Class VI Biology

neral Instructions:

All questions are **compulsory**.
Questions 1 to 15 carry one mark each.
Questions in 2 A and B carry one mark each.
Questions in 3 A carry one mark each and B carries 5 marks.
Question 4 A and B carries 5 marks each.
Questions in 5 A and B carry one mark each.
Questions in 6A and B carry one mark each.
Question 7 A and B carry five marks each.

uestion 1

hoose the correct answer out of the four available choices given below each question. [15]

1. Who coined the term 'cell'?
   (a) Matthias Schleiden
   (b) Theodor Schwann'
   (c) Charles Darwin
   (d) Robert Hooke

2. Which of the following connects the pharynx to the stomach?
   (a) Large intestine
   (b) Oesophagus
   (c) Caecum
   (d) Small intestine

3. Transpiration is a function of the_____.
   (a) Leaves
   (b) Stem
   (c) Flower
   (d) All of these

4. Which of the following is not good for the eyes?
   (a) Eating vegetables
   (b) Looking at the Sun directly
   (c) Washing your eyes with cold water
   (d) Taking breaks while working on a computer

5. Oxygen and carbon dioxide are exchanged at the_____.
   (a) Nasal cavities
   (b) Trachea
   (c) Pharynx
   (d) Alveoli

6. Which of the following refers to the initial U-shaped part of the small intestine?
   (a) Jejunum
   (b) Ileum
   (c) Duodenum
   (d) Caecum

7. Vacuole is a watery sac bounded by a membrane termed as_____.
   (a) Tonoplast
   (b) Chromoplast
   (c) Centriole
   (d) Cristae

8. The outermost part of a rose flower is
   (a) Sepals
   (b) Petals
   (c) Stamen
   (d) Style

9. Which of the following is the main source of energy?
   (a) Proteins
   (b) Minerals
   (c) Vitamins
   (d) Carbohydrates

10. Which of these connects the leaf to the stem?
    (a) Lamina
    (b) Veins
    (c) Midrib
    (d) Petiole

11. What is the shape of the trees found on the mountains?
    (a) Rod
    (b) Spiral
    (c) Cone
    (d) Straight

12. What is the function of tail in fish?
    (a) Swimming
    (b) Changing directions
    (c) Respiration
    (d) Protection

13. The corolla is made up of units called_____.
    (a) Sepals
    (b) Petals
    (c) Stamens
    (d) Style

14. In plant cells, which of the following organelles has smaller units called dictyosomes?
    (a) Cytoplasm
    (b) Cell wall
    (c) Golgi apparatus
    (d) Centrosome

15. During photosynthesis plants give out_____.
    (a) Carbon dioxide
    (b) Oxygen
    (c) Nitrogen
    (d) Carbon monoxide

Question 2 [5]

A. Name the following.
1. The organelle which digests old or injured parts of its own cell. 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. plaque
3. The pattern or arrangement of veins on a leaf. venation
4. The surface of a tooth. ~~enamel~~ enamel
5. Tiny openings found on the lower side of the leaf for the exchange of gases. stomata

[5]

B. Fill in the blanks.
1. The enzyme ~~amylase~~ converts maltose into glucose. amylase
2. Frogs have_____ webbed feet which allow them to swim in water. webbed
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_____. breathing

Question 3

A. Match the following. [5]

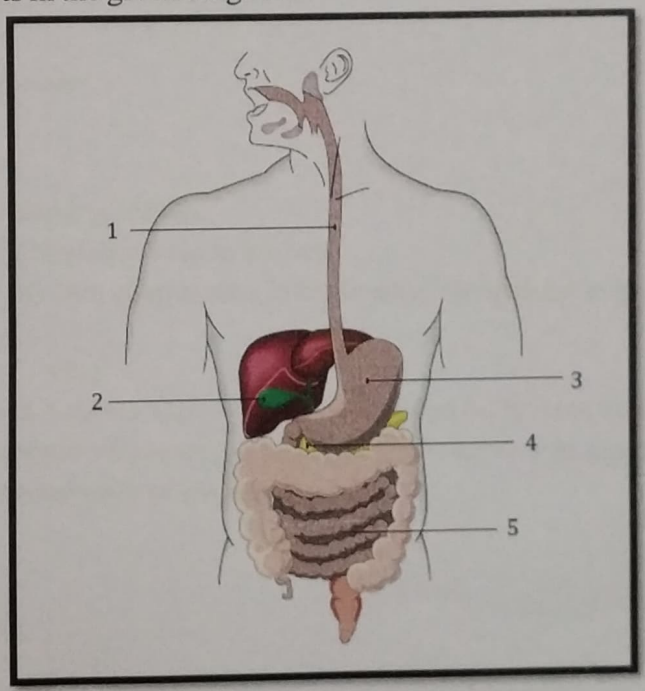
Column A	Column B
1. Chloroplast	A. Converts starch into maltose 4
2. Cell membrane	B. Converts peptones into amino acids 5
3. Ribosome	C. Manufacture of food in plants 1
4. Amylase	D. Synthesis of proteins 3
5. Erepsin	E. Entry and exit of materials 2

