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[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1544

G

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.

P.T.O.

(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*

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