

CLASS XI BIOLOGY FULL LENGTH TEST

TIME: 3 HOURS

M.M.: 70

GENERAL INSTRUCTIONS :

- (i) There are a total of 26 questions and five sections in the question paper. All questions are compulsory.
- (ii) Section A contains question numbers 1 to 5, Very Short Answer type questions of **one mark** each.
- (iii) Section B contains question numbers 6 to 10, Short Answer type I questions of **two marks** each.
- (iv) Section C contains question numbers 11 to 22, Short Answer type II questions of **three marks** each.
- (v) Section D contains question numbers 23, Value Based Question of **four marks**.
- (vi) Section E contains question numbers 24 to 26, Long Answer type questions of **five marks** each.
- (vii) There is no overall choice in the question paper, however, an internal choice is provided in one question of two marks, one question of three marks and all three questions of **five marks**. An examinee is to attempt any one of the questions out of the two given in the question paper with the same question number.

SECTION-A

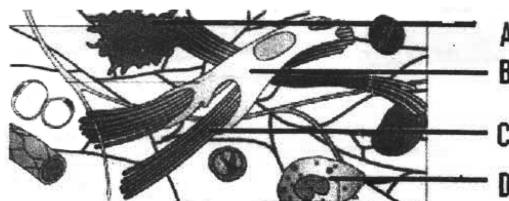
1.
 - a. Name the instrument that estimates the volume of air involved in breathing.
 - b. Name the muscles that contribute, to increase the strength of inspiration.
2. Suppose there were plants having height concentration of chlorophyll b, but lacked chlorophyll a completely. What effect will it have on photosynthesis? Give reasons.
3. Sort the following into actively or passively transported substances during reabsorption of GFE.
4. What are trichomes? and how are they beneficial to the plants.
5. How aquatic Amphibians and marine fishes differ in their nitrogenous wastes they excrete?

SECTION-B

6. How do exocrine and endocrine glands differ? Explain with suitable examples?
7. Give reasons for the following:
 - a. Proteins are heteropolymers and not homopolymers.
 - b. Some amino are called essential amino acids.
 - c. Malonate is a competitive inhibitor for succinate.
 - d. Most enzymes function at optimum temperature.
8. Rh factor plays a crucial role in child's birth born out of a marriage between Rh -ve woman and a Rh +ve man. Explain.
9. Deficiency symptoms depend on the mobility of elements in the plant. Explain with suitable examples.
10.
 - a. Which epithelium consists of thin, flat, disc-like cells closely fitted like tiles?
 - b. Which epithelium has cells that are tall as well as wide having rounded nucleus in the centre?
 - c. Which kind of epithelium would you find in: (i) Buccal cavity. (ii) Inner surface of bronchiole.

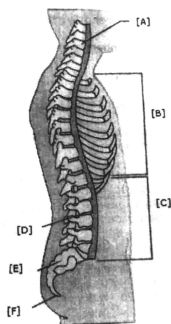
OR

Identify the parts labelled A, B, C and D.



SECTION-C

11. Describe the catalytic cycle of an enzyme action.
12.
 - a. Why does starch give a positive test with iodine?
 - b. Why is it possible to construct the second stand of the DNA, if the base sequence of one strand is known?
13. Explain the following terms:
 - a. Epiphyllous
 - b. Syncarpous
 - c. Twisted Aestivation
 - d. Pericarp
 - e. Hilum
 - f. Epigynous
14. Draw below is a vertebral column with namings A, B, C, D, E and F.



15. How water that enters the root ultimately reaches the vascular cylinder?
16. Which one of the plant growth regulator would you use for the following process:
 - a. Induce rooting in a twig.
 - b. Quick ripening of a fruit.
 - c. Delay in leaf senescence.
 - d. Induces closure of stomatal opening.
 - e. Increase in the length of grapes stalks.
 - f. Promotes bolting in rosette leaved plants.
17. What are the two crucial events in aerobic respiration? Mention the site where these events occur.
18. How do calcium ions affect muscle contraction?
19.
 - a. What is cardiac cycle? What is its duration?
 - b. State the relationship between stroke volume and cardiac output.
 - c. What causes the heart sounds?
20. What are three major types of cells found in the gastric glands and explain their role.
21. Give reasons for the following:
 - a. Impulse transmission across electrical synapse is faster than that across a chemical synapse.
 - b. Rods and cones differ chemically and functionally.
 - c. Insulin is called a hypoglycemic hormone.
22.
 - a. What is the chemical composition of middle lamella? And what role does it play?
 - b. How are materials packed in the form of vesicles by Golgi apparatus?

SECTION-D

23. Nitin is approached by an uneducated cardiac patient. The later shows a prescription to Nitin that contains the undermentioned phrase. **A condition of atherosclerosis is diagnosed. The patient is also complaining of angina. Heart attacks or heart failures are likely.** Nitin explains all the terms to the patient.
 - a. Present Nitin's explanations.
 - b. Mention any four values that Nitin is displaying.

SECTION-E

24. A group of plants lack photorespiration. How they have adapted themselves to do so? Explain and support your explanation with appropriate diagrams.
25. Describe non cyclic photophosphorylation in plants. Why this process is also called as Z scheme.
26. Only with two labelled diagrams represent two stages of the secondary growth in a dicot stem, the first stage must have interfascicular cambium and the second stage must show the bark.