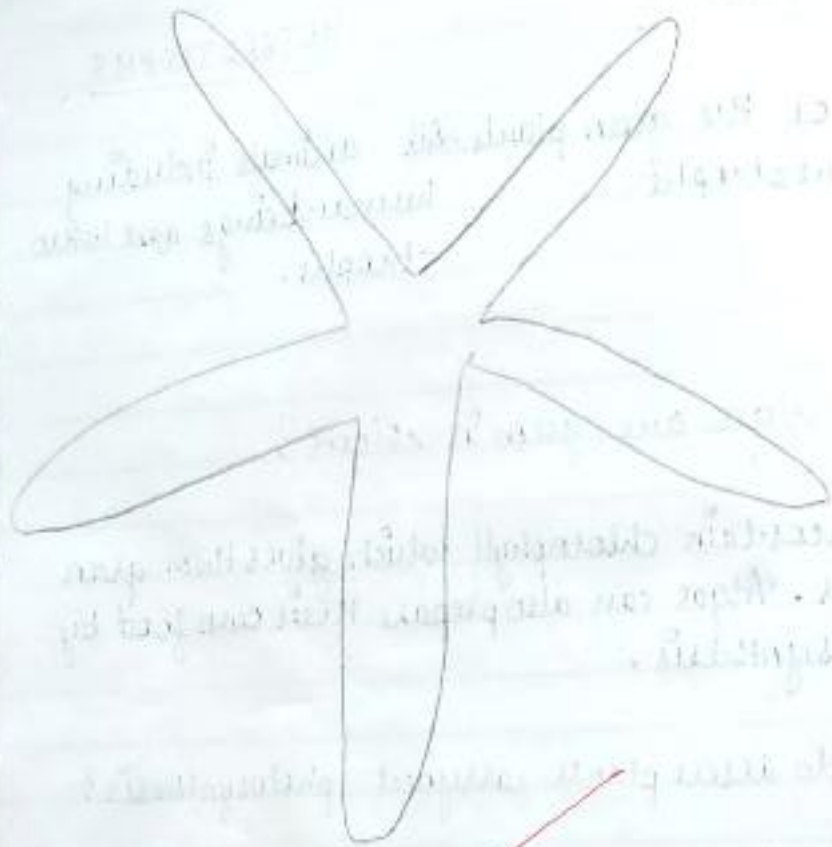


FIG. 2.1

STARFISH

25/4/19

Ch-2 Nutrition in Animals



Q.1 What do you mean by animal nutrition?

Ans Animal Nutrition includes nutrient requirements, mode of intake of food and its utilization in the body.

Q.2 Define Ingestion.

Ans The process of taking food into the body is called ingestion.

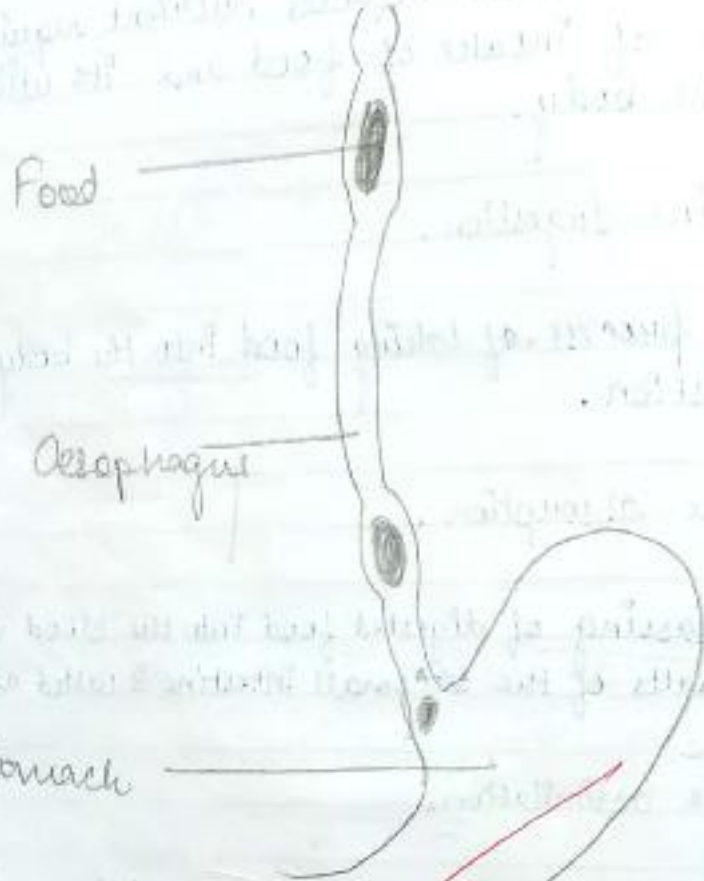
Q.3 Define absorption.

Ans The passing of digested food into the blood vessels in the walls of the ~~the~~ small intestine is called absorption.

Q.4 Define assimilation.

Ans ~~The passing of dig.~~ The absorbed ~~substances~~ substances are transported to the different organs of the body where they are used to make complex substances like proteins required by the body. This is called assimilation.

Movement of food in oesophagus of the alimentary canal



Q.5 Define villi.

