

Roll No.

Total Pages : 3

325101

January 2023
B.Sc. (Life Sciences) Ist Semester
Plant Biodiversity (BLS-101)

Time : 3 Hours]

[Max. Marks : 75

Instructions :

1. *It is compulsory to answer all the questions (1.5 marks each) of Part-A in short.*
2. *Answer any four questions from Part-B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*

PART-A

1. (a) Why are viruses considered as connecting link between living and non-living? (1.5)
- (b) Differentiate between the cell wall of Gram-positive and Gram-negative Bacteria? (1.5)
- (c) Why do we refer bryophytes as 'Amphibians of Plant Kingdom'? (1.5)
- (d) Define Helotism. (1.5)
- (e) Write in brief about economic importance of Fungi. (1.5)
- (f) Define Heterothallism in Fungi. (1.5)

- (g) What are heterosporous pteridophytes? Give example. (1.5)
- (h) What is alternation of generations? (1.5)
- (i) Write in brief about economic importance of bacteria. (1.5)
- (j) State any *two* general characters of Chlorophyta and Cyanophyta along with examples. (1.5)

PART-B

2. (a) Describe lytic and lysogenic mode of replication in viruses with the help of suitable diagrams. (10)
- (b) Discuss the different modes of genetic recombination in bacteria? (5)
3. (a) Write the distinguishing features of Ascomycotina and Basidiomycotina. (5)
- (b) Give a comparative account of three classes of Bryophytes. Write down the key features that help the bryophytes in transition to land habit. (10)
4. Give the general characters of algae and describe the different modes of asexual and sexual reproduction in algae. (15)
5. (a) Give classification of Lichen on basis of growth form along with examples. (5)
- (b) Describe parasexual method of reproduction in Fungi with the help of suitable diagrams. How does it differ from sexual reproduction? (10)

6. (a) Describe the internal structure of strobilus (longitudinal section), megasporangium and microsporangium of Selaginella with the help of labelled diagrams. (10)
- (b) Explain how heterospory leads to seed habit in plants. (5)
7. Describe with labelled diagrams — the external morphology of gametophyte, internal structure of thallus, modes of reproduction and internal structure of sporophyte Marchantia. (15)