

2012  
B.A./B.Sc. (General) First Semester  
Botany  
Paper – A: Plant Diversity - I

Time allowed: 3 Hours

Max. Marks: 36

**NOTE:** Attempt five questions in all, including Question No. 1 which is compulsory and selecting one question from each Unit. Draw neat and well labeled diagrams wherever necessary.

x-x-x

I. (A) Fill in the blanks:-

- a) Common name of Batrachospermum is \_\_\_\_\_.
- b) The filament of oscillatoria is called \_\_\_\_\_.
- c) The fungal component of lichen is called \_\_\_\_\_.
- d) \_\_\_\_\_ algae is used in space flights and nuclear submarines as food and source of oxygen.
- e) \_\_\_\_\_ class of fungi lacks sexual reproduction.
- f) Gongrosira stage of vaucheria is made up of \_\_\_\_\_.

(6x1)

(B) Multiple Choice Questions:-

- a) Asexual reproduction in Batrachospermum takes place by
  - (i) Zoospores
  - (ii) Monospores
  - (iii) Spermetia
  - (iv) Lynzoospores
- b) Bread mould is common name of
  - (i) Rhizopus
  - (ii) Ustilago
  - (iii) Saccharomyces
  - (iv) Puccinia
- c) Wart like swellings on the upper surface of lichen thallus are
  - (i) Cephalodia
  - (ii) Soredia
  - (iii) Cyphellae
  - (iv) Isidia
- d) Colletotrichum falcatum causes
  - (i) Red rot of sugarcane
  - (ii) Black rust of wheat
  - (iii) White rust of crucifers
  - (iv) Loose smut of wheat
- e) Oscillatoria reproduces vegetatively by
  - (i) Akinetes
  - (ii) Heterocysts
  - (iii) Hormogonia
  - (iv) All of these

P.T.O.

(2)

f) The extra nuclear genome present in bacteria is known as:-

- |                    |                      |       |
|--------------------|----------------------|-------|
| (i) Pro chromosome | (ii) Cytoplasmic DNA |       |
| (iii) Plasmid      | (iv) All of these    | (6x1) |

### UNIT – I

- II. a) Describe asexual reproduction of Vaucheria.  
b) Write note on coenobium of Volvox. (3,3)
- III. Write short notes on any two of the following:-  
a) Describe sexual reproduction in Cladophora.  
b) Draw well labeled diagram of a Bacterial cell.  
c) Draw graphic life cycle of Volvox. (3+3)

### UNIT – II

- IV. Draw diagrammatic life cycle of Dictyota. (6)
- V. Write short notes on any two of the following:-  
a) Post fertilization changes in Batrachospermum  
b) Use of algae as food  
c) Chytridia stage of Batrachospermum (3+3)

### UNIT – III

- VI. Draw diagrammatic life cycle of three different species of yeast. (6)
- VII. Discuss asexual reproduction in Albugo and Rhizopus. (3+3)

### UNIT – IV

- VIII. Describe the life cycle of Puccinia graminis tritici on wheat. (6)
- IX. Write short notes on any two of the following:-  
a) Basidium of Agaricus  
b) Symptoms of loose smut of wheat  
c) Draw V.S. Lichen thallus. (3+3)