Ans The inner wall of the small intestine have thousand of finger like projections is called villi. The villi increases the surface area for absorption of the digested food. Each villus has a network of thin and small blood vessels close to its surface. The surface of the villi absorbs the digested food.

Q.6 Name the main digestive glands found in the human body.

Ans The main digestive glands are -

- i) The salivary glands
- ii) The liver
- iii) The pancreas.

Q.7 List the various steps involved in the process of digestion.

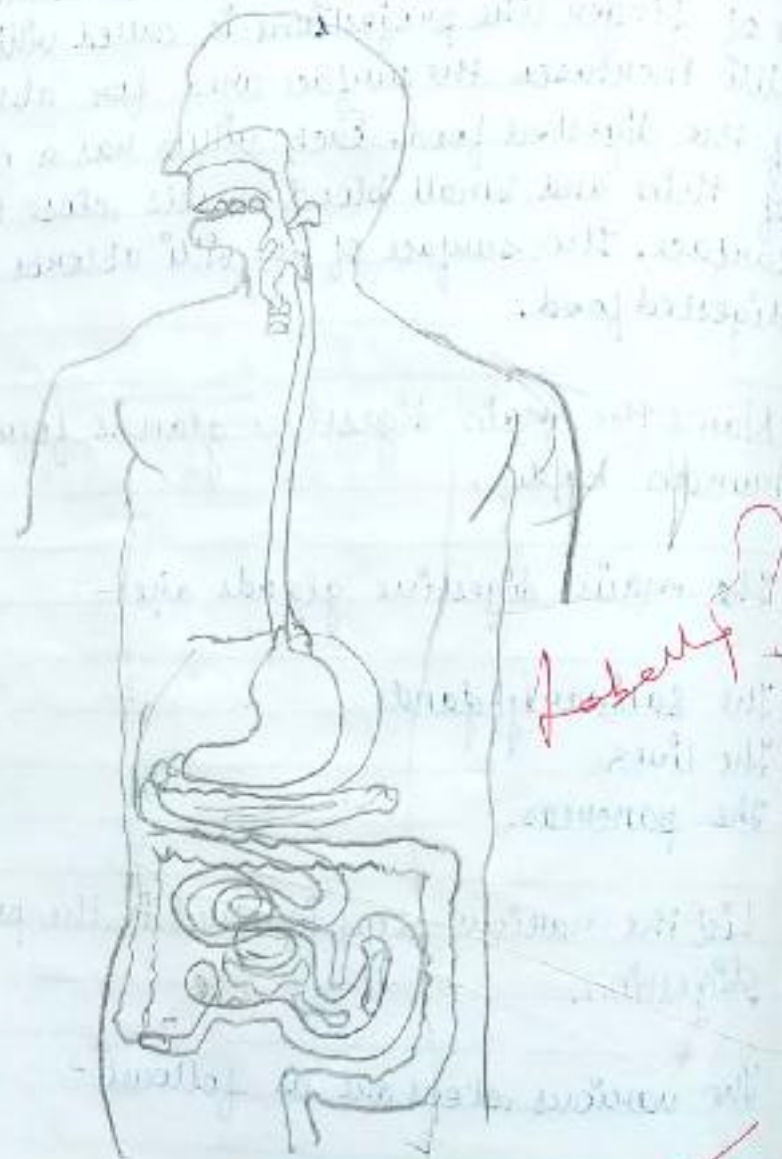
Ans The various steps are as follows -

- ① Ingestion - Intake of food

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HUMAN DIGESTIVE SYSTEM

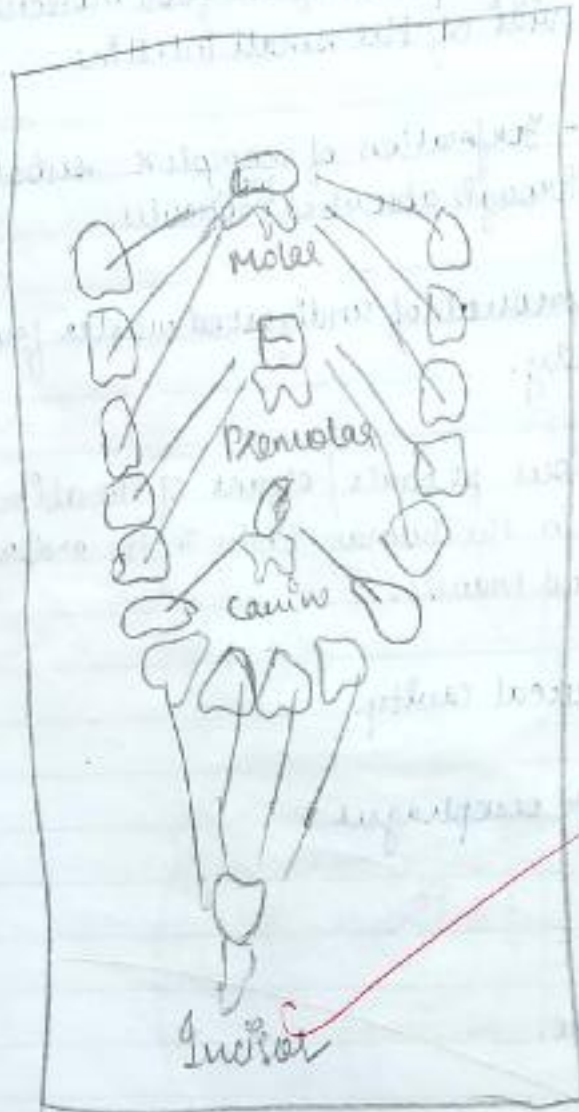


- ② Digestion - breakdown of complex food material into smaller ones.
- ③ Absorption - Absorption of the food molecules by the villi of the small intestine.
- ④ Assimilation - Formation of complex substances through absorbed molecules.
- ⑤ Egestion - removal of undigested wastes from the body.

