

First Semester B. Sc. (Part - I) Examination

BOTANY

(Diversity and Application of Microbes and
Cryptogams)

P. Pages : 7

Time : Three Hours]

[Max. Marks : 80

- Note :** (1) There are **Seven** questions in all.
(2) Question no. **One** is compulsory and carries **Eight** marks.
(3) Question no. **Two** to **Seven** carry equal marks.
(4) Draw well labelled diagrams wherever necessary.

1. (A) Fill in the blanks :—

- (i) The cap cells in thallus is characteristic of _____ alge. $\frac{1}{2}$
- (ii) T. M. V. stands for _____. $\frac{1}{2}$
- (iii) The amphibians of the plant kingdom are _____ $\frac{1}{2}$

(iv) ----- are first Vascular Cryptogams. $\frac{1}{2}$

(B) Choose correct alternatives (MCQs) :—

(v) The symbiotic association of Bacteria with roots of leguminous plants are —

(a) Azotobacter

(b) Rhizobium

(c) E-coli

(d) Nostoc. $\frac{1}{2}$

(vi) Fungi imperfectii are also called as

(a) Ascomycotina

(b) Basidiomycotina

(c) Deuteromycotina

(d) Mastigomycotina. $\frac{1}{2}$

(vii) Father of Indian Bryology is -----

(a) S. K. Pande

(b) R. S. Chopra

(c) S. R. Kashyap

(d) Ram udar. $\frac{1}{2}$

(viii) Spoon like elaters are found with spores of-

(a) Marsilea

(b) Equisetum

(c) Selaginella

(d) Psilotum. $\frac{1}{2}$

(C) Answer in **One** sentences :—

(ix) Name the fungus causing stem rust disease to wheat. 1

(x) What is meant by Dogamy ? 1

(xi) Name the types of rhizoids in Marchantia. 1

(xii) Define Siphonostele. 1

2. Describe the cell structure and reproduction in Bacteria. 12

OR

Describe :

- (a) Tobacco Mosaic Virus [TMV]. 6
- (b) Role of Microbes in Industry and Medicine. 6

3. Explain the following :—

- (c) Globule in Chara. 4
- (d) Carposporophyte in Batrachospermum. 4
- (e) Thallus structure of Dedogonium. 4

OR

- (f) Thallus structure of Bactrachospermum. 4
- (g) Female conceptacle in Sargassum. 4
- (h) Nucule in Chara. 4

4. Comment on :

- (i) Economic importance of Lichens. 4

(j) Uredial stage in Puccinia. 4

(k) Ascocarp (cleistothecium) of Aspergillus. 4

OR

(l) Zoosporangium in Albugo. 4

(m) Telial stage in Puccinia. 4

(n) Distinguishing characters of Deuteromycotina. 4

5. Explain the following :—

(o) Internal structure of Marchantia thalus. 4

(p) Affinities of Bryophytes with Algae. 4

(q) Anthridiophore in Marchantia. 4

OR

Draw only diagrams of following :

(r) L. S. of sporophyte in Marchantia. 4

(s) L. S. of anthridial branch in Funaria. 4

(t) L. S. Capsule in Funaria. 4

6. Explain the following :—

(u) Types of protosteles in pteridophytes. 4

(v) Internal structure of aerial stem in Equisetum. 4

(w) Heterospory. 4

OR

(x) Prothallus in Equisetum. 4

(y) H. L. S. of Sporocarp in Marsilea. 4

(z) T. S. of petiole in Marsilea. 4

7. Explain the following :—

(a) Types of Mycorrhiza and its application. 6

(b) Tikka disease of Groundnut. 6

OR

- (c) Role of Fungi in Agriculture and Medicine. 6
- (d) Economic importance of Algae in Food and Agriculture. 6



