HW

① Question 1

Choose the correct answer out of the four available choices given below each questions.

1) Who coined the term "cell"?

Ans Robert Hooke

2) Which of the following connects the pharynx to the stomach?

Ans Oesophagus

3) Transpiration is a function of the

Ans Leaves

4) Which of the following is not good for the eyes?

Ans Looking at the sun directly

5) Oxygen and carbon dioxide are exchanged at the

Ans Alveoli

6) Which of the following refers to the central U-shaped part of the small intestine?

Ans Duodenum

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7) Vacuole is a watery sac bounded by a membrane termed as.

Ans Vacular membrane or Tonoplast

8) The outermost part of a rose flaver is

Ans Sepals

9) Which of the following is the main source of energy?

Ans Carbohydrates

10) Which of these connects the leaf to the stem?

Ans Petiole

11) What is the shape of the trees found on the mountains?

Ans Cone

12) What is the function of tail in fish?

Ans ~~Petals~~ Changing direction

13) The Corolla is made up of units called

Ans Petals

14) In plant cells, which of the following organelles has smaller units called dictyosomes?

Ans Golgi apparatus

15) During photosynthesis plants give out.

Ans Oxygen

Question-2

A) Name the following.

1) The organelle which digests old or injured parts of its own cell.

Ans Lysosomes

2) A thin, sticky film composed of mucous, food particles and bacteria, which develops on the surface of the teeth over a period of time.

Ans Plaque

3) The pattern or arrangement of veins on a leaf.

Ans Venation

4) The surface of a tooth.

Ans Crown

5) Tiny openings found on the lower side of the leaf for the exchange of gases.

Ans Stomata

B) Fill In The Blanks →

1) The enzyme ~~amylase~~ maltase converts maltose into glucose.

2) Frogs have webbed back feet which allow them to swim in water.

3) Fertilisation results in the growth and transformation of the ovary into a fruit.

4) Centrosome consists of one or two rod-like bodies called centrioles.

5) One complete sequence of part contraction and relaxation is called peristalsis.

