

B.Sc. Part—I (Semester—I) Examination

1S : BOTANY

(Diversity and Applications of Microbes and Cryptogams)

Time : Three Hours]

[Maximum Marks : 80

- Note** :—(1) There are SEVEN questions in all.
 (2) Question No. 1 is compulsory and carries 8 marks.
 (3) Question No. 2 to Question No. 7 carry equal marks.
 (4) Draw neat and well labelled diagrams.

1. (A) Fill in the blanks :—

- (i) The male sex organ of Chara is known as _____. $\frac{1}{2}$
 (ii) Algal and Fungal members together form a thallus known as _____. $\frac{1}{2}$
 (iii) Telial stage is characteristic of fungus _____. $\frac{1}{2}$
 (iv) Carinal canal and Vallecular canals are present in aerial stem of _____. $\frac{1}{2}$

(B) Choose the correct alternative [MCQ] :—

- (v) The vascular cryptogams are _____.
 (a) Algae (b) Bryophytes
 (c) Pteridophytes (d) Fungi $\frac{1}{2}$
- (vi) Air bladder is found in _____.
 (a) Volvox (b) Sargassum
 (c) Chara (d) Polysiphonia $\frac{1}{2}$
- (vii) *Puccinia graminis* belongs to _____.
 (a) Bryophytes (b) Algae
 (c) Gymnosperms (d) Fungi $\frac{1}{2}$
- (viii) Peristome teeth is characteristic of :
 (a) *Marchantia* sporophyte (b) *Funaria* capsule
 (c) *Anthoceros* sporophyte (d) *Polytrichum* sporogonium $\frac{1}{2}$

- (C) Answer in **one** sentence :—
- (ix) What does HIV stand for ? 1
- (x) Which type of stele is present in *Marsilea* rhizome ? 1
- (xi) Name the types of rhizoids in *Marchantia*. 1
- (xii) Horse-tail is the common name of which genus ? 1
2. Comment on :—
- (a) Binary Fission in Bacteria. 4
- (b) Role of Microbes in Medicine. 4
- (c) Structure of HIV. 4
- OR**
- (d) General characters of cryptogams. 4
- (e) Role of microbes in Agriculture. 4
- (f) Autotrophic bacteria. 4
3. Explain the following :—
- (g) Sex organs in *Oedogonium*. 6
- (h) Sex organs in *Batrachospermum*. 6
- OR**
- (i) Sex organs in *Chara*. 6
- (j) Thallus structure of *Sargassum*. 6
4. Give account of :—
- (k) Types of Lichen (any two). 4
- (l) Conidial stage in *Aspergillus*. 4
- (m) Uredial stage in *Puccinia*. 4

OR

- (n) Distinguishing characters of Deuteromycetes. 4
- (o) Economic importance of Lichen. 4
- (p) Asexual reproduction in *Albugo*. 4
5. Explain the following :—
- (q) Affinities of Bryophytes with Algae. 4
- (r) Brief account on Indian Bryologist (any two). 4
- (s) Gemma cup in *Marchantia*. 4
- OR**
- (t) Draw a well labelled diagram of *Funaria* sporophyte (L.S.). 4
- (u) Affinities of Bryophytes with Pteridophytes. 4
- (v) Antheridiophore in *Marchantia*. 4
6. Explain the following :—
- (w) H.L.S. and T.L.S. of sporocarp. 6
- (x) Types of Protostele. 6
- OR**
- Explain the following :—
- (y) L.S. of *Equisetum* cone. 6
- (z) Heterospory and Seed Habit. 6
7. Comment on :—
- (a) Applications of Mycorrhiza. 4
- (b) Black arm of cotton. 4
- (c) Economic importance of Algae in Food. 4
- OR**
- (d) Role of Fungi in Medicine. 4
- (e) Structure and control measures of TMV. 4
- (f) Tikka disease of groundnut. 4

