



V & C Patel English School
Half Yearly Examination

Std.: XI
Subject: Biology

Max Marks: 70
Date: 13/09/17
Time: 3 hrs.

General instructions:

- (1) All questions are compulsory.
- (2) The question paper consists of five sections.
Section A- 5 questions of one mark each
Section B - 5 questions of two marks each
Section C- 12 questions of three marks each
Section D – 1 question of 4 mark
Section E – 3 questions of 5 marks each
- (3) There is no overall choice. However an internal option has been provided in one question of 2 marks, one question of 3 marks and all the three questions of 5 marks weightage. A student has to attempt only one of the alternatives in such question.
- (4) Wherever necessary, diagrams drawn should be neat and properly labeled.

SECTION – A

- Q-1 Name the kingdom in which the cells have cell wall around them.
- Q-2 Why the bryophytes are called amphibian of plant kingdom?
- Q-3 What type of modification of root is found in (1) Turnip (2) Mangrove tree
- Q-4 Name two semi – autonomous organelles in a plant cell.
- Q-5 Name two monosaccharides found in nucleic acids.

SECTION – B

- Q-6 What are conidia? How are they different from sporangiospores?
- Q-7 Justify the following statements on the basis of external morphology:
(1) Underground parts of a plant are not always root.
(2) Flower is a modified shoot.
- Q-8 Epidermal cells are often modified to perform specialized functions in plants. Name some of them and function they perform.
- Q-9 Telophase of cell division is known as reverse of prophase. Explain.
- Q-10 What are nuclear pores? What is the advantage of them?

SECTION – C

- Q-11 (1) What are protozoans? Give two examples of free – living and parasitic forms.
(2) What are slime moulds? How do they survive during unfavorable conditions?
(3) What are viroid and prions?
- Q-12 Differentiate between
(1) Racemose inflorescence and Cymose inflorescence
(2) Apocarpous ovary and Syncarpous ovary
(3) Hypogynous flower and Epigynous flower
- Q-13 Write the precise functions of:
(1) Sieve tube (2) Interfascicular cambium (3) Collenchyma (4) Aerenchyma
(5) Cork cambium (6) Companion cell
- Q-14 Explain the classification of meristematic tissue based on the location in plant body with the help of diagram.
- OR**
- Give reasons.
(1) Pulp of guava & pear is gritty.
(2) Heartwood is more resistant to insects and fungal pests.
(3) The leaves of monocot roll during dry & hot condition.
- Q-15 Draw a neat and labeled diagram of the cross section of a portion of dicot stem, showing histological details and answer the following with reference to anatomy of dicot stem.
(1) List the features of vascular bundles.
(2) How xylem vessels are arranged? What do you call such an arrangement?
(3) What type of cells constitutes pith?
- Q-16 Name the phase of mitosis which is best to study chromosome morphology. Show it diagrammatically and list the distinctive feature of that phase.
- Q-17 How is cytokinesis in plant cell differ from an animal cell?
- Q-18 (1) Cork is impervious to water. Why?
(2) Why are enzymes of lysosomes called acid hydrolases? Why are lysosomes described as suicidal bags of the cell?
- Q-19 Briefly explain the ultra-structure of centriole as observed under electron microscope.
- Q-20 What are mesosomes? Mention any four functions attributed to them.
- Q21 How is a peptide bond formed?

Q-22 (1) What are activators among cofactors? Give two examples.

(2) What forms the backbone of a DNA molecule?

SECTION – D

Q-23 During a tour to Nainital in Himalayas, the teacher asked students to identify the green patches on the bark of trees. No one was able to identify those patches and requested the teacher to tell them about these structures. The teacher replied that those are lichens.

Read the above passage and answer the following questions.

(1) What are lichens? What scientific terms are given to organisms associated in lichens?

(2) What is symbiosis?

(3) What message teacher wanted to convey to the students?

SECTION – E

Q-24 Describe how secondary growth occur in a dicot stem.

OR

(1) Expand the floral formula $\% \overline{K}_{(5)} C_{(5)} A_{(9+1)} \underline{G}_{(2)}$ and draw the floral diagram for the same.

(2) Represent diagrammatically marginal placentation. Give one example and describe the same.

Q-25 Describe any five classes of enzymes according to IUB classification with examples.

OR

Explain the structure of nucleotide and the types of nucleotides found in DNA.

Q-26 Represent diagrammatically the five substages of Prophase I of meiosis with their significance.

OR

Draw labeled diagrams of:

(1) Female and male thallus of liverworts

(2) Gametophyte and sporophyte of *Funaria*

(3) Alternation of generation in Angiosperms