

## Biology

1) a) Robert Hooke

2) b) oesophagus

3) a) Leaves

4) b) looking at the sun directly

5) d) Fleveoli

6) c) Duodenum

7) a) Tonoplast

8) a) Sepals

9) d) carbohydrates

10) d) Petiole

11) c) Cone

12) b) changing direction

13) b) Petals

14) c) Golgi apparatus

15) b) oxygen

6) Maltase

17) Webbed

18) Fruit

19) Centriole

20) Cardiac cycle

21) a) Lysosomes

b) Plaque

c) Venation

d) ↳ Buccal

↳ Lingual

↳ Mesial

↳ Distal

↳ Occlusal / Incisal

22) ① → C

② → E

③ → D

④ → A

⑤ → B

23) Roots grow downwards in the soil.

↳ Two types of root system occur

→ Taproot system

→ Fibrous root system

b) Shoot System

It consists of stems, buds, leaves, flowers and fruit.

24)

- Spines → Reduce water loss, protect against herbivores
- Tendril → Provides support to living stem
- Scale leaves → Store food and protect the buds

25) Types of teeth seen in humans: :-

a) Incisors

- ↳ Chisel and flat shaped teeth
- ↳ Total 8 in number
- ↳ Help to shred and slice food particles to smaller fragments.

b) Canines

- ↳ Round, pointed teeth
- ↳ Total 4 in number
- ↳ Help in tearing the food

c) Premolars

- ↳ Total 8 in number
- ↳ Help in crushing and grinding the food.

d) Molars

- ↳ Total 12 in number
- ↳ They have broad, uneven surface for finer crushing and grinding of food.
- ↳ Last molar on each side is called the wisdom tooth.

ii) The small intestines are well adapted for absorbing nutrients during digestion by being very long, having villi and microvilli that increase surface area, using muscular contractions to move and mix food and receiving and housing digestive enzymes and biles that help the breakdown of food.

26) Three groups of basic of functions:

Functions	nutrients	
i) Energy giving food	carbohydrate food	cereals, fat, sugar
ii) Body building food	Proteins	Pulses, milk, meat
iii) Regulatory and protective food	vitamins and minerals	Fruits and vegetable

27) Seed dispersal is an adaptive mechanism in all seed bearing plants, participating in the movement or transport of seeds away from their parent plant to ensure the germination and survival of some of the seeds to adult plants.

Different method of seed dispersal

- ↳ By wind
- ↳ By water
- ↳ By animals and plants
- ↳ By gravity
- ↳ By explosions

- 28. 1 → Oesophagus
- 2 → Gall bladder
- 3 → Stomach
- 4 → Pancreas
- 5 → Small intestine

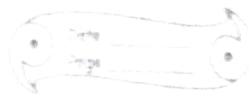
### 29. Structure of a leaf: →

**Petiole:** The basal part of a leaf is a stalk called petiole. It is attached to the stem at the node. An auxiliary bud is present in the axil of the leaf.

Sometimes, leaves are directly attached to the stem without a petiole. Such leaves are called "sessile" leaves.

**Leaf Blade or Lamina:** The green and the broad part of the leaf is called "lamina or leaf blade". Its outer edge is called "leaf margin".

**Midrib:** Petiole continues into the lamina as the "midrib". This laterally gives out fine branches called "veins". Petiole, midrib, veins, and veinlets carry water and foods. Veins also provide a skeleton or supportive frame work to the leaves.



## Functions of the leaf

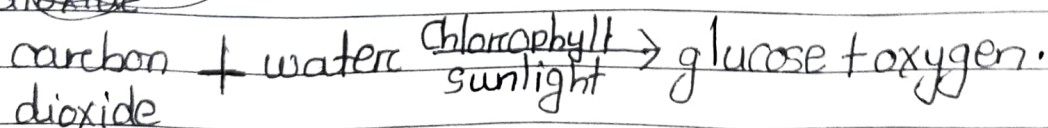
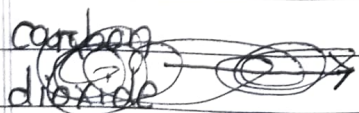
↳ Leaves are the important part of a plant. They perform various functions but the two main functions are: →

- Photosynthesis → All green plants have the capability to prepare their own food, and are therefore called autotrophs (auto = self; trope = nourishment). This method of nutrition is called autotrophic nutrition. For preparing food, the plant requires the followings:

1. Water
2. Carbon dioxide
3. Chlorophyll
4. Energy

The process by which a plant leaf prepares or synthesises food from water and carbon dioxide in the presence of chlorophyll and sunlight is called photosynthesis.

Photosynthesis is represented as follow:



30.

### BREATHING

a) The process during which the air containing oxygen is drawn into the lungs and the air containing carbon dioxide is forced out from the lungs is called breathing.

### PLAQUE

b) This along with bacteria on the teeth's surface form a yellow coloured film called plaque.

### EGESTION

c) The process of eliminating the undigested food through the anus is called egestion.

### INTERNODES

d) Internodes is the part of the stem that occurs between two consecutive nodes.

### BIXSUAL FLOWER

e) The above four whorls viz. calyx, corolla, androecium and gynoecium are present in the same flower it is known as Bixesual flower.