Question 38

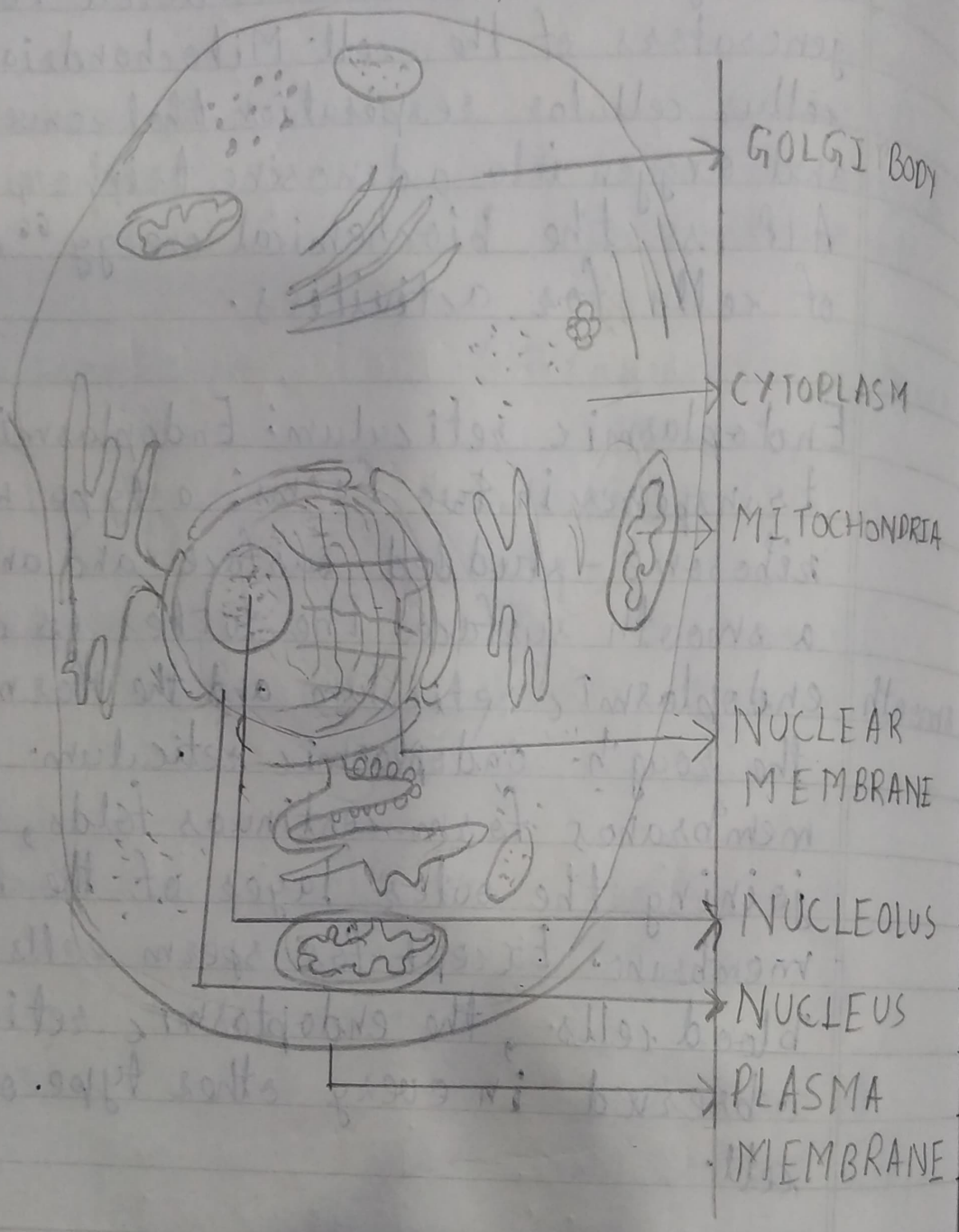
A. Match the following.

Column - A	Column - B
1. Chloroplast	a. Converts starch into maltose. (4)
2. Cell membrane	b. Converts peptones into amino acids. (5)
3. Ribosome	c. Manufacture of food in plants. (1)
4. Amylase	d. Synthesis of proteins. (3)
5. Erepsin	e. Entry and exit of materials. (2)

B) With the help of a suitable diagram explain the structure and function of the mitochondria and the endoplasmic reticulum.

Ans→ Mitochondria: Mitochondra is a rod-shaped cell organelle that is considered the power generators of the cell. Mitochondria performs ~~cellus~~ cellular respiration that converts glucose and oxygen into adenosine triphosphate (ATP). ATP is the biochemical energy "currency" of cells for activities.

Endoplasmic reticulum: Endoplasmic reticulum transpires in two forms: a type with ribosome-studded surface and another with a smooth surface. The latter is called the smooth endoplasmic reticulum and the former is called the rough endoplasmic reticulum. These ~~memb~~ membranes form continuos folds, eventually joining the outer layer of the nuclear membrane. Except for sperm cells and red blood cells, the endoplasmic reticulum is observed in every other type of eukaryotic cell.



A generalised animal cell showing finer details as observed through an electron microscope.

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Question -4

A) Why is seed dispersal important? Explain the different methods of seed dispersal.

Ans Dispersal of seeds is very important for the survival of plant species. It also prevents the overcrowding of plants in an area. If the plants will ~~grow~~ grown in a very small area the water, minerals and sunlight available for the plants will be limited. As a result of this, many of the plants will die. So, dispersal of seeds is very important.

Methods of seed dispersal

Dispersal by wind:

Seeds of some plants are not only light in weight but also have silky hair or wings so that they are easily carried away by the wind.

Ex- Cotton, Dandelion etc.

Dispersal by water:

It takes place in some aquatic plant and in some which grow near a water body.

