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Total No. of Questions : 07]

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**RJ-117**

**B. Sc. B. Ed. (Secondary) Examination, 2024**

**(First Semester)**

**BOTANY**

**DC-I**

**Biodiversity of Microbes, Algae, Fungi, Bryophytes,  
Pteridophytes and Gymnosperms**

**Time : 3 Hours]**

**[Maximum Marks : 60**

**Note :** All questions are compulsory. Marks are indicated at right.

**Section A**

**1×5=5**

**(Objective Type Questions)**

**1. Multiple Choice Questions :**

(a) Heterocyst occur in :

- (i) *Volvox* sp.
- (ii) *Ectocarpus* sp.
- (iii) *Nostoc* sp.
- (iv) None of the above

(b) In Mycorrhiza, the food is synthesized by :

- ~~(i) Mycobiont~~
- (ii) Phycobiont
- (iii) Bacteria
- (iv) None of the above

(c) Gemmae in *Marchantia* accomplish :

- ~~(i) Sexual reproduction~~
- (ii) Asexual reproduction
- (iii) Clonal propagation
- (iv) None of the above

(d) Heterospores and ligules are characteristic of :

- (i) *Equisetum* sp.
- (ii) *Pteris* sp.
- (iii) *Selaginella* sp.
- (iv) None of the above

(e) The alga occurring coralloid root of *Cycas* sp. is :

- (i) *Oedogonium* sp.
- (ii) *Nostoc* sp.
- (iii) *Volvox* sp.
- (iv) None of the above

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**Section B**

3×5=15

**(Short Answer Type Questions)**

2. (i) Structure of virus.

Or

Distinguishing features of Mycoplasma.

(ii) Development of ascospores in *Penicillium* sp.

Or

Differences between uredospores and teleutospores.

(iii) Gametophyte thallus of *Anthoceros* sp.

Or

Internal structure of Funaria capsule

(iv) Telome theory.

Or

Economic importance of Pteridophytes.

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(v) Female gametophyte of *Cycas* sp.

Or

Female cone of *Pinus* sp.

**Section C**

8×5=40

**(Long Answer Type Questions)**

3. Illustrate conjugation in Bacteria and its significance.

Or

Describe the Life cycle of *Oedogonium* sp. nannadrous type <https://www.onlinebu.com>

4. Describe the Life cycle of *Rhizopus* sp.

Or

Describe in detail the Life cycle of *Agaricus* sp.

5. Illustrate antheridiophore and archegoniophore of *Marchantia* sp.

Or

Describe economic importance of Bryophytes.

6. Illustrate anatomical difference in stems of *Selaginella* sp. and *Equisetum* sp. 5

Or

Describe the Life cycle of *Pteris* sp.

7. Illustrate anatomical features of *cycas* leaf and coralloid root.

Or

Illustrate the differences in *Cycas* male cone and *Pinus* male cone. 5

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