

[This question paper contains 4 printed pages.]

5113

Your Roll No.

B.Sc. Prog./II

B

LS - 201 : BIODIVERSITY - I - PLANTS

(Admissions of 2008 and onwards)

Time : 3 Hours

Maximum Marks : 75

*(Write your Roll No. on the top immediately
on receipt of this question paper.)*

Attempt any five questions.

All questions carry equal marks.

All parts of a question must be attempted together.

1. (a) Explain any ten of the following terms briefly by giving one example of each.
 - (i) Gemma
 - (ii) Ligule
 - (iii) Basidiocarp
 - (iv) Heterocyst
 - (v) Bacteriophage
 - (vi) Soredium
 - (vii) Transfusion tissue
 - (viii) Synergid

P.T.O.

(ix) Perithecium

(x) Zoospore

(xi) Dermatophyte (1×10=10)

(b) Write the generic names of any five of the plants having the following structures :

(i) Rhizophore

(ii) A sporangium having columella

(iii) Trifoliar spur

(iv) Cap Cells

(v) Protonema

(vi) Antheridiophore (1×5=5)

2. Differentiate between any five of the following :

(i) Archaeobacteria & Cyanobacteria

(ii) Carposporophyte & Tetrasporophyte

(iii) Transduction & Transformation

(iv) Rust & Smut

(v) Liverwort & Mosses

(vi) Pteridophytes & Gymnosperms

(vii) Natural & Artificial System of Classification

(viii) Pycno-xylic & Manoxylic wood (3×5=15)

3. (a) Comment on the statement, "Lichens are considered pioneers in plant succession. (3)
- (b) Describe the various modes of reproduction in algae. (5)
- (c) What is alternation of generations? Explain it with reference to the life cycle of *Pteris* or *Funaria*. (7)
4. Draw neat and well labelled diagrams of any five of the following :
- (i) EM structure of a bacterial cell
 - (ii) T.S. *Selaginella* stem
 - (iii) T.S. *Pinus* needle
 - (iv) L.S. ovule showing 7-celled embryo sac
 - (v) L.S. *Agaricus* gills
 - (vi) V.S. *Marchantia* archegoniophore
 - (vii) Nannandrous filament in *Oedogonium*
- (3×5=15)
5. Write short notes on any five of the following :
- (i) Thallus of *Vaucheria*
 - (ii) Sexual Reproduction in *Rhizopus*
 - (iii) Retroviruses

- (iv) Spore Dispersal Mechanism in *Funaria*
- (v) Rhizophore of *Selaginella*
- (vi) Corolloid roots of *Cycas*
- (vii) Binomial Nomenclature (3×5=15)

6. Briefly explain any three of the following :

- (i) Economic importance of lichens
- (ii) Seed habit in *Selaginella*
- (iii) Role of Cyanobacteria as biofertilizer
- (iv) Chemotaxonomy
- (v) Double fertilization (3×5=15)

7. (a) Give an account of sexual reproduction in *Polysiphonia/Fucus*. (5)

(b) Discuss the industrial uses of fungi. (5)

(c) In what ways are the angiosperms useful to us. (5)