

OR

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Draw well labelled diagram of the following :—

- (P) L. S. of Sporophyte in **Marchantia**. 4
 (Q) L. S. archegonial branch of **Funaria**. 4
 (R) L. S. Antheridiophore in **Marchantia**. 4

6. Explain :

- (A) L. S. cone in **Equisetum**. 6
 (B) T. S. rhizome in **Marsilea**. 6

OR

- (P) T. S. stem in **Equisetum**. 6
 (Q) H. L. S. of **Marsilea** sporocarp. 6

7. Explain the following :—

- (A) Symptoms and control measures of TMV. 4
 (B) Role of Fungi in Food. 4
 (C) Economic importance of algae with reference to agriculture. 4

OR

- (P) Role of Fungi in medicine. 4
 (Q) Endomycorrhiza. 4
 (R) Tikka disease of Groundnut. 4



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

BOTANY

(Diversity and Applications of Microbes and Cryptogams)

P. Pages : 4

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 Nos. **Two to Six** carry equal marks.
 (4) Draw well labelled diagrams wherever necessary.

1. (A) Fill in the blanks :—

- (i) Algal and Fungal members together form a thallus known as _____. $\frac{1}{2}$
 (ii) In **Chara**, a female reproductive organ is known as _____. $\frac{1}{2}$
 (iii) Tikka disease of groundnut is caused by Fungus _____. $\frac{1}{2}$
 (iv) Gemma cups are found in _____. $\frac{1}{2}$

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

- (v) _____ are seed bearing plants.
 (a) Algae (b) Phanerogams
 (c) Bryophytes (d) Fungi $\frac{1}{2}$

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P.T.O.

(vi) Spore producing organ in **Marsilea** is

- (a) Strobilus (b) Sporocarp
(c) Spike (d) Cone $\frac{1}{2}$

(vii) The Primary host of **Puccinia** is

- (a) Wheat (b) Cotton
(c) Groundnut (d) Tobacco $\frac{1}{2}$

(viii) The Stele Present in **Equisetum** stem is

- (a) Protostele.
(b) Ectophloic siphonostele.
(c) Amphiphloic siphonostele.
(d) Solenostele. $\frac{1}{2}$

(C) Answer in **one** sentence :—

- (ix) What is Mycorrhiza ? 1
(x) Which types of rhizoids are present in **Marchantia** ? 1
(xi) What is Heterospory ? 1
(xii) Define Oogamy. 1

2. Explain the following :—

- (A) Structure of HIV. 4
(B) Binary fission in Bacteria. 4
(C) Role of Microbes in Medicine. 4

OR

- (P) General characters of cryptogams. 4
(Q) Nutrition in Bacteria. 4
(R) Role of Microbes in Industries. 4
3. Give detail account of sexual reproduction in Macrandrous species of **Oedogonium**. 12

OR

Explain :—

- (a) Thallus structure of **Sargassum**. 6
(b) Sex organs in **Batrachospermum**. 6
4. Explain the following :—
- (A) Uredial stage in **Puccinia**. 4
(B) Asexual reproduction in **Albugo**. 4
(C) Crustose Lichen. 4

OR

- (P) Asexual reproduction in **Aspergillus**. 4
(Q) Pycnidial stage in **Puccinia**. 4
(R) Economic importance of Lichens. 4
5. Explain the following :—
- (A) Gemma cup. 4
(B) Affinities of Bryophytes with Algae. 4
(C) Antheridial branch in **Funaria**. 4