Tripura
Class XI
Biology
Sample Paper – 2

Time: 3 hrs **Total marks: 70**

General instructions:

1. All Questions are Conpulsory.
2. There is no overall choice. However, there is an internal choice in one question of 2 marks weightage, one question of 3 marks and all the question of 5 marks.

SECTION A

1.

(i) Why urochordates are also called tunicates? [1]

(ii) Why is a neem leaf called pinnately compound? [1]

(iii) Name the polymer of fructose. [1]

(iv) What are the requirements needed for the chemiosmotic synthesis of ATP in chloroplasts? [1]

(v) Which glands secrete sebum? [1]

(vi) Why are animals of Aschelminthes called roundworms? [1]

(vii) When do you refer to a vascular bundle as a closed bundle? [1]

(viii) What is the feature of a metacentric chromosome? [1]

(ix) Name the reduced form of ubiquinone. [1]

SECTION B

2.

(i) Why bryophytes are called amphibians of the plant kingdom? [2]

(ii) Mention any two types of vacuoles found in animal cells along with their functions. [2]

(iii) How does the partial pressure of O_2 (pO_2) and CO_2 (pCO_2) affect the binding and dissociation of carbaminohaemoglobin? [2]

(iv) What is emphysema? What causes it? [2]

Or

Amylase is secreted by two different glands. Name them. What is the action of amylase on food?

(v) What are mycorrhizae? How does it benefit the plant? [2]

(vi) What are plasmids? What characters do they confer to the bacteria? [2]

(vii) Describe the two ways by which transport of oxygen takes place in the blood. [2]

SECTION C

3.

(i) Distinguish between intracellular and extracellular digestion. [3]

(ii) How many hearts are found in the earthworm? Give their location in the body of the earthworm. [3]

(iii) Draw a neat diagram of the digestive system of the frog. [3]

(iv) What is meant by modification of root? What type of modification of root is found in [3]

i. Banyan tree
ii. Turnip
iii. Mangrove trees

(v) Giving an example, describe the different types of amino acids based on the number of carboxyl and amino groups in them. [3]

(vi)

i. What are nuclear pores? Mention their function.
ii. What is interkinesis? [3]

(vii)

i. Draw the structure of a triglyceride.
ii. Name the sugars present in nucleic acids. [3]

(viii) What is glycolysis? Name the two monosaccharides which readily enter the glycolytic pathway. [3]

(ix) What is oxidative phosphorylation? Name the enzyme involved in this process and its location. [3]

(x) Describe the dentition found in an adult human. [3]

(xi) What is the importance of plasma proteins? [3]

Or

Diffusion of gases occurs in the alveolar region only and not in the other parts of the respiratory system. Why?

SECTION D

4. Read the passage and answer the questions which follow: [4]

One evening while Mohan was standing under a tree, a few watery drops fell on his head. He tried to find the source of the watery fluid. He found that the drops were dripping from the tips of the leaves. He shared his observation with his botanist uncle who explained the reason.

i. What is the name of this phenomenon?
ii. What are hydathodes?
iii. What is the cause of guttation?
iv. Which quality of a good student of biology is exhibited by Mohan?

SECTION E

5.

(i) Describe the internal structure of a dorsiventral leaf with the help of labelled diagrams. [5]

OR

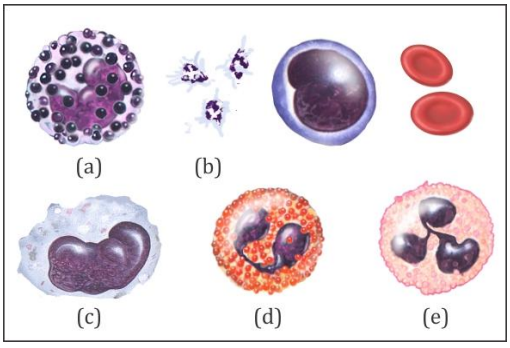
i. Draw a diagram to show the Hatch–Slack pathway.
ii. Name two plants in which the C_4 pathway occur.
iii. What is the first stable product of the C_4 cycle?

(ii)

i. What is a reflex arc?
ii. Name the components of the reflex pathway.
iii. Draw a diagram to show the knee-jerk reflex.

Or

Study the blood cells carefully shown in the figure and answer the following questions: [5]



i. Name the various types of blood cells labelled as (a), (b), (c), (d) and (e).
ii. Give one important function of each.