MARTHOMA RESIDENTIAL SCHOOL, THIRUVALLA
FIRST TERMINAL EXAMINATION 2019-2020

STD XI

BIOLOGY **Time: 3 hours**

Paper – 1

(Theory)

(Maximum marks: 70)

(Candidates are allowed additional 15 minutes for only reading the paper. They must not start writing during this time)

This paper comprises of TWO PARTS -- PART 1and PART 11

Answer all the questions

Part 1 contains one question of 20 marks having subparts

Part 2 consist of section A, B and C.

Section A contains seven questions of two marks each

Section B contains seven questions of three marks each.

Section C contains three questions of five marks each.

Internal choices have been provided in two questions in section A, two questions in section B and in all three questions of section C

PART I (20 Marks)

Answer all questions

Question 1

(a) Answer the following briefly and to the point [8x1]

(i) Name the type of cell division that takes place in the zygote of an organism exhibiting haplontic lifecycle.

(ii) Give one significant difference between exarch and endarch xylem

(iii) What is a perianth?.

(iv) Which part of the leaf is modified into a pitcher in a pitcher plant?.

(v) What is a mycorrhizae?

(vi) What is the difference between a urochordate and cephalochordate?.

(vii) Give any one significant function of the mast cell.

(viii) What kind of heart and bones do fishes have?

(b) Each of the following questions has four choices. Choose the correct option in each case: [4x1]

(i) The adventitious roots of this plant get swollen to store food:

(1) Carrot
(2) Sweet potato
(3) Turnip
(4) Radish

(ii) Casparian strip is made up of:

(1) Lignin
(2) Pectin
(3) Suberin
(4) Cellulose

(iii) A triploblastic. unsegmented animal with a complete alimentary canal could be

(1) Round worm
(2) Liver fluke
(3) Tape worm
(4) Hydra

(iv) Osteocytes are present in fluid filled cavities known as

(i) Ossein
(ii) Lamella
(iii) Canaliculi
(iv) lacunae

(c) Give one significant contribution of each of the following scientists: [4x1/2]

(i) F.F. Blackman
(ii) Carl Woese
(iii) Katherine Esau
(v) George Palade

(d) Define the following:

(i) Dendrochronology [3x1]
(ii) Taxon
(iii) Transformation

(e) Answer the following:

(i) Bulliform cells help in water conservation. Give reason. [3x1]
(ii) What is a mycoplasma?
(iii) Give any two characteristics of a viroid

PART II

SECTION A (14 Marks)

(Answer all questions)

Question 2

(a) List four significant difference between heartwood and sapwood. [2]

OR

(b) List four significant difference between gymnosperms and bryophytes.

Question 3

Give an account of sub aerial modifications of stem. [2]

Question 4

Explain the term alternation of generation with the help of an example. [2]

Question 5

Viruses are the intermediates between living and non-living world. Justify. [2]

Question 6

(a) Write any four characteristics of phylum, Platyhelminthes [2]

OR

(b) Write any four characteristics of phylum Mollusca.

Question 7

Draw a neat labelled diagram of a bacteriophage. [2]

Question 8

Expand the following abbreviations.

(i) CPCB
(ii) EST
(iii) GMO
(iv) IARI

SECTION B (21 Marks)

(Answer all questions)

Question 9 [3]

Discuss the different types of flowers on the basis of position of ovary. Make necessary diagrams.

Question 10 [3]

(a) Make a labelled diagram showing T.S of a monocot root.

Question 11 [3]

Give the classification of meristem based on origin.

Question 12 [3]

(a) What is inflorescence? Mention two points of difference between racemose and cymose inflorescence.

OR

(b) (i) Make a labelled diagram showing the regions of a root.
(ii) Give the economic importance of algae (any two).

Question 13 [3]

Write down the differences between chondrichthyes and oestichthyes with examples.

Question 14 [3]

(a) Draw the T.S of a hyaline cartilage and explain it.

OR

(b) Draw a neat labelled diagram showing the T.S of a mammalian bone and explain it.

Question 15 [3]

Explain the role of each of the following in taxonomic studies.

(i) Botanical garden
(ii) Museum
(iii) Herbarium

SECTION C (15 Marks)
(Answer all questions)

Question 16

(a)

(i) Given an account of secondary growth in a dicot system [5]

(ii) Describe the aerial modification of stem

(b) **OR**

(i) Why are xylem and phloem classified as complex tissue? Describe the structure of phloem

(ii) What is phyllotaxy? Give the types with one example in each case.

Question 17

(a)

(i) Describe the different types of vascular bundles. [5]

(ii) Mention some features peculiar to angiosperms.

(b) **OR**

Give the salient features of Ascomycetes with reference to their structure and sexual reproduction

Question 18

(a) What are the distinguishing characteristics of phylum chordate? Briefly explain the characteristics of the following classes. [5]

(i) Cyclostomata

(ii) Amphibia

(iii) Reptilia

(iv)) Aves

OR

(b) What is a simple epithelial tissue? Prepare a brief note including the structure, function and location of difference types of simple epithelial tissues.