

ICSE Board
Class VI Biology
Sample Paper – 2

Time: 2 hrs

Total Marks: 75

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. Which of the following are termed as the 'protein factories' of the cell?
 - (a) Mitochondria
 - (b) Golgi complex
 - (c) Lysosomes
 - (d) Ribosomes

2. Pollination by birds is called
 - (a) Anemophily
 - (b) Ornithophily
 - (c) Entomophily
 - (d) Hydrophily

3. The ovary extends into a thin, long filament called the _____.
 - (a) Style
 - (b) Stigma
 - (c) Carpel
 - (d) Stamen

4. What is the fleshy edible part of the fruit known as?
 - (a) Epicarp
 - (b) Mesocarp
 - (c) Endocarp
 - (d) Exocarp

5. The storage cells of camel are present in
- (a) Legs
 - (b) Intestine
 - (c) Head
 - (d) Stomach
6. Which of the following is a muscular chamber where the digestive tract and the respiratory passage cross each other?
- (a) Stomach
 - (b) Oesophagus
 - (c) Pharynx
 - (d) Larynx
7. Which of the following organs separates abdominal cavity and chest cavity??
- (a) Rib cage
 - (b) Diaphragm
 - (c) Trachea
 - (d) Lungs

8. Which of the following is a healthier choice of food?



9. Dirty skin can lead to growth of itch mites, which tunnel into the skin causing _____.
- (a) Rabies
 - (b) Scabies
 - (c) Scurvy
 - (d) Pneumonia

10. Which of the following is not good for the eyes?
- (a) Eating vegetables
 - (b) Looking at the sun directly
 - (c) Washing eyes with cold water
 - (d) Taking breaks while working on computer
11. Prolonged contraction of skeletal muscles occurs in
- (a) Pneumonia
 - (b) Tetanus
 - (c) Cholera
 - (d) Typhoid
12. Hypokalemia is caused due to deficiency of _____.
- (a) Iodine
 - (b) Potassium
 - (c) Calcium
 - (d) Sodium
13. In desert plants, the leaves are modified into
- (a) Spines
 - (b) Tendrils
 - (c) Cones
 - (d) Spores
14. Animal 'X' has thick fur on its body and a thick layer of fat below its skin. These body features suggest that this animal is adapted to _____ habitat.
- (a) Aquatic
 - (b) Mountain
 - (c) Desert
 - (d) Aerial
15. Which of the following is absent in animal cells?
- (a) Plastid
 - (b) Centrosome
 - (c) Golgi apparatus
 - (d) Cytoplasm

Question 2

A. Name the following. [5]

1. It helps in the formation of haemoglobin in blood.
2. Transfer of pollen grains from the anther to the stigma of a flower
3. A flower which contains both male and female reproductive parts.
4. Jelly-like substance between the nucleus and the cell membrane
5. Plants which hang in air and have aerial roots.

B. Fill in the blanks. [5]

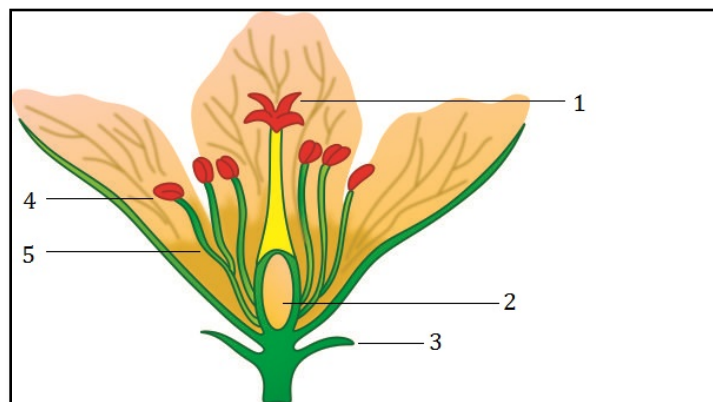
1. Each alveolus has a rich network of fine blood vessels called _____.
2. The process of utilisation of nutrients in the cells of the body is termed as _____.
3. In compound leaves, the modified midrib is known as a _____.
4. Tooth decay is caused by germs in the mouth which along with saliva and food form a thin, sticky, transparent film called _____ on the surface of teeth.
5. The living space of an organism is called its _____.

