

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



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

SECOND SEMESTER – APRIL 2022

UPB 2501 – ALGAE AND BRYOPHYTES

(21 BATCH ONLY)

Date: 16-06-2022

Dept. No.

Max. : 100 Marks

Time: 01:00-04:00

SECTION A

Answer ALL the Questions

20 marks

1. Choose the correct answer

(5 x 1 = 5)

- | | | | |
|----|--|----|-----|
| a) | The algae live in a colony and non-flagellated is | K1 | CO1 |
| | i) <i>Volvox</i> ii) <i>Hydrodictyon</i> iii) <i>Chlorella</i> iv) Diatoms | | |
| b) | <i>Chara</i> is called stone wart due to the deposition of -----. | K1 | CO1 |
| | i) Calcium chloride ii) Calcium oxalate iii) Silica iv) Calcium carbonate | | |
| c) | <i>Chlorella</i> – a SCP is belonging to the division ----- | K1 | CO1 |
| | i) Cyanoophyceae ii) Chlorophyceae iii) Bacillariophyceae iv) Phaeophyceae | | |
| d) | The peat mass is derived from the bryophytic plant-----. | K1 | CO1 |
| | i) <i>Marchantia</i> ii) <i>Anthoceros</i> iii) <i>Sphagnum</i> iv) <i>Funaria</i> . | | |
| e) | Meristematic seta is found in the bryophyte -----. | K1 | CO1 |
| | i) <i>Marchantia</i> ii) <i>Anthoceros</i> iii) <i>Sphagnum</i> iv) <i>Funaria</i> . | | |

2. Complete the following sentences

(5 x 1 = 5)

- | | | | |
|----|---|----|-----|
| a) | The parasitic algae that cause red rust in tea is -----. | K1 | CO1 |
| b) | Trichothalic meristem is found in the algae -----. | K1 | CO1 |
| c) | -----, a Blue Green Algae used as SCP by the space travellers. | K1 | CO1 |
| d) | Hornworts are nothing but -----. | K1 | CO1 |
| e) | The juvenile plant of <i>Funaria</i> from the germinated spore is called -----. | K1 | CO1 |

3. Answer the following, each within about 50 words

(5 x 2 = 10)

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|----|--|----|-----|
| a) | Mention the salient features of Rhodophyceae. | K2 | CO1 |
| b) | Define meristoderm. | K2 | CO1 |
| c) | Distinguish between SCO and SCP. | K2 | CO1 |
| d) | Give the roles of perigynium and perichaetium in <i>Marchantia</i> . | K2 | CO1 |
| e) | What are peristome cells? | K2 | CO1 |

SECTION B

Answer any TWO of the following, each within 500 words. Draw diagrams / flowchart wherever necessary. (2 x 10 = 20 marks)

4.	Outline the classification of algae based on pigments and reserve food materials.	K3	CO2
5.	Write notes on male and female conceptacles in <i>Sargassum</i> .	K3	CO2
6.	Describe the morphology of <i>Ectocarpus</i> thallus.	K3	CO2
7.	Chart out the methods to cultivate sea weeds as (LSWB) liquid sea weed biofertilizer.	K3	CO2

SECTION C

Answer any TWO of the following, each within 500 words. Draw diagrams / flowchart wherever necessary. (2 x 10 = 20 marks)

8.	Analyse about the general characters of bryophytes.	K4	CO3
9.	Bring out the economic importance of bryophytes	K4	CO3
10.	Compare the archegonium of <i>Marchantia</i> with <i>Anthoceros</i> .	K4	CO3
11.	Substantiate on the <i>Funaria</i> capsule an advanced sporophyte.	K4	CO3

SECTION D

Answer any ONE of the following, each within 1000 words. Draw diagrams / flowchart wherever necessary. (1 x 20 = 20 marks)

12.	Correlate on the asexual and sexual reproduction in <i>Chara</i> and <i>Volvox</i> .	K5	CO4
13.	Evaluate the life cycle of <i>Gracillaria</i> – a triphasic plant.	K5	CO4

SECTION E

Answer any ONE of the following, each within 1000 words. Draw diagrams / flowchart wherever necessary. (1 x 20 = 20 marks)

14.	Construct the classification of Bryophytes. Mention the salient features of major divisions.	K6	CO5
15.	Summarize the details on the sporophytes of <i>Marchantia</i> and <i>Anthoceros</i> .	K6	CO5

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