Q8 Name the various parts/organs of the alimentary canal found in the human body in the order in which the food travels.

- Ans
- ① Mouth or buccal cavity.
 - ② Food pipe or oesophagus.
 - ③ Stomach.
 - ④ Small Intestine.
 - ⑤ Large Intestine.

DIFFERENT TYPES OF TEETH



⑥ Rectum

⑦ Anus

Q.1 Name the various types of teeth found in the human body and also write their functions.

Ans ① Incisors - biting and cutting of food

② Canines - piercing and tearing of food.

③ Premolars and Molars - Chewing and grinding of food.

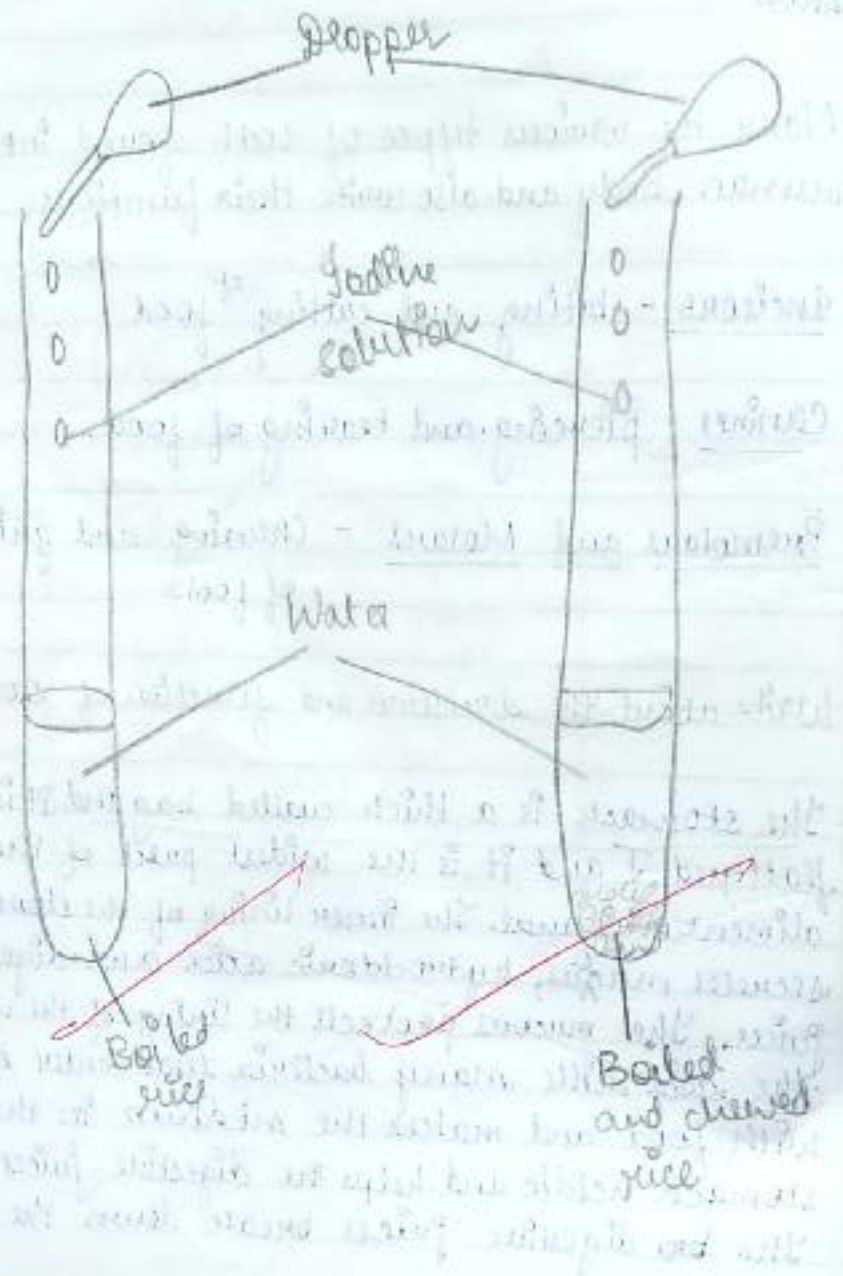
Q.2 Write about the structure and function of stomach.

