

## B.Sc. (Part-I) Semester—I Examination

## BOTANY

## (Diversity and Applications of Microbes and Cryptogams)

Time : Three Hours]

[Maximum Marks :80

- N.B. :**— (i) There are **SEVEN** questions in all.  
 (ii) Q. No. 1 is compulsory and carries 8 marks.  
 (iii) Question Nos. 2-6 carry equal marks.  
 (iv) Draw neat and well labelled diagrams wherever necessary.

1. (a) Fill in the blanks :

- (i) Dwarf male is found in \_\_\_\_\_ alga. ½  
 (ii) Lichens are symbiotic association of Algae and \_\_\_\_\_. ½  
 (iii) Tikka disease in ground nut is caused by \_\_\_\_\_. ½  
 (iv) Male sex organ in Bryophytes is called as \_\_\_\_\_. ½

(b) Choose the correct alternatives (MCQ) :

- (v) Gemma cup is found in – ½

(a) Marchantia (b) Anthoceros (c) Sphagnum (d) Riccia

- (vi) Bacteria were first discovered by ----- ½

(a) Robert Koch (b) A. R. Lecuvenheck

(c) Robert Hook (d) N. D. Zinder

- (vii) White rust of crucifer is caused by ----- ½

(a) *Albugo* (b) *Aspergillus* (c) *Agaricus* (d) *Mucor*

- (viii) The spore producing organ in *Matsilea* is :

(a) Cone (b) Strobilus (c) Spotocarp (d) Synangium

(c) Answer in one sentence :-

- (ix) AIDS stands for ? 1  
 (x) What are lichens ? 1  
 (xi) What is Mycelium ? 1  
 (xii) Define Heterospory. 1

2. Explain :-

- (a) General characters of virus. 4  
 (b) Role of microbes in Agriculture. 4  
 (c) Cell structure of Bacteria. 4

**OR**

- (d) Structure of TMV. 4  
 (e) Role of microbes in Medicine. 4  
 (f) Mode of nutrition in Bacteria. 4

3. Describe sexual reproduction in *Charq.*

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**OR**

Explain :

- (g) Asexual reproduction in *Oedogonium*. 6  
 (h) Thallus structure in *Sargassum*. 6

4. Explain :

- (i) Asexual reproduction in *Aspergillus*. 4  
 (j) Oogonium in *Albugo*. 4  
 (k) Telial stage in *Puccinia*. 4

**OR**

- (l) Economic importance of Lichen. 4  
 (m) General characters of *Deuteromycotina*. 4  
 (n) Basidial stage in *Puccinia*. 4

5. Explain :-
- (o) External features in *Marchantia* thallus. 4
  - (p) Affinities of Bryophytes with Pteridophytes. 4
  - (q) L.S. of antheridial branch in *Funaria*. 4

**OR**

- (r) Brief account on Indian Bryologist (any two). 4
  - (s) L. S. of capsule in *Funaria* (only diagram). 4
  - (t) Structure of Gemma cap. 4
6. Explain :-
- (u) Types of protosteles. 6
  - (v) T. S. of aerial stem in *Equisetum*. 6

**OR**

- (w) T. S. *Marsilea* petiole. 6
  - (x) L. S. of cone in *Equisetum*. 6
7. Explain :-
- (a) Economic importance of Algae with reference to agriculture. 4
  - (b) Types of mycorrhiza. 4
  - (c) Tikka disease. 4

**OR**

- (d) Role of Fungi in medicine. 4
- (e) Black arm of cotton. 4
- (f) Economic importance of algae in food. 4

