

Class VI Biology

General Instructions:

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

Choose 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 Oxygen.

- (a) Carbon dioxide
- (b) Oxygen
- (c) Nitrogen
- (d) Carbon monoxide

Question 2

A. Name the following.

[5]

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. dental ~~plaque~~ Plaque
3. The pattern or arrangement of veins on a leaf. venation
4. The surface of a tooth. occlusal
5. Tiny openings found on the lower side of the leaf for the exchange of gases.

B. Fill in the blanks.

[5]

1. The enzyme maltase converts maltose into glucose.
2. Frogs have webbed 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 cardiac cycle

Question 3

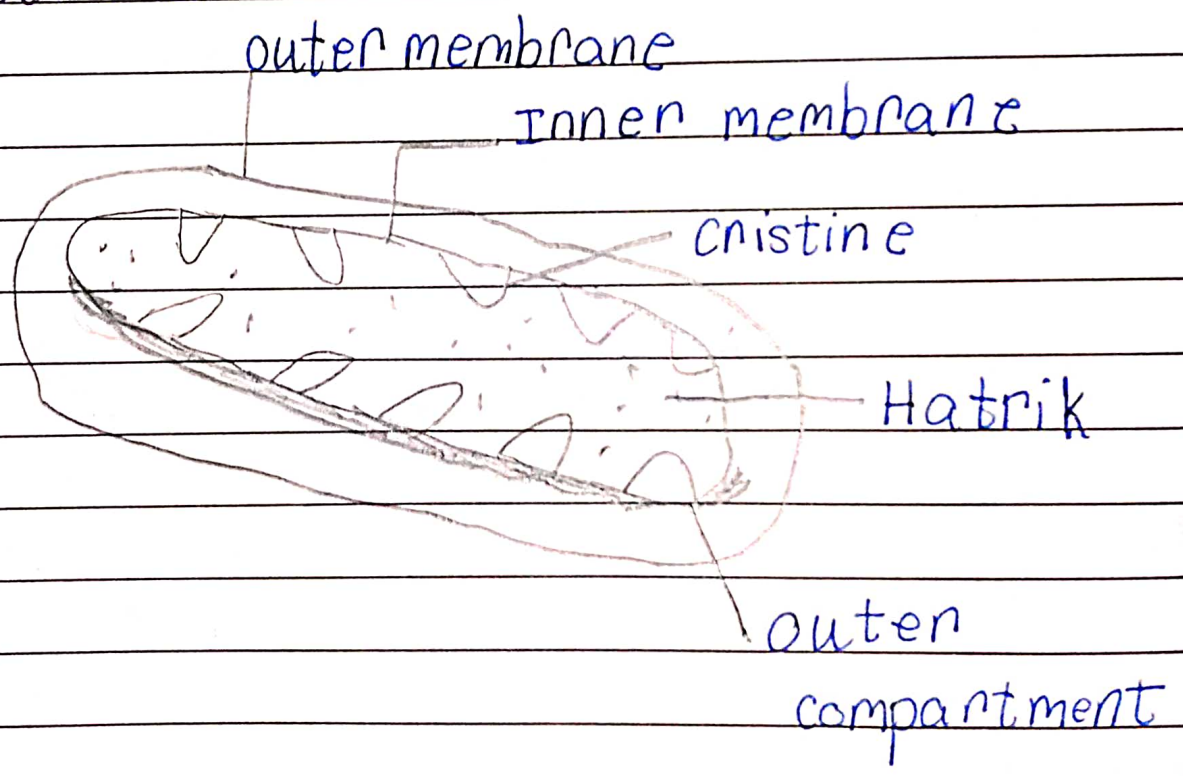
Match the following.

[5]