Question 3

A. Match the following. [5]

Column A	Column B
1. Lysosome	a. Frond
2. Leaves of ferns	b. Powerhouse
3. Plastid	c. Enamel
4. Tooth's surface	d. Food factory
5. Mitochondria	e. Suicidal bag

B. Observe the diagram given below and label the parts of the flower. [5]



Question 4

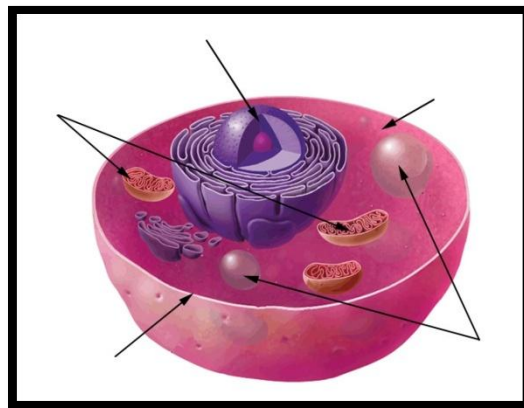
- A. Public hygiene is equally important as personal hygiene. Give a brief account on public hygiene. [5]
- B. Mention any five adaptations in camel for desert habitat. [5]

Question 5

- A. Give one point of difference between the following on the basis of what is given in the brackets: [5]
1. Plant cell and animal cell (cell wall)
 2. Adaptation and acclimatisation (definition)
 3. Monocots and dicots (number of cotyledons)
 4. Incisors and canines (function)
 5. Pneumonia and dysentery (mode of transmission)
- B. Find the odd one out. [5]
1. Lungs, Bronchi, Trachea, Kidneys
 2. *Euglena*, *Spirogyra*, *Amoeba*, *Chlorella*
 3. Style, Ovary, Stamen, Stigma
 4. Erepsin, Maltase, Lactase, Salivary amylase
 5. Asthma, Bronchitis, Pneumonia, Diarrhoea.

Question 6

- A. Observe the given diagram and label the parts. [5]



- B. Define the following. [5]
1. Nutrition
 2. Peristalsis
 3. Petiole
 4. Unicellular organisms
 5. Enamel

Question 7

A. Answer the following.

1. How does leaf modification help insectivorous plants? [2]

2. Complete the process of respiration. [3]

Oxygen from air enters → Nasal cavities → _____ → Trachea → _____ → _____ → Alveoli

B. Answer the following.

1. State any two differences between dry fruits and fleshy fruits. [2]

2. Plants X and Y are cone-shaped with sloping branches. They have needle-shaped leaves which are covered with a thick waxy cuticle. [3]

(a) To which habitat are plants X and Y adapted?

(b) What is the advantage of needle-shaped leaves?

(c) Why do these plants have sloping branches?

Solution

Question 1

1. (d) Ribosomes. (Ribosomes play an important role in the synthesis of proteins. Hence, they are also known as the protein factories of the cell.)
2. (b) Ornithophily. (Pollination by wind is called anemophily. Pollination by insects is called entomophily. Pollination by water is called hydrophily.)
3. (a) Style. (Style is the thin filament that connects the stigma to the ovary. Pollen grains germinated on the stigma, form the pollen tube, through the style, to reach the ovary.)
4. (b) Mesocarp. (The fleshy edible part of the fruit is known as mesocarp.)
5. (d) Stomach. (The storage cells of camel are present in stomach. Camels have a special stomach to store water.)
6. (c) Pharynx. (Pharynx is a muscular chamber where the digestive tract and the respiratory passage cross each other.)
7. (b) Diaphragm. (Diaphragm separates the abdominal cavity and the chest cavity.)
8. (a) Corn. (Corn is a healthier choice of food as compared to burgers, chips and soft drinks.)
9. (b) Scabies. (Skin forms the first line of defence against infections. Hence, it is important to keep the skin clean by having a bath twice a day and using clean, washed clothes.)
10. (b) Looking at the sun directly. (Looking at the sun directly can damage the sensitive cells of the eyes. So, looking at the sun directly is not good for the eyes.)
11. (b) Tetanus. (Prolonged contraction of skeletal muscles and muscle spasm in the jaw are the symptoms of Tetanus.)
12. (b) Potassium. (Deficiency of potassium causes hypokalemia.)
13. (a) Spines. (The leaves of desert plants are modified into spines to reduce the rate of transpiration.)

