

**2017**

**M.Sc.**

**1st Semester Examination**

**BOTANY**

**PAPER—BOT-102**

**Subject Code—23**

*Full Marks : 40*

*Time : 2 Hours*

*The figures in the margin indicate full marks.*

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

*Illustrate the answers wherever necessary.*

*Answer all questions.*

**Unit - I**

**( Phycology )**

[Marks : 20]

1. Answer any *four* of the following : 1×4

(a) What is streptophytic algae ?

(b) Name a typical molecular element used for algal classification.

*(Turn Over)*

- (c) Why is micromorphology a significant index in phylogenetic study ?
- (d) What is phycobilisome ?
- (e) Mention the sites for storing reserve foods in Chlorophyta and Rhodophyta.
- (f) Why is the use of *Dunaliella* advantageous for preparing SCP ?
- (g) Which component of agar-agar is responsible for gelling and which one for imparting viscosity ?

2. Attempt any *two* of the following : 3×2

- (a) Parallalism in algae ;
- (b) Green water technique in pisciculture ; and
- (c) Six contrasting characters of Cyanobacteria and Chlorophyta.

3. Answer any *one* of the following :

- (a) Enumerate the salient features of Rhodophyta. What is triphasic life cycle ? Mention the ploidy level of each phase of the cycle. 6+2+2
- (b) Mention the chemical nature of algin. Name two genera as the sources of it. Mention its various commercial uses highlighting their respective properties. 2+2+6

**Unit - II****(Bryology)****{Marks : 20}**

4. Answer any *four* from the following questions : 1×4
- (a) What is the significance of '360 mya' ?
  - (b) What is 'm' chromosome ?
  - (c) Define haplo- and diplo-lepidous moss.
  - (d) Name two pore-less liverworts.
  - (e) Name one bryophyte which has no rhizoid.
  - (f) In which liverwort the sex chromosomes (XY and XX) were first discovered ?
  - (g) Name two free floating aquatic liverworts.
5. Write short notes on any *two* of the following : 3×2
- (a) Ethnobryology ;
  - (b) Takakiales & Calobryales ; and
  - (c) Bryomonitoring.

6. Answer any *one* of the following :

- (a) Write the salient features of three coordinated phyla Marchantiophyta, Anthoceroophyta and Bryophyta with suitable examples to each phylum. 3+3+3+1
- (b) Define cytogenetics of bryophytes. Write the chromosomal diversity in bryophytes and their application in taxonomy with examples. 2+5+3
-