2018

M.Sc. 1st Seme. Examination

BOTANY

PAPER—BOT-102

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Unit–I

Phycology

[Marks : 20]

1. Answer any *two* questions : 2×2

(a) Comment on streptophyta and Streptophytic algae.

(b) Give a brief account of two ultrastructural features of algae having taxonomic significance.

(c) What is 'Q value' of algal pheromone ? Give two examples of algal taxa mentioning their respective Q values.

(d) Name two algal genera ideally used in green water technique. How do they contribute ?

2. Answer any *two* questions : 2×4

(a) Write a note on the chemical nature, algal sources and four uses of agar-agar.

(b) Briefly describe the parameters used in classifying algae.

(c) Comment on the endosymbiotic theory.

(d) Write a comprehensive note on the types of infertile soils in India and roles of algae in reclaiming soil fertility.

3. Answer any *one* question : 1×8

(a) Illustrate the salient features of Chlorophyta. State the nature of arrangement of thylakoids and genetic material in Cyanophyta. Mention the constraints in using algae as SCP. 4+2+2

(b) Define pheromone in contrast with hormone. Give a comprehensive account of the occurrence of different chemical agents acting as pheromone in different algal groups. Elucidate different modes of action of pheromone in algae. 2+2+4

Unit–II

Bryology

[Marks : 20]

4. Answer any *two* questions : 2×2

(a) What is 'basal bryophyte' ? Give an example.

(b) What are 'haplo' and 'diplolepidous' mosses ? Give examples.

(c) Differentiate between life form and growth form of Bryophyta.

(d) Who first discovered *Takakia* ? Mention the year of discovery.

5. Write short notes on any *two* of the following : 2×4

(a) Biotechnology in bryophytes,

(b) Takakioles – Affinities and systematic position,

(c) Justify — Bryophyte as site indicators,

(d) 'M' – chromosome and sex chromosomes.

Answer any *one* question. 1×8

6. Write the chemical aspects of bryophytes and mention its applications of chemical nature in solving disputed taxa of bryophytes. 2+6

7. Who first introduced current system of classification in bryophytes ? What are the basic differences between traditional and current system of classification ? Write the current system of classification with merits and demerits. 1+2+4+1

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