

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1353

I

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.
3. Question No. **1** is compulsory.
4. Draw well labelled diagrams wherever necessary.

P.T.O.

1. (a) Name the genus having the following (Attempt any five) : (1×5=5)

- (i) Air bladder
- (ii) Ligule
- (iii) Fairy Ring
- (iv) Foliose Lichen
- (v) Gemma cup
- (vi) Maidenhair fern
- (vii) Spiral Chloroplast

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

- (i) The term algae was coined by
- (ii) The reserve food material of red algae is
- (iii) Engler and Prantl system of classification is an example of system of classification.
- (iv) Infectious piece of RNA without protein coat is
- (v) The number of capsomere in TMV is
- (vi) True vessel is found in the Gymnosperm

- (vii) Obliquely placed septa are found in rhizoids of

(c) Match the following : (1×5=5)

- | | |
|-----------------------------|-------------------------|
| (i) Peltate Columella | (a) <i>Polysiphonia</i> |
| (ii) Heterotrichous thallus | (b) <i>Funaria</i> |
| (iii) Scales | (c) <i>Rhizopus</i> |
| (iv) Collar | (d) <i>Marchantia</i> |
| (v) Operculum | (e) <i>Gnetum</i> |

2. Differentiate between the following (Attempt any five) : (5×3=15)

- (i) Pteridophytes and Gymnosperms
- (ii) TMV and Bacteriophage
- (iii) Gram-positive and Gram-negative bacteria
- (iv) Natural and Artificial classification
- (v) Megasporophyll and Microsporophyll of *Selaginella*

3. Draw the well labelled diagram of the following (Attempt any three): (5×3=15)

- (i) Diagrammatic sketch of Bacterium

- (ii) *Rhizopus* showing asexual reproduction
- (iii) V.S Receptacle of *Sargassum* showing bisexual conceptacle
- (iv) Morphology of Basidiocarp of *Agaricus*
- (v) Morphology of Male cone of *Gnetum*

4. Write short notes on the following (Attempt any three) : (5×3=15)

- (i) Scalariform conjugation of *Spirogyra*
- (ii) Bacterial genetic recombination by Transduction
- (iii) Characteristic features of Fungi
- (iv) Bryophytes as amphibians of plant kingdom
- (v) General features of Viruses

5. Attempt any two from the following :

- (a) Explain the affinities of Slime molds with Fungi. (7.5)
- (b) With the help of diagrams, explain briefly the gametophore of *Marchantia*. (7.5)
- (c) What is heterospory? Explain giving one example. (7.5)

(500)