Ans. The stomach is a thick walled bag and it is like a flattened J and it is the widest part of the alimentary canal. The inner lining of the stomach secretes mucus, hydrochloric acid and digestive juices. The mucus protects the lining of the stomach. The acid kills many bacteria that enter along with food and makes the medium in the stomach acidic and helps the digestive juices to act. The digestive juices break down the proteins.

Remark

Teacher's Sign.

EFFECT OF SALIVA ON STARCH



into simpler substances.

Q.11

Write the structure and function of small intestine.

Ans

The small intestine is highly coiled and is about 7.5 metres long. It receives secretions from the liver and the pancreas. Besides, ~~the~~ its wall also secretes juices. When the digested food passes into the lower part of small intestine, the intestinal juices secreted by its wall acts on the food and the food gets ~~completely~~ completely digested here.

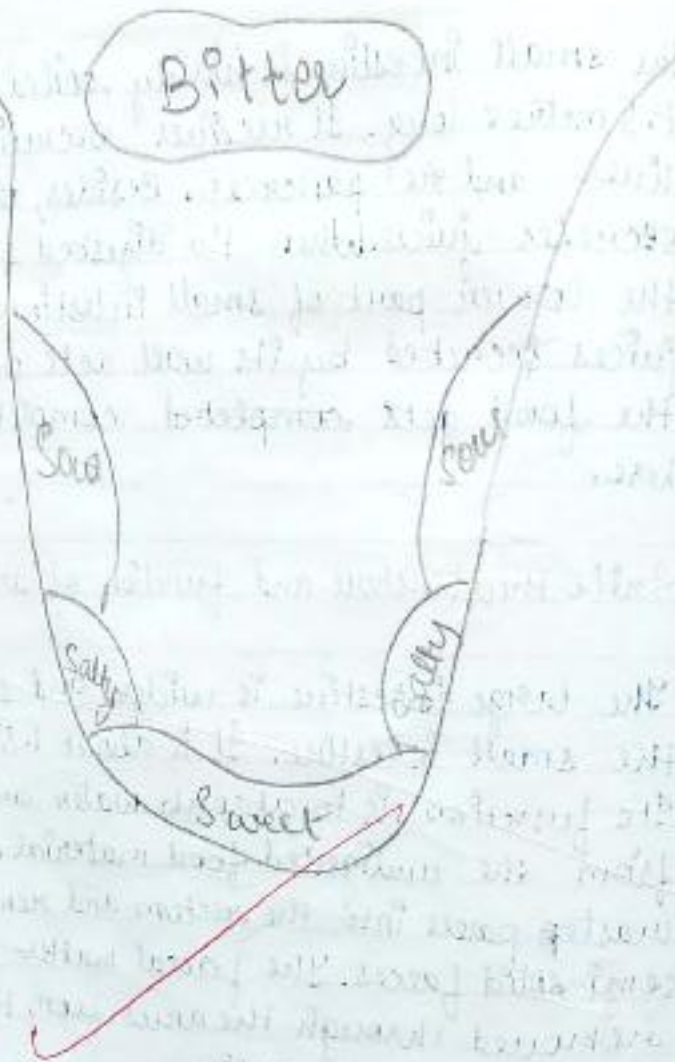
Q.12

Write the structure and function of large intestine.

Ans

The large intestine is wider and ~~shorter~~ than the small intestine. It is about 1.5 m in length. Its function is to absorb water and some salts from the undigested food material. The remaining waste passes into the rectum and remains there as semi-solid faeces. The faecal matter is ~~removed~~ removed through the anus from time to time. This is called as egestion.

REGIONS OF TONGUE FOR DIFFERENT TASTE



* Each villus has a blood vessel close to its surface.

Q.13 What are villi and what is its location and function or write about the structure and function of villi.

Ans The small intestine has thousands of finger like outgrowths or projections and these are called as villi. The villi increase the surface area for absorption of digested food. The surface of the villi absorbs the digested food material. The absorbed substances are transported through the blood vessels to different organs of the body where they are used to build complex substances.