14. (b) Mountain. (Animals such as snow leopard are adapted to mountain habitat. They have thick fur on their body which protects them from cold and keeps them warm. They have a thick layer of fat beneath their skin for insulation and to protect them from cold.

15. (a) Plastid. (Plastids are found only in plant cells as they contain chlorophyll which plays an important role in the manufacture of food.)

Please note that the information provided in brackets is to help you in your learning. It does not have to be included in your answer.

Question 2

A.

1. Iron
2. Pollination
3. Hermaphrodite
4. Cytoplasm
5. Epiphytes

B.

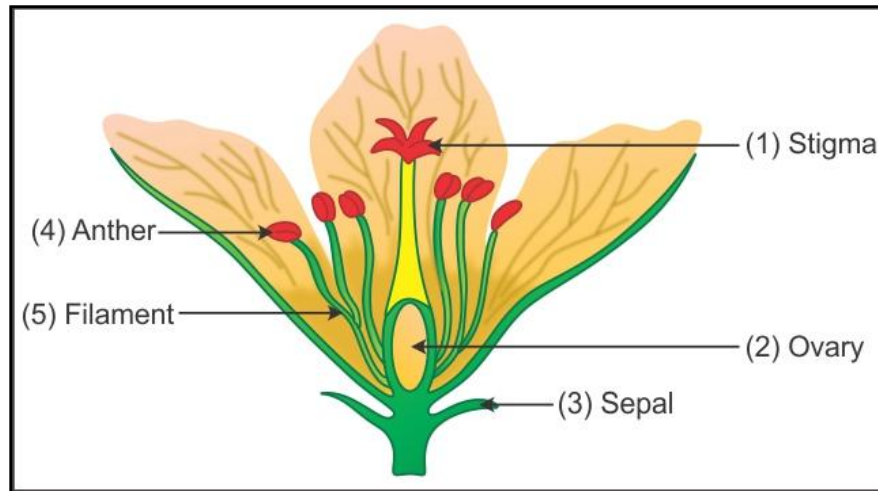
1. Capillaries
2. Assimilation
3. Rachis
4. Plaque
5. Habitat

Question 3

A.

Column A	Column B
1. Lysosome	e. Suicidal bag
2. Leaves of ferns	a. Frond
3. Plastid	d. Food factory
4. Tooth's surface	c. Enamel
5. Mitochondria	b. Powerhouse

B.



Question 4

A. Along with the personal hygiene it is very important to maintain the surroundings clean. Following steps can be taken to maintain the public hygiene:

1. Sewage and chemical wastes should not be released into water bodies.
2. Sewage should be chemically treated first before being released into water bodies.
3. Garbage must be kept covered otherwise flies breed on it.
4. All drains must be covered.
5. Do not allow water to stagnate near your house.
6. Pipes carrying potable water should not be located near the sewage pipelines. In case of leakage, water gets mixed and contaminates.

B. Adaptations in camel for desert habitat:

7. Its limbs contain large pads which help it to move on hot and slippery sand.
8. The hump of the camel is a reservoir of food in the form of fat.
9. It drinks a large quantity of water and stores it in water-cells, muscles and connective tissues.
10. It can live without drinking water for about two weeks. It excretes very little water in the form of urine.
11. It can adjust its internal temperature according to the surrounding air. It sweats less in the bright sun to maintain its body temperature.

Question 5

A.