Ex- ~~Cocco~~ Coconut, Water Lily etc.

Dispersal by animals:
Some seeds have spine like structures so that they get stuck to the fur of animals and get spread to different places
Ex- Xanthium, Tiger Nail

Dispersal by bursting:
Some fruits burst open when they mature. The force of bursting is enough to spread the seeds..
Ex- Balsam, Castor

B) Label the parts in the given diagram.

1. Oesophagus
2. Gall Bladder
3. Stomach
4. Pancreas
5. Small Intestine

Question-5

B) Find the odd one out:

3. (Rose), Neem, Acacia, Mango

5) Cell Wall, Mitochondria, Cytoplasm, Cell Membrane

Question-6

A. Describe the structure and function of leaves.

Ans⇒ ~~Start st~~ Structure of leaves –

A leaf has three main parts:- petiole, lamina and midrib

Petiole: The basal part of the leaf which is attached to the stem at the node is the petiole.

Lamina: The flat, green and board part of the leaf is called leaf blade or lamina. The outer age of the leaf blade is called leaf margin.

Midrib: Petiole continues to the lamina as midrib. This laterally gives out finer branches called veins. Petiole, midrib and veins conduct water and food.

Function of leaves -
They perform two main functions :-
Photosynthesis , Transpiration

Photosynthesis :

It is the process by which a plant leaf prepares or synthesizes food ~~in the~~ with the help of carbon dioxide and water in the presence of sunlight and ~~photosynthesis~~ chlorophyll.

Photosynthesis is represented as :

Carbon dioxide + Water $\xrightarrow[\text{Sunlight}]{\text{Chlorophyll}}$ Glucose + Oxygen

Transpiration :

The process by which water is lost in the form of water vapour ~~from the~~ by evaporation from the surface of the leaves and other aerial parts of the plant is called transpiration. It has a cooling effect and develops a suction force in the ~~roots to absorb water~~.

roots to absorb more water ~~from~~ with ~~mi~~ mineral ions from the soil.

B. Define the following terms.

a1) Egestion

Ans⇒ The process of eliminating undigested food through the anus is called egestion.

2) Breathing

Ans⇒ The process by which an organism takes in air containing oxygen to the lungs and gives out air loaded with carbondioxide is called breathing.

3) Internodes

Ans⇒ The part of the stem between two successive nodes is called internode.

4) Plaque

Ans⇒ When we eat sugary or starchy foods they get stuck in our teeth. This along with bacteria forms a yellow coloured film on the teeth surface is called plaque.

5) Bisexual flower

Ans⇒ Flowers that have both the male and female reprodactive parts i.e. andreocium and gynoecium.
Ex- Lily, Tulip, Sunflower etc.

Question-7

A) Answer the following in brief.

1. Explain the modifications in the leaf.

Ans Sometimes the complete leaf or a part of the leaf is modified to perform a specific function. Some of these modifications are:- Leaf tendril, Spines and Scale leaves.

Leaf tendril:
In case of some weak stemmed plants the leaves or leaflets are modified into

wiry, coiled structures. These are called tendrils. They are sensitive to touch. As they touch any object they coil around it.
Ex - Sweet Pea etc.

Spines: leaves
In some plants ~~spines~~ are reduced to spines to reduce water loss.
Ex - Cactus, prickly poppy etc.

Scale leaves:
In some plants like ginger and onion they have thin and dry or thick and fleshy scale leaves. The function of the scale leaves is to protect the buds.

B) Answer the following.
2. State the importance of transpiration.

Ans The importance of transpiration to green plants are:-

① Cooling effect: The water keeps on evaporating from the surface of the leaf. So, it helps the plant to cool itself while it is hot outside.

(11) Transpirational pull: As water keeps on evaporating from the leaf surface the roots pull up more water from the soil to make up this water during the transpiration. As a result of this a lot of mineral salts are also brough by the roots ~~to~~ along with water from the soil. These minerals help in the growth of the plant.