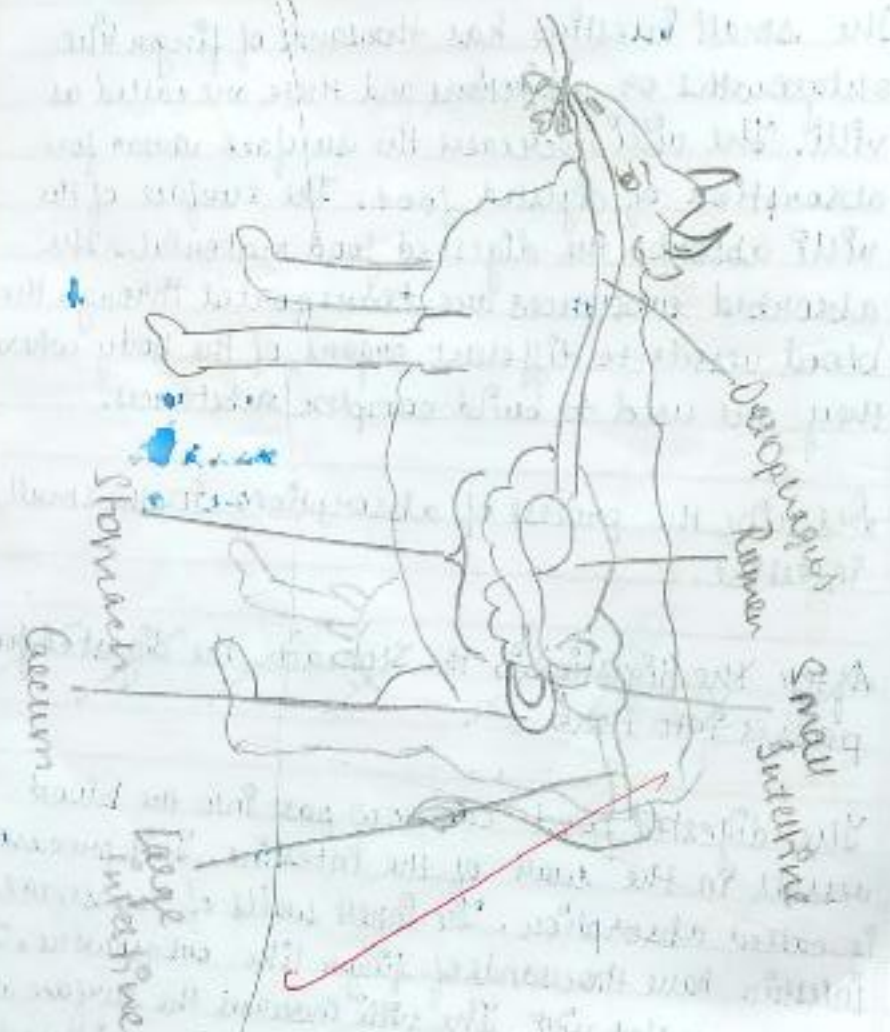
Q.14 Describe the process of absorption in the small intestine.

Ans ~~After the digestion in the stomach the digested food passes into the~~

~~The digested food can now pass into the blood vessels in the wall of the intestine. This process is called absorption. The inner walls of the small intestine have thousands of finger like outgrowths. These are called villi. The villi increase the surface area for absorption of the digested food. Each villus has~~

Fig 2.9

Digestive System Of Ruminant



a network of thin and small blood vessels close to the surface. The surface of the villi absorbs the digested food materials. The absorbed substances are transported via the blood vessels to different organs of the body where they are used to make complex substances ^{required by the body}. This is known as assimilation.

Q.15 Describe the process of digestion in ruminants.

Ans. Ruminants like cows quickly swallow the grass and store it in the part of the stomach called Rumen. Here the food gets partially digested and is called cud. But later the cud returns to the mouth in small lumps and the animals ~~chew~~ ^{chew} it. This process is called rumination and ~~these~~ ^{these} animals are called ruminants. Ruminants have a large sac like structure called Caecum between the ~~oesophagus~~ ^{oesophagus} and small intestine. The cellulose of the food is digested here by the action of certain bacteria which are not present in humans.

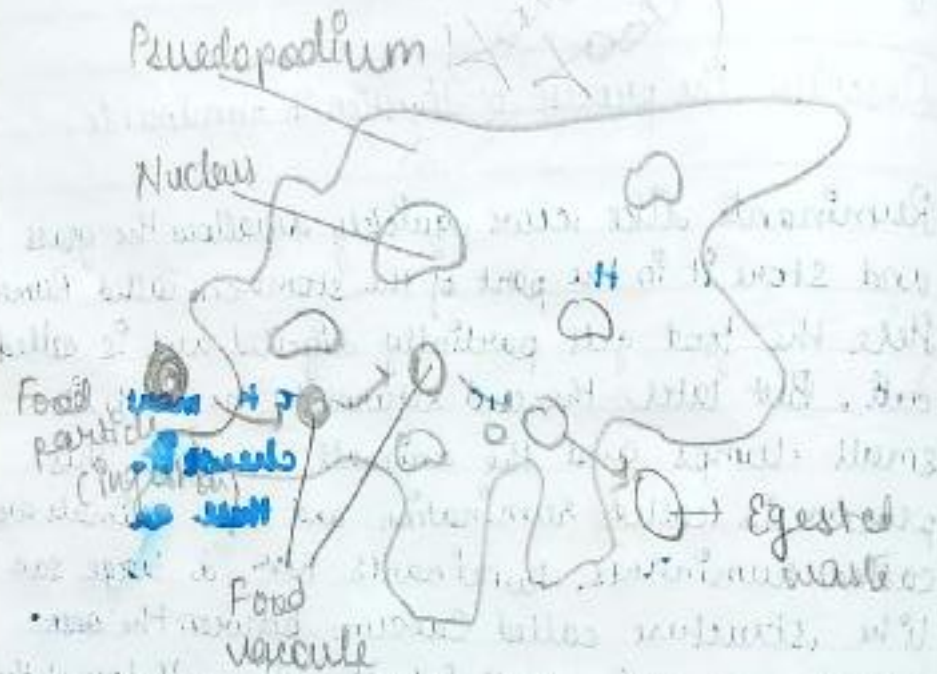
Q.16 Describe the process of digestion in Amoeba.