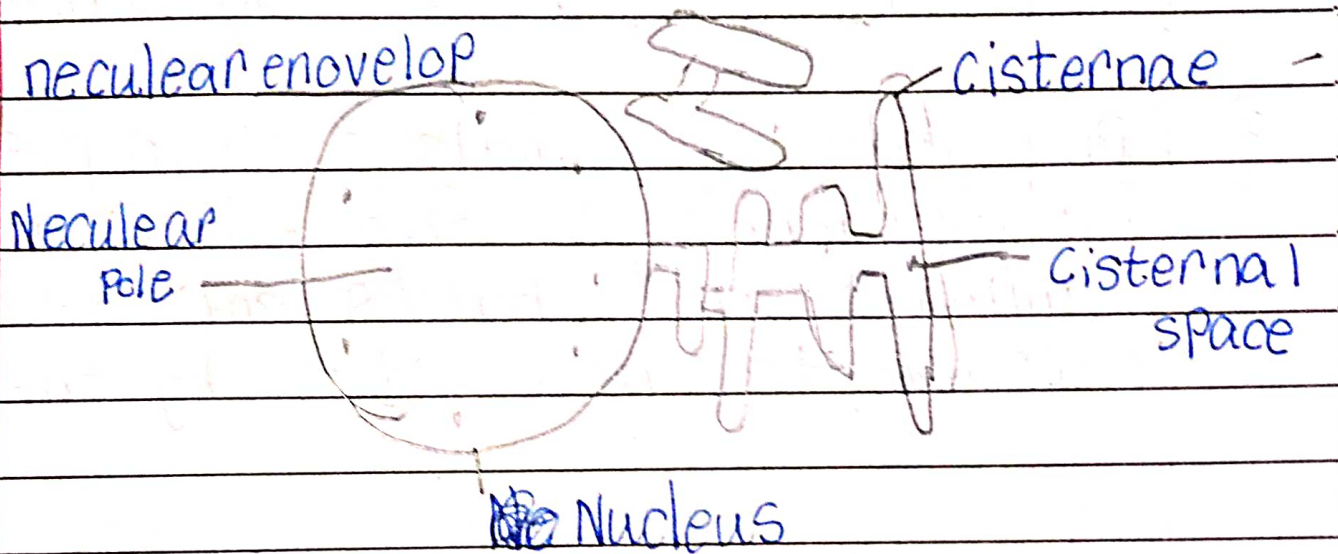
Column A	Column B
1. Chloroplast	A. Converts starch into maltose
2. Cell membrane	B. Converts peptones into amino acids
3. Ribosome	C. Manufacture of food in plants
4. Amylase	D. Synthesis of proteins
5. Erepsin	E. Entry and exit of materials

B) with the help of a suitable diagram explain the structure and function of ~~Mitochondria~~ Microchondria and Endoplasmic Reticulum

Microchondria have a double membrane arrangement which separates the organelle into four compartments - The outer membrane, the intermembrane space, the inner membrane and the matrix. It also generates most of the chemical energy ~~are~~ needed to power the cell's biochemical reactions.



- Endoplasmic reticulum is a network of membranes called, cisternae. These sac-like structures are held together by the cytoskeleton. The phospholipid membrane enclose the cisternal space, which is continuous with the perinuclear space but separate from cytosol. It also produce proteins for the rest of the cell to function.



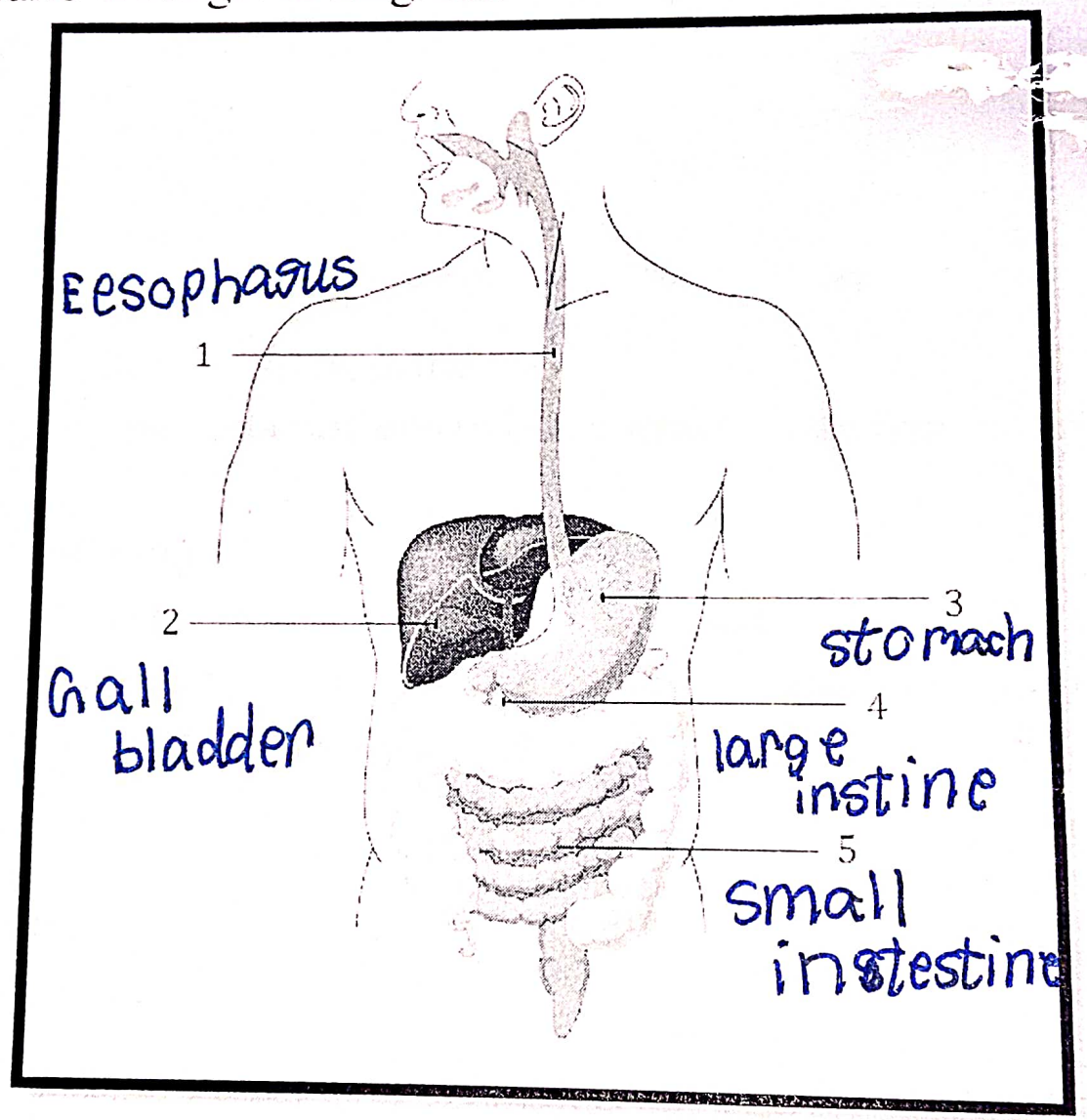
4) Why is seed dispersal important? Explain the methods of seed dispersal.

