

1544

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(c) VS of sporophyll-*Adiantum* sp.

(d) Stages in sexual reproduction (conjugation) in *Spirogyra* sp.

4. Answer the following (Attempt any **three**): (5×3=15)

(a) What is heterospory? Discuss the evolution of seed habit in *Selaginella*.

(b) What are Myxomycetes? Discuss its affinities with Fungi.

(c) Discuss the various systems of classification in angiosperms.

(d) Discuss the various means of reproduction in *Marchantia*.

5. Write short notes any **three**: (5×3=15)

(a) Transformation in Bacteria

(b) Types of Lichens

(c) Lytic cycle in bacteriophage

(d) Male and Female Strobilus of *Gnetum*

(1000)

[This question paper contains 4 printed pages.]

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DSC-I

Your Roll No.....

Sr. No. of Question Paper : 1544

28/12/2023
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Unique Paper Code : 2162011101

Name of the Paper : Plant Diversity and Evolution

Name of the Course : B.Sc. (Hons.) Botany

Semester : I

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **four** questions in all, including Question No. 1 which is compulsory.
3. **All** parts of question must be answered together.
4. **All** questions carry equal marks.
5. Draw diagrams wherever required in support of your answer.

P.T.O.

1. (a) Define the following terms (**any five**) : (1×5=5)

- (i) Prophage
- (ii) Pyrenoid
- (iii) Dolipore septum
- (iv) False indusium
- (v) Apophysis
- (vi) Inflorescence

(b) Fill in the blanks (**any five**) : (1×5=5)

- (i) The theory of natural selection was proposed by _____.
- (ii) Bryophytes are known as _____ of plant kingdom.
- (iii) Pteridophytes are cryptogams with well-developed _____ system.
- (iv) *Ephedra* is the source of _____ used for the treatment of asthma.
- (v) Colony of *Volvox* is known as _____.
- (vi) _____ is the main constituent of the fungal cell wall.

(c) Give an example (scientific name) (**any five**) : (1×5=5)

- (i) Bread Mould
- (ii) ss-RNA virus causing disease in plant
- (iii) Gymnosperm with vessels in secondary wood
- (iv) Maiden hair fern or 'Walking fern
- (v) Cord Moss
- (vi) Marine brown algae with pneumatocysts

2. Differentiate between the following (**any three**) : (5×3=15)

- (a) Eubacteria and Archaeobacteria
- (b) Bryophytes and Pteridophytes
- (c) Chlorophyceae and Phaeophyceae
- (d) Zygomycota and Basidiomycota

3. Draw the well-labelled diagram for the following (**any three**) : (5×3=15)

- (a) Structure of bacteriophage
- (b) VS passing through gills of *Agaricus* sp.