Ans. When the food gets trapped in a food vacuole with the help of pseudopodia, digested are secreted in it. They act on the food and break

Remark

Teacher's Sign

AMOEBA



it down into simpler substances. Gradually the digested food is absorbed. The absorbed substances are used for growth, maintenance and multiplication. The undigested residue of the food is expelled outside by the vacuole.

Q.17 Describe the process of food intake in Amoeba.

Ans. Amoeba is a single celled microscopic organism found in pond water. Amoeba constantly changes its shape and position. It pushes out one or more finger like projection called pseudopodia or false feet for movement and capture of food. Amoeba feeds on some microscopic organisms. When it senses food, it pushes out pseudopodia around the food particles and engulfs it. The food becomes trapped in a food vacuole with the help of pseudopodia.

Q.18 Write one similarity and one difference between nutrition in amoeba and human beings.

Ans. Similarity

① Amoeba and human beings are living organisms. They both have digestive systems and they

expell the undigested food.

Difference

① Human beings digestion process consists of many steps

① In human beings complete process is involved like ingestion, digestion, absorption, assimilation and egestion and the human beings also have alimentary canal and secretory glands. But Amoeba does not have the above organs.

Q.19. Where is Bile produced? Which components of the food does it help to digest? Where is it stored?

Ans. The bile is a digestive juice produced by the liver. It is stored in the gall bladder. It helps to digest fats into fatty acids and glycerol.

Q.20 Name the type of carbohydrates that can be digested by sea animals but not by humans. Give me reason also

Ans Cellulose is the type of carbohydrate that can be digested by ruminants but not by humans. This is because ruminants have a sac like structure called caecum ~~into~~ which is present between the oesophagus and the small intestine which contains certain bacteria that are not present by humans.

Q.21 ^{How} do we get instant energy from glucose

Ans We get instant energy from glucose because it is the simplest form of energy giving food and can be broken easily in the cell with the help of oxygen carbon dioxide and water and the energy is released.

Q.22 Name the end products obtained at the end of the digestion of carbohydrates, proteins and fats.

- Ans
- 1) Carbohydrates - Glucose and sugar
 - 2) Proteins - Amino acids
 - 2) Fats - fatty acids and glycerol

Q.23 Why do we need food?

Ans All organisms including humans need food for growth, repair and functioning of the body.

Q.24 How does a starfish consume food?

Ans Starfish feeds on animals covered by shells of calcium carbonate. After opening the shell, the starfish pops out its stomach through its mouth to eat the soft animal inside the shell. The stomach then goes back into the body and the food is slowly digested.

Q.25 Why are vitamins necessary in our diet?

Ans It protects us from diseases.

Q.26 What do you mean by milk teeth and permanent teeth?

Ans The first set of teeth that grows during infancy and they fall off at the age between 6 to 8 years. These are termed as milk teeth.

The second set that replaces the milk teeth are the permanent teeth. The permanent teeth may last throughout life or fall off during old age or due to some dental disease.

Q29 What are the smallest units of carbohydrates, proteins and fats

Ans The smallest unit of

i) carbohydrates - sugar (glucose)

ii) proteins - amino acids

iii) fats - fatty acids and glycerol

Q30 What do you mean by Oral Rehydration Solution?

Ans When a person is suffering from diarrhoea, he should be given boiled and ~~not~~ cooled water with a pinch of salt dissolved in it. This is called ORAL REHYDRATION SOLUTION.

Q31 What is the function of gall bladder?

Remark

Teacher's Sign.

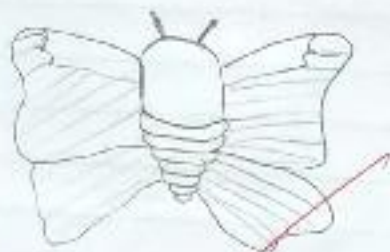
Ans The gall bladder stores Bile juice temporarily which is secreted by the liver. This Bile Juice helps in the digestion of fats.

Q.30 In which part of the body the digestion starts?

Ans Mouth or Buccal Cavity.

19
 The process of silkworms spinning their cocoons is called sericulture.
 Adult Silk Moths lay eggs on mulberry leaves.

a) Male silk moth b) Female silk moth



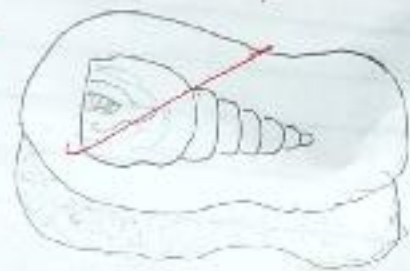
c) Eggs on mulberry leaves

d) Silk worm



e) Cocoon with developing moth

f) Cocoon



24/06/19

Ch-3 Fibre to Fabric



Q.1 Where does wool come from or name some wool yielding animals.

Ans Wool comes from sheep, goat, yak and some animals like Llama and Alpaca.

Q.2 In the poem 'Baa baa black sheep', which part has wool?

Ans Skin

Q.3 In the poem 'Mary had a little lamb whose fleece was as white as snow', what is meant by white fleece of the lamb?

