

(Turn Over)

1. Answer any four questions of the following : 1×4
- (a) Name an algal division having Chlorophyll-C.
  - (b) State the nature of thylakoid arrangement in Cyanophyta.
  - (c) Name a pheromone in algae and its source genus.
  - (d) What is the chemical nature of agar agar?

( *Phycology* )

Unit—1

*Illustrate the answers wherever necessary.  
Candidates are required to give their answers in their  
own words as far as practicable.  
The figures in the right-hand margin indicate full marks.*

*Time : 2 Hours*

*Full Marks : 40*

**PAPER—BOT-102**

**BOTANY**

**1st Semester Examination**

**M.Sc.**

**2016**

- (e) What is periplastidial space ?
- (f) Mention the chemical constituent of mastigoneme.
- (g) Which group of algae possesses triphasic type of life cycle ?

2. Answer any *two* questions of the following : 2×4

(a) Define Streptophyta. What is designated by Viridiplantae ? What is meant by Streptophytic algae ? Name an ultrastructural feature used in algal classification. 1+1+1+1

(b) Briefly state the chemical nature of alginic acid. Write a brief note on the commercial use of alginic acid. 2+2

(c) What is soil reclamation ? State the basic reason of soil infertility in India. Comment on the specific roles of algae in regaining and maintaining soil fertility. 1+1+2

(d) Define hydrocarbon. What are the sources of hydrocarbon in algae. Comment on the prospective uses of hydrocarbons from algae. 1+1+2

3. Illustrate the salient features of Heterokontophyta. Write a brief note on two characteristic ultrastructural features of this group. 4+4

Or

Illustrate the green water technology in pisciculture mentioning its advantages. Name two algae used in it. Write a brief note on the constituents and the conditions to be maintained in preparing fish feed with algae.

2+2+4

### Unit—II

#### ( *Bryology* )

1. Answer *four* from the following questions : 1×4
- (a) What are the basic differences between 'hydroid' and 'leptoid'? Give an example.
  - (b) Characterize 'lignin' and give an example of its occurrence in bryophytes.
  - (c) What is 'm' chromosomes? Give an example.
  - (d) What is bryomonitoring?
  - (e) Name two copper indicator bryophytes.
  - (f) Name two common bryophytes from South West Bengal.
  - (g) What is peat-moss?

2. Write short notes on any *two* of the following : 2×4
- (a) Production of bio-active molecules from bryophytes and Fuel production from bryophytes.
  - (b) Heterochromatin in Bryophytes.
  - (c) Chemosystematics in Bryophytes.
  - (d) Order Anthocerotales.
3. Answer any *one* of the following questions : 1×8
- (a) Write down the affinities and systematic position of Calobryales and Takakiales. 4+4
  - (b) Who first proposed the recent system of classification in Bryophytes? Discuss in detail the merits and demerits of this system of classification. 2+6
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