

Odd Semester, 2020

(Held in March, 2021)

BOTANY

(Elective/Honours)

(BOT-ELH-101)

(Algae, Bryophytes and Pteridophytes)

Marks : 56

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

Answer Question No. **1** which is compulsory and
any **four**, selecting **one** from each Section

1. Write notes on the following : 4×4=16

(a) Haplontic life cycle in green algae

(b) Sex organs in *Chara*

(c) Gemma cup

(d) Strobilus of *Lycopodium*

SECTION—I

2. Give an account of Fritsch's classification
of algae with its salient features and
examples. 10

3. Describe the range of vegetative structures
in Chlorophyceae with suitable diagrams. 5+5=10

SECTION—II

4. Describe the life cycle of *Oedogonium* with
suitable diagrams. 7+3=10

5. Briefly comment on the following : 5×2=10
(a) Economic importance of algae
(b) Cystocarp in *Polysiphonia*

SECTION—III

6. With suitable illustrations, give an
account of the evolution of sporophytes
in bryophytes. 7+3=10

7. Explain the following with proper diagrams : 5×2=10

(a) Anatomical features of *Marchantia*
thallus

(b) Sporogonium of *Sphagnum*

(3)

SECTION—IV

8. What is heterospory? Discuss how heterospory is related to establishment of seed habit in plants. $2+8=10$
9. With suitable illustrations, write notes on the following : $5 \times 2 = 10$
- (a) Male gametophyte development in *Selaginella*
- (b) Types of siphonostele in pteridophytes

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