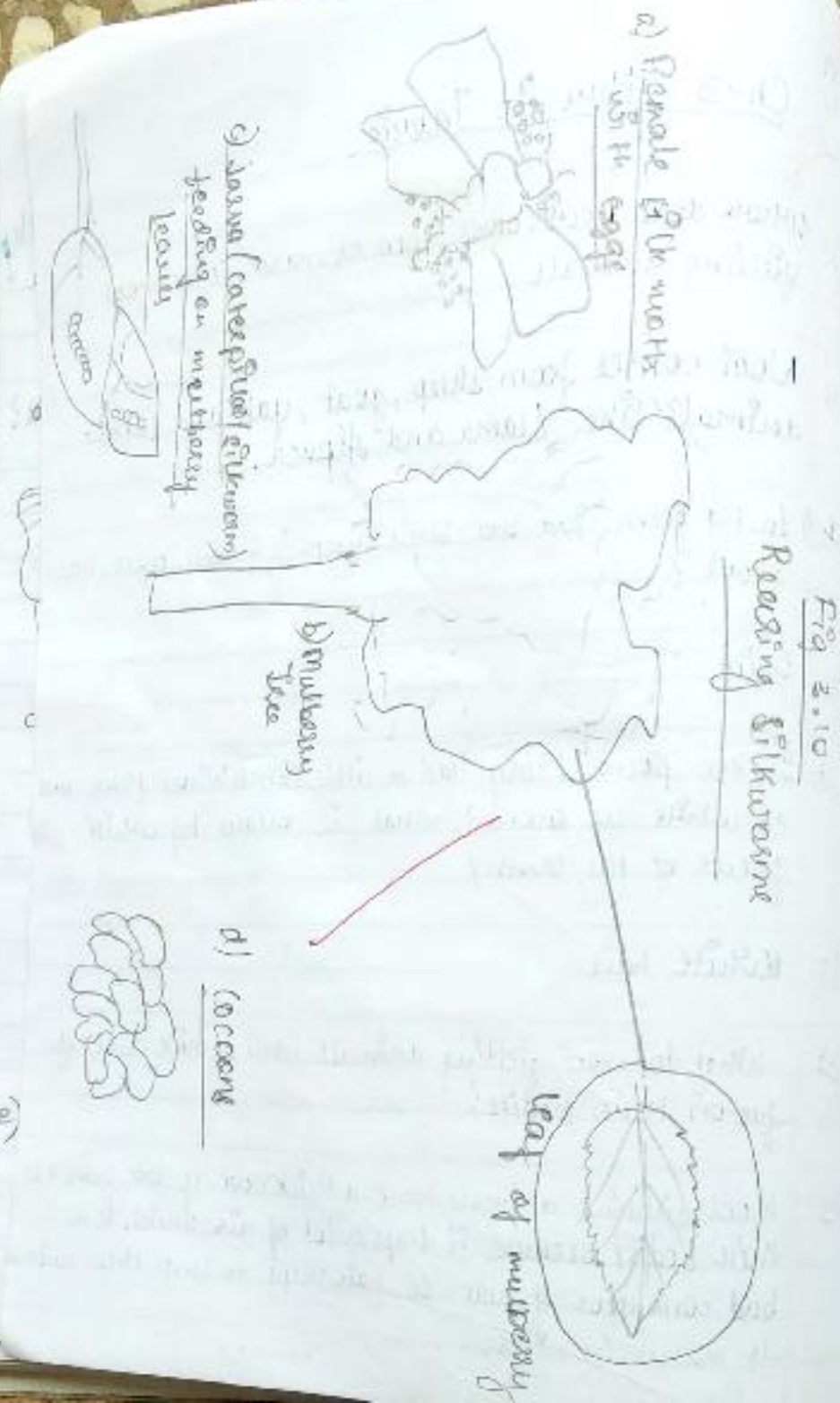
Ans White hair

Q.4 Why do wool yielding animals have a thick coat of fur on their bodies?

Ans Wool yielding animals have a thick coat of hair on their bodies because it traps a lot of air which is a bad conductor of heat. So hair helps to keep these animals warm in winter.

Remark

Teacher's Sign



Q4 What is selective breeding?

Ans The process of selecting parents for obtaining special characters in their offspring, such as soft under hair in the sheep, is termed 'selective breeding'.

Q5 How was sheep fed by the rearsers in the hilly region or with what do the rearsers in the hilly area feed their grazing sheep?

Ans In hilly areas, shepherds can be seen taking their sheep for grazing as they are herbivores and prefer grass and leaves. Apart from grazing, rearsers also feed them on a mixture of pulses, cotton, jowar, oil cakes (material left after taking out oil from seeds) and minerals. In winter, ~~sheep are kept~~ they feed on leaves, grain and dry fodder.

Q6 What do you mean by shearing in wool industry?

Ans The fleece of the sheep along with a thin layer of skin is removed from the body. This process is called shearing.

Q.7 What do you mean by scouring in wool industry

Ans The sheared skin with hair is thoroughly washed in tanks to remove grease, dust and dirt. This is called scouring.

~~Q.8 What do you mean by sericulture~~

Q.8 Define sericulture.

Ans The rearing of silkworms for obtaining silk is called as sericulture.

Q.9 What is fleece?

Ans The hair of the wool yielding animal is called fleece.