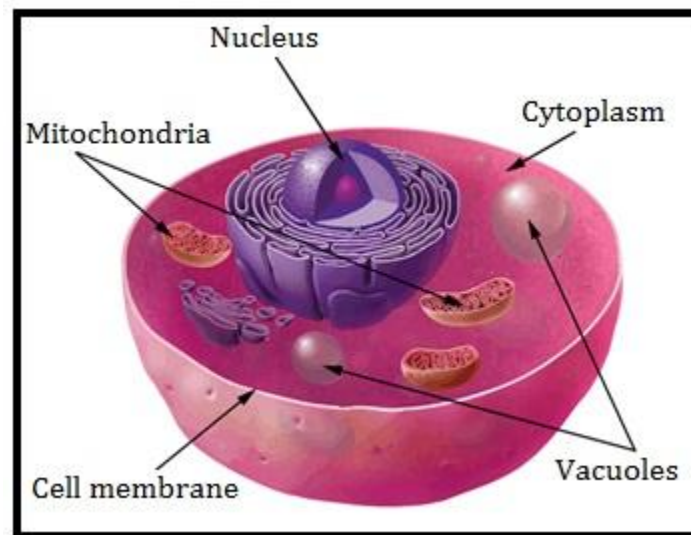
1. A cell wall is present in an animal cell, but absent in a plant cell.
2. Adaptation is the process by which an organism develops certain body features to adjust to its surroundings while acclimatisation is the process of being accustomed to a different environment over a short period.
3. Monocots are the seeds with only one cotyledon while dicots are seeds with two cotyledons.
4. Incisors are used for cutting food while canines are used for tearing food.
5. Pneumonia is transmitted through droplets of moisture expelled into the air by infected person; dysentery is spread by consumption of food or water contaminated by disease-causing germs.

B.

1. Kidneys. (It is a part of the excretory system, while trachea, bronchi and lungs constitute the respiratory system.)
2. *Spirogyra*. (It is multicellular, while *Euglena*, *Amoeba* and *Chlorella* are unicellular.)
3. Stamen. (It is a part of the male reproductive system of flowering plants. Style, ovary and stigma are the parts of the female reproductive system of flowering plants.)
4. Salivary amylase. (It is secreted by salivary glands while erepsin, maltase and lactase are secreted by the small intestine.)
5. Diarrhoea. (It is a disorder of the digestive system while asthma, bronchitis and pneumonia are disorders of the respiratory system.)

Question 6

A.



B.

1. **Nutrition:** Nutrition is defined as a series of processes by which an organism takes in and utilises food for promoting growth and replacing the worn out or injured tissues.
2. **Peristalsis:** Peristalsis is a wave-like movement brought about by the contraction and relaxation of muscles which helps the food to move down through the digestive tract.
3. **Petiole:** Petiole is a narrow, stalk-like structure connecting the leaf to the stem.
4. **Unicellular organisms:** Unicellular organisms are organisms made of a single cell.
5. **Enamel:** Enamel is the hardest substance in the body which covers the crown and the neck of the tooth, thereby protecting it from wear and tear.

Question 7

A.

1.
 - Insectivorous plants eat insects to fulfil their nitrogen requirement as they grow in nitrogen-deficient regions.
 - The leaf of such plants is modified into a pitcher which is partly filled with a fluid and has slippery edges. Insects sitting on the leaves slip down and fall into the pitcher, where they are trapped in the fluid and are digested by the plant.
2. **Process of respiration:**
Oxygen from air enters → Nasal cavities → Pharynx → Trachea → Bronchi → Bronchioles → Alveoli

B.

1. **Differences between dry fruits and fleshy fruits:**

Dry fruits	Fleshy fruits
<ul style="list-style-type: none">• Papery or dry pericarp	<ul style="list-style-type: none">• Soft and pulpy pericarp
<ul style="list-style-type: none">• Pericarp is not distinguished into three layers	<ul style="list-style-type: none">• Pericarp is distinguished into epicarp, mesocarp and endocarp

2.

- (a) Plants X and Y are adapted to survive in mountain habitat.
- (b) Needle-shaped leaves with a thick waxy cuticle help to reduce the loss of water through transpiration and protect them from damage by rain and snow.
- (c) Mountain plants have sloping branches to allow rainwater and snow to slide off easily without damaging the branches and leaves.