BOTANY PAPER–A

(Plant Diversity—I)

Time Allowed : Three Hours **Maximum Marks : 68**

Note : Attempt **five** questions in all. Q. No **1** is compulsory. Attempt **four** more questions, slecting **one** from each Unit. Draw diagrams where necessary.

1. (A) Fill in the blanks :

(i) The most common method of reproduction in bacteria is by..... .

(ii) The frequently used blue-green algae form nitrogen fixation in rice fields are..... .

(iii) Red rust of tea is caused by..... .

(iv) Full form of VAM is..... .

(v) The algal partner of lichen thallus is called as..... .

(vi) The cell/byphal wall in fungi is made up of..... .

(vii) Red rot of Sugarcane is caused by..... .

(viii) The term heterothallism was first coined by..... .

(ix) Obligate parasites obtain their nutrition only from..... host.

(x) Doli-pore septa are found in..... $10 \times 1 = 10$

(B) Multiple Choice Questions :

(i) Reserve food of Chlorophycease is :

(a) Oil (b) Glycogen

(c) Starch (d) Proteins

(ii) Sea weeds mainly belongs to :

(a) Phaeophyceae (b) Chlorophyceae

(c) Xanthophyceae (d) Rhodophyceae

(iii) Frogspawn is the common name of :

(a) *Volvox* (b) *Vaucheria*

(c) *Batrachospermum* (d) *Dictyota*

(iv) Parenchymatous thallus is seen in :

(a) *Vaucheria* (b) *Oscillatoria*

(c) *Dictyota* (d) *Volvox*

(v) Fucoxanthin is found in :

(a) Chlorophyceae (b) Phacophyceae

(c) Rhodophyceae (d) Xanthophyceae

(vi) The bacteria having a tuft of flagella at both ends are known as :

(a) Lophotrichous (b) Peritrichous

(c) Atrichous (d) Amphitrichous

(vii) A flask-shaped ascocarp with an ostiole is called as :

(a) Apothecium (b) Perithecium

(c) Cleistothecium (d) Hypothecium

(viii) Which of the following is an edible fungus ?

(a) *Agaricus* (b) *Ustilago*

(c) *Albugo* (d) *Puccinia*

(ix) Clamp connections are formed in :

(a) Ascomycetes (b) Basidiomycetes

(c) Oomycetes (d) Zygomycetes

(x) Which of the following spores are seen in *Puccinia* on Barberry ?

(a) Aecidiospores (b) Uredospores

(c) Basidiospores (d) Teleutospores

10×1=10

UNIT–I

2. (a) Describe briefly the sexual reproduction reproduction in *Vaucheria*.

(b) Differentiate between gram + ve and gram–ve bacteria. 6×2=12

3. (a) Give only the diagrammatic representation of the life cycle of *Cladophora*.

(b) Describe briefly he thallus structure of *Volvox*. 6×2=12

UNIT–II

4. Explain the phenomenon of alternation of generations in *Dictyota* with the help of suitable diagrams. 12

5. Write notes on any **two** of the following :

(a) Role of Algae in agriculture.

(b) Post-fertilisation changes in *Batrachosphermum*

(c) Thallus structure in *Batrachospermum*. 6×2=12

UNIT–III

6. With the help of suitable diagrams give the different types of life cycles in Yeasts. 12

7. Write notes on any **two** of the following :

(a) White rust of crucifers

(b) Sexual reproduction in *Rhizopus*.

(c) Asexual reproduction in *Rhyzopus*. 6×2=12

UNIT–IV

8. (a) What is a heteroecious rust ? Describe the life history of *Puccinia* on wheat.

(b) Describe the external structure of thallus in lichens. 8,4

9. Write notes on any **two** of the following :

(a) Basidiocarp of *Agaricus*

(b) Loose smut of wheat.

(c) Red rot of sugarcane. 6×2=12