Seed dispersal helps the plant to reach favorable habitat for survival

through their movement. They are dispersed in following way -

- 1) Dispersal by wind - The seeds that are usually smaller in size or that have wings or hair like structures get dispersed by wind.
- 2) Dispersal by water - seeds that develop ~~floating~~ floating ability in the form of spongy or fibrous coat are dispersed by water.
- 3) Dispersal by animals - spiny seeds get attached to the body of animals and birds and are carried to new sites by them.

B. Label the parts in the given diagram.



5)a. How is cactus adapted to survive in a desert ?

Cactus ~~are~~ are adapted to survive in the hot and humid conditions of the desert, cactus has following adaptations :

- i) Modified flat green stem that prepare food by photosynthesis and conserves water.
- ii) stem is ~~covered~~ covered with a thick waxy layer, which helps to retain water.
- iii) Leaves present in form of spines to prevent water loss through transpiration.
- iv) Long roots that go ~~ve~~ very deep into the soil for absorbing water.

b. Why does mountain goat has strong hooves ?

The mountain goat has strong ~~has~~ hooves for running up the rocky slopes of mountains for grazing.

6)a Describe the structure and function of leaves.

The chief function of a leaf is to produce food via process call photosynthesis in plants. It is composed of stomata which are responsible for gas exchange and chlorophyll which catch the sunlight for photosynthesis. The structure of leaves are as follow-

- 1) Petiole - the stalk that supports a leaf in a plant and attached the leaf ~~blade~~ blade ~~with~~ to the stem.
- 2) Lamina - the green flat part of a leaf is specialized for photosynthesis.
- 3) Veins - The lines on the lamina that provide support for the leaf and transport both water and food.
- 4) Midrib - The central, thick, linear veins that runs along the length of a leaf is called midrib.

B) i. Egestion - The elimination of ~~wastes~~ ^{wastes} of digestion through the anus.

ii. Breathing - the process of taking in fresh air from the environment and expulsion of foul air from the body.

iii. Internodes - The portion of a stem between the level of insertion of two successive leaves or leaf pairs.

iv. Plaque - a sticky, slimy substance made up mostly of germs that cause tooth decay.

v. Bisexual flower - one flower that contains both male and female reproductive organ.

B. Find the odd one out.

1. Typhoid, Diphtheria, Tetanus, Measles
2. Dengue, Conjunctivitis, Chicken pox, Measles
3. Rose, Neem, Acacia, Mango
4. Night blindness, Beriberi, Diabetes, Pellagra
5. Cell wall, Mitochondria, Cytoplasm, Cell membrane

7) A. Answer in brief

i. Explain the modification in the leaf.

A) 1. Tendrils - In weak-stemmed plants, a leaf or a ~~plant~~ the leaf gets modified into green thread like structure called tendrils which help in climbing around the support.

2. Leaf - spines - Leaves of certain plants become wholly partially modified for defensive purpose into spines.

3. Scale - To protect their axillary bud some plant leaves changes into scale.

2. two adaptations in birds which help them to fly -

- Their bodies are made of hollow bones which make their body light.
- They have feathers on their wings.

B) i. In case of snow leopards, the rounded body and small ears help to minimise the body surface area. This reduce loss from body.