



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

**B.Sc. DEGREE EXAMINATION – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY**

FIRST SEMESTER – APRIL 2017

**16UPB1MC01- ALGAE AND BRYOPHYTES**

Date: 19-04-2017  
09:00-12:00

Dept. No.

Max. : 100 Marks

**PART-A**

*Answer the following, each within 50 words.*

*( 10 x 2 = 20 marks )*

1. What are endophytic algae? Give examples
2. Define haplontic life cycle.
3. What is coenobium?
4. Differentiate unilocular from pleurilocular sporangia.
5. Mention the uses of Spirulina.
6. Mention a few algae used as food.
- 7 Name any two fossil bryophytes.
8. What is protonema?
9. Mention the significance of intercalary meristem in *Anthoceros*.
10. Draw the internal structure of the leaf of *Funaria*.

**PART-B**

*Answer the following each within 500 words. Draw diagrams and flowcharts wherever necessary.*

*( 5 x 7 = 35 marks )*

11a Tabulate the pigments, flagellation and reserve food in any four major classes of algae.

**(or)**

b. What are the various means of vegetative reproduction in algae.

12a. Describe the sex organs in *Chara*.

**(or)**

b. Describe the habit of *Sargassum*.

13a. Describe the production, harvesting and factors affecting algal biomass.

**(or)**

b. How is mass cultivation of Bluegreen algae done? Mention its applications in field crops

14a. Give an outline of Rothalmers classification of bryophytes.

**(or)**

b. Represent the lifecycle pattern in Bryophytes.

15a. Describe the gametophyte of *Marchantia*.

**(or)**

b. Describe the antheridia and archegonia in *Anthoceros*.

### PART-C

*Answer any three of the following, each within 1200 words. Draw diagrams and flow charts wherever necessary.* (3 x15 =45 marks)

16. Describe the range of thallus organization in algae.
17. Bring out the process of sexual reproduction and post-fertilization changes in *Gracilaria*.
18. Mention the uses of algae in industry.
19. Give out the salient features of the three classes of Bryophytes.
20. Describe the sporophyte of *Funaria*.

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