Q.10 Name some Indian sheep breeds, the quality of wool they give and the states where they are found

P. T. O.

<u>S.no</u>	<u>Breed</u>	<u>Quality</u>	<u>State</u>
1.	Lohi	Good quality	Rajasthan, Punjab
2.	Rampur Bushair	Brown fleece	U.P., Himachal
3.	Nali	Carpet wool	Haryana, Rajasthan, Punjab
4.	Bakraharwal	Woolen shawl	Jammu and Kashmir
5.	Masumati	Coarse wool	Gujarat
6.	Patanwadi	Hesier	Gujarat

Q.11 Write step ~~with~~ wise note on processing of fibre into wool.

Ans. The following are the steps on the processing of fibres into wool:-

Step 1:- The fleece of sheep along with the thin layer of skin is removed from its body. This is called shearing.

Step 2:- The sheared skin with hair is thoroughly washed in tanks to remove grease, dust and dirt. This is called scouring. Nowadays scouring is done in machines.

Step 3: After scouring, sorting is done. The hairy skin is sent to a factory where the hairs of different sorts are sorted out.

Step 4: The small fluffy fibres called burs are picked out from the skin. These are the same burs which sometimes appear on our sweaters. Fibres are scoured again and then dried. This process nearly draws into fibres.

Step 5: The fibres can be dyed in various colours as the natural fleece is brown, black or white.

Step 6: The fibres are straightened out and rolled into yarn. The longer fibres are made into wool for sweaters and the shorter fibres are spun and woven into woollen cloth.

Q.12 What is sorter's disease? What type of hazard is this?

Ans Some sorters get affected by a bacterium called anthrax that causes a fatal blood disease called sorter's disease. This is an occupational hazard.

Q.13

Explain the following in the life history of silkworm that is pupa and cocoon. Or Explain the life history of silk moth.

Ans 1. The female silk moth lays eggs from which hatch larvae which are called as caterpillars or silk worms.

2. The silkworms grow in size and the caterpillar is ready to enter the next stage of its life history called pupa, then it ~~some~~ weaves a net to hold itself. Then it swings its head from side to side in the form of figure 8. During these movements the head of the caterpillar secretes a fibre made of proteins which hardens on exposure to air and becomes silk fibre. Soon the caterpillar completely covers itself by silk fibre and turns into pupa. This covering is known as cocoon.

3. The ~~full~~ further development of pupa into moth continues inside the cocoon. (Fig 3.9A-f)

Q. 14. Which part of sheep has wool?

Ans. Skin

Q. 15. Which fur is used in Pashmina Shawls?

Ans. The underfur of Kashmiri goat is woven into fine shawls, called as Pashmina Shawl.

Q. 16. Name a few common silk yarns available in India. What is the reason behind the different texture of yarn?

- Ans.
1. Mulberry Silk
 2. Eri Silk
 3. Kosa Silk
 4. Muga Silk
 5. Tassar Silk

The different types of silk moths produce different types of fibre. The silk yarns are of different textures such as coarse, smooth and shiny. On the basis of difference in the appearance of silk fibres the type of silk prod

-ed by them & classified into different varieties.

Q.17 a) What happens when synthetic fibre is burnt?

Ans The synthetic fibre will burn with a small like burning plastic and will drip in the form of black ball of residue (not ash) and produce black smoke.

b) What happens when cotton fibre is burnt?

Ans Cotton consists of pure carbohydrate. When we burn it it creates burning paper smell.

✓ c) What happens when natural silk and wool are burnt?

Ans Natural silk and wool are made up of proteins molecules. Therefore when we burn them it creates a burning hair smell.

d) Name the fibres which burn with a sooty flame and the odour of burnt hair.

Ans Silk and wool.

Q.17) Name 2 breeds of South America which yield wool.

Ans) Llama and Alpaca are breeds of South America that yield wool.

f) Make sketches of 2 stages of silk moth which are directly related to production of silk.

Fig 3.9 (d) and (e)

Q.18a) Explain the rearing of silkworms.

Ans) 1) The female silk moth lays eggs hundreds of eggs at a time. The eggs are stored carefully on strips of cloth or papers and sold to silkworm farmers.

2. The farmers keep the eggs under hygienic conditions and under suitable conditions of temperature and humidity. The eggs are warmed to a suitable temperature for the larvae to hatch from eggs.

3. This is done when mulberry trees bear a fresh crop of leaves. The larvae called as caterpillars or silkworms eat day and night and increase enormously in size. The larvae are kept in bamboo trays along

with freshly chopped mulberry leaves.

4) After to 25-30 days the caterpillar stops eating and move to a tiny chamber in the tray to spin cocoons. Small racks or twigs may be provided in the trays in which the cocoon gets attached.



The silkworm spins a cocoon inside which develop a silk moth.

Q18(b) Explain the processing of silk or what is reeling of silk?

Ans A pile of cocoons is used for obtaining silk fibres. The cocoons are kept under sun or boiled or exposed to steam. The silk fibres separate out. The process of taking out threads from cocoons for use as silk is called reeling. Reeling is done in special machines which unwind the threads or fibres of silk from the cocoons. Silk fibres are then spun into silk threads which are woven into a silk cloth.

Excellent