# **CBSE Class XI Biology** Sample Paper – 8

### Time: 3 hrs

Total marks: 70

## **General instructions:**

- 1. All questions are compulsory.
- 2. The question paper consists of four sections A, B, C and D.
- 3. Internal choice is given in all the sections. A student has to attempt only one of the alternatives in such questions.
- 4. Section A contains 5 questions of 1 mark each.
- 5. Section B has 7 questions of 2 marks each.
- 6. Section C is of 12 questions of 3 marks each.
- 7. Section D has 3 questions of 5 marks each.
- 8. Wherever necessary, the diagrams drawn should be neat and properly labelled.

## **SECTION A**

1.	Why are urochordates also called tunicates?[2]	1]		
	OR			
	What are parapodia? State their function.			
2.	Why is a neem leaf called pinnately compound?	1]		
3.	Name the polymer of fructose.	1]		
4.	What are the requirements needed for the chemiosmotic synthesis of ATP is chloroplasts?	in 1]		
	OR	-		
	What is an LHC? Where is it present?			
5.	Which glands secrete sebum? [2	1]		
SECTION B				
6.	Why are bryophytes called amphibians of the plant kingdom?	2]		
7.	Mention any two types of vacuoles found in animal cells along with their functions. [2	2]		
8.	How does the partial pressure of $O_2$ (p $O_2$ ) and $CO_2$ (p $CO_2$ ) affect the binding and dissociation of carbaminohaemoglobin?	ıd 2]		

9.	What is emphysema? What causes it?	[2]		
	OR			
	Amylase is secreted by two glands. Name them. What is the action of amylase on food?			
10	Write any two peculiar features of parasitic Platyhelminthes.	[2]		
11	List any two differences between fibrous roots and adventitious roots.	[2]		
	Draw a diagram of mango indicating the arrangement of its pericarp. Describe pericarp in short.	its		
12	.What is crossing over? Name the enzyme responsible for it.	[2]		
SECTION C				
13	Distinguish between intracellular and extracellular digestion.	[3]		
14	How many hearts are found in earthworm? Give their location in the body of earthworm.	the [3]		
	OR			
Describe the exoskeleton of cockroach.				
15	Draw a neat diagram of the digestive system of frog.	[3]		
16	What is meant by modification of root? What type of modification of root is found in i. Banyan tree ii. Turnip iii. Mangrove trees	[3]		
<ul><li>17. Giving an example, describe the different types of amino acids based on the number of carboxyl and amino groups in them.</li><li>[3]</li></ul>				
	OR			
	Draw the structures of			
	a. Cholesterol			
	u. Urach c. Triglyceride			
18		[3]		

i. What are nuclear pores? Mention their function.

ii. What is interkinesis?

19.

- i. Describe the primary structure of protein.
- ii. Name the sugars present in nucleic acids.
- **20.**What is glycolysis? Name the two monosaccharides which readily enter the glycolytic pathway. [3]

[3]

[3]

- **21.**What is oxidative phosphorylation? Name the enzyme involved in this process and its location. [3]
- **22.** Describe the dentition found in an adult human.

#### OR

What is succus entericus? State its role.

**23.**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?

- **24.** A cyclic process occurs in C<sub>3</sub> plants which is light dependent and needs O<sub>2</sub>. This process does not produce energy but rather consumes energy. [3]
  - (a) Name the given process.
  - (b) What are the end products of this process?
  - (c) Where does it occur?

## **SECTION D**

**25.**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<sub>4</sub> pathway occurs.
- iii. What is the first stable product of the C<sub>4</sub> cycle?

## 26.

- 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:



- i. Name the various types of blood cells labelled as (a), (b), (c), (d) and (e).
- ii. Give one important function of each.
- **27.** Explain polarisation and depolarisation of the membrane of a nerve fibre. [5]

OR

- (a) Expand MSH. Where is it synthesised in the human body? Mention its function.
- (b) How does the thymus gland or thymosin play a major role in the development of immunity?