B. With the help of a suitable diagram explain the structure and function of the mitochondria and the endoplasmic reticulum. [5]

Question 4

A. Why is seed dispersal important? Explain the different methods of seed dispersal. [5]

B. Label the parts in the given diagram. [5]



B. 1. Oesophagus
2. Gall bladder
3. Stomach
4. Pancreas
5. Small intestine

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QUESTION 3

B. With the help of a suitable diagram explain the structure and function of the mitochondria and the endoplasmic reticulum. [5]

Mitochondria:

Mitochondria is a rod shaped organelle that is considered the power generators of the cell. It performs cellular respiration which converts glucose and oxygen to adenosine triphosphate (ATP). ATP is the bio-chemical energy "currency" of the cell for all activities.

Endoplasmic reticulum:

A network of membraneous tubules within the cytoplasm of a eukaryotic cell, continuous with the nuclear membrane is called endoplasmic reticulum. It usually has ribosomes attached and is involved in protein and lipid synthesis.

QUESTION 4

A. Why is seed dispersal important? Explain the different methods of seed dispersal. [5]

Dispersal of seed is very important for the survival of plant species. If plants grow too closely, they have to compete for light, water and nutrients from the soil. Seed dispersal

allows plants to spread out from a wide area and avoid competing with one another for the same resources. The most common method of seed dispersal are wind, water, animals, explosion. Seeds of plants like dandelions, comma swan plants and cotton wood are light and have feathery bristles and can be carried long distance by wind.

Water dispersal: Many plants have seeds that use water as a means of dispersal and float away from the parent plant. If the seeds fall in the water they are carried away from the tide to grow somewhere else. Ex- coconut, mangroves and lotus seeds disperse by water.

Animal dispersal: Birds often fly away from the parent plant and disperse the seeds in their droppings.

QUESTION 6

Q.A. Describe the structures and functions of leaves

A leaf has three main parts. Petiole, Lamina/leaf blade and Midrib.

Petiole → This is the basal part of the leaf it is attached to the stem at the node.

Lamina / leaf blade → The green, flat and broad part of the leaf is known as lamina or leaf blade. The outer edge of leaf blade is called leaf margin.

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

The leaf has to main functions:

(i) Photosynthesis → The process by which a plant leaf ~~for~~ prepares food from water and carbondioxide in the presence of chlorophyll and sunlight is known as photosynthesis.

(ii) Transposition → The process by which water is lost ~~from~~ in the form of water vapour by evaporation from the surface of the leaf and other ~~air~~ aerial parts of the plant. It has a ~~cooling~~ pulling effect and it develops a ~~suff~~ suction force to make the root absorb more water and minerals from soil.

B. Define the following: [5]

1. Egestion = The process of eliminating the undigested food through the anus is called egestion.

2. Breathing = Breathing is a physical process which involves inhalation of air through the nostrils into the nasal cavity ~~the~~ and finally into the lungs and exhalation, the forcing out of the air from the lungs.

3. Internode = The part of the stem between to successive node is known as internode.

4. Plaque = Sometimes sugary and ~~star~~ starchy foods that we eat get stuck to the teeth. This along with bacteria on the teeth's surface form a yellow coloured film called plaque.

5. Bisexual flower = Some flower with both male and female reproductive par that is androceium gynoecium. are called bisexual flower.

QUESTION 7

A. i) Explain the modification in the leaf. [3]

Tendrils = In case of certain weak stemmed plant the leafs and leaflets are madified into wiry and coiled structures called tendrils. They are sensitive to touch. As touch something they coil around it and help the plant to climb up.

Spines = Leaf are modified into spines to reduce water loss. like cactus, ~~prickly~~ prickly poppy, leaves have the spines on the margin.

Scale leaves = The plants ~~which~~ like onion and ginger, thick and fleashy or thin and dry scale leaves are present respectively. Their function is to store food and protect the buds.

B. 2. State the importance of transpiration.

The importance of transpiration to the green plants are

i) Cooling effect = The water keeps on evaporates from the leaf surface during transpiration, this helps the plant to cool itself when it is hot outside.

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Transpirational pull = As water continously evaporates from the leaf surface, the roots pull up more water from the soil to make up this water loss during the transpiration. This as a result important minerals, salt are also brought by the roots along with the water from the soil. This mineral helps the plant to grow.