

BOTANY PAPER-A

(Plant Diversity-I)

Time : Three Hours

Max. Marks : 36

- Note : (i) Attempt *five* questions in all.
(ii) Question No. 1 is compulsory.
(iii) Attempt *four* more questions, selecting *one* from each Unit.
(iv) Draw diagrams wherever necessary.

1. (A) Fill in the blanks :

- (i) Red Rot of sugarcane is caused by
- (ii) The reserve food material in *Oscillatoria* is
- (iii) The algal component of lichen is called
- (iv) Bacteria have accessory rings of DNA called
- (v) Colony of *Volvox* is known as
- (vi) *Rhizopus* is commonly called

6×1=6

(B) Multiple Choice Questions :

- (i) The characteristic red colour in Rhodophyta is due to :
 - (a) Fucoxanthin
 - (b) Violaxanthin
 - (c) *Siphonoxanthin*
 - (d) *r-phycoerythrin*
- (ii) Which of the following is a bicelled spore is *Puccinia* ?
 - (a) Uredospore
 - (b) Telutospore
 - (c) Accidiospore
 - (d) Pycniospore
- (iii) Fairy rings are seen in :
 - (a) *Agaricus*
 - (b) *Albugo*
 - (c) *Puccinia*
 - (d) *Ustilago*
- (iv) Frog spawn is name given to which genus ?
 - (a) *Dictyota*
 - (b) *Vaucheria*
 - (c) *Volvox*
 - (d) *Batrachospermum*
- (v) Black coloured dusty spores of *Ustilago* are called :
 - (a) Chloamydospore
 - (b) Smutspore
 - (c) Brandspore
 - (d) All of these

(vi) In bacteria, genetic recombination occur by :

(a) Conjugation

(b) Sporulation

(c) Budding

(d) Binary fission

6×1=6

Unit-I

2. (a) Describe briefly asexual reproduction in *Volvox* with the help of suitable diagrams. 33
- (b) Describe bacterial cell structure in brief. 33
3. Write notes on any *two* of the following : 33
- (a) Asexual reproduction in *Cladophora*
- (b) External structure of *Vaucheria* thallus
- (c) Reproduction in *Oscillatoria*

Unit-II

4. Give an account of sexual reproduction in *Dictyota*. 6
5. (a) Describe chantransia stage in *Batrachospermum*. 33
- (b) Give use of algae in agriculture.

Unit-III

6. Describe sexual reproduction in *Rhizopus*. 6
7. (a) Explain cell structure of Yeast. 33
- (b) Give symptoms of white rust of crucifers.

Unit-IV

8. (a) Describe asexual reproduction in *Colletotrichum*. 42
- (b) Draw mature basidiocarp of *Agaricus*.
9. Write notes on any *two* of the following : 33
- (a) Teluto-stage of *Puccinia*
- (b) Asexual reproduction in *Ustilago*
- (c) Different types of lichens thalli