

This question paper contains 4 printed pages]

Your Roll No. ....

218

B.Sc. Prog. II

C

LS-26: BIODIVERSITY I PLANTS

(Admissions of 2008 and onwards)

Time : 3 Hours

Maximum Marks : 75

*Note: The Roll No. should be written in the top of this question paper.*

Attempt any *Five* questions.

*All* questions carry equal marks.

*All* parts of a question must be attempted together.

1. Define the following terms with *one* example in each : 15 × 5 = 75

- (i) Organotrophs
- (ii) Heterocyst
- (iii) Gongrosira stage
- (iv) Fairy rings
- (v) Capsid

P.T.O.

- (vi) Diploxylic
- (vii) Endothecium
- (viii) Anemophily
- (ix) Antheridiophore
- (x) Peristomial teeth
- (xi) Coenosorus
- (xii) Dwarf male
- (xiii) Coralloid root
- (xiv) Chemotaxonomy
- (xv) Resurrection plant.

2. Differentiate between any *five* of the following :  $5 \times 3 = 15$

- (i) Archaea and eubacteria
- (ii) Lytic and lysogeny
- (iii) Ascus and basidium
- (iv) True and false indusium
- (v) Gametophytic and sporophytic self-incompatibility

- (vi) Nuclear and cellular endosperm
- (vii) Monocot and dicot plants.
3. Write short notes on any *five* of the following : 5×3=15
- (i) Transformation
- (ii) Structure of TMV
- (iii) Post-fertilization changes in *Polysiphonia*
- (iv) Male sterility
- (v) Three domain classification
- (vi) Modern trends in plant taxonomy.
4. Draw well labelled diagrams of any *five* of the following : 5×3=15
- (i) Structure of a typical bacterial cell
- (ii) V.S. of *Fucus* male conceptacle
- (iii) V.S. of *Marchantia* thallus passing through gemma cup
- (iv) L.S. of Selaginella strobilus
- (v) T.S. of *Cycas* catkin
- (vi) T.S. of mature tetrasporangiate anther

5. (i) Discuss various modes of asexual reproduction in *Rhizopus*. 5
- (ii) Briefly comment on the spore dispersal mechanism in *Pteris*. 5
- (iii) Describe the Bentham and Hooker's system of classification. 5
6. Describe the following (any three) : 3×5=15
- (i) Methods of culture
- (ii) Six kingdom classification
- (iii) Fungal diseases of plants
- (iv) Pollen-pistil interaction.
7. (i) With the help of suitable diagrams describe the life cycle of macrandrous dioecious species of *Oedogonium*. 8
- (ii) Give an account of various types of lichen and their ecological importance. 7