

# M.Sc. BOTANY

## SEMESTER -I

Algae, Bryophytes, Pteridophytes and Gymnosperms

### AUTHORS

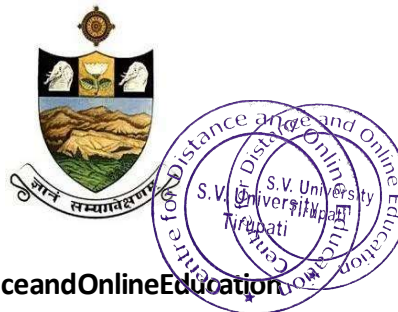
Prof. P.SuwaranalathaDevi  
Department of Applied Microbiology  
SriPadmavathiMahilaViswavidyalayam  
Tirupati 517502  
AndhraPradesh  
India

Dr.S.Thavamani  
Department of Botany  
Directorate of Distance Education  
SriVenkateswaraUniversity Tirupati-517502  
AndhraPradesh  
India

Dr. T.Vijiya  
Department of Botany  
SriVenkateswaraUniversity Tirupati-517502  
AndhraPradesh  
India

Dr.M.NagaLakshmiDevamma  
Department of Botany  
Sri Venkateswara University Tirupati-517502  
AndhraPradesh  
India

  
DIRECTOR  
Centre for Distance and  
Online Education (CDCO)  
Sri Venkateswara University  
TIRUPATI - 517 502.



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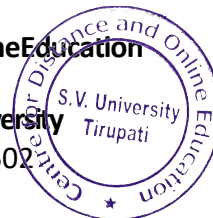
  
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TIRUPATI

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Tirupathi, AP-517 502



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DIRECTOR  
Centre for Distance and  
Online Education (CDOE)  
Sri Venkateswara University  
TIRUPATI - 517 502.

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REGISTRAR  
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TIRUPATI

## BRIEF CONTENT

### UNIT- I Phycology:

- a). Classification of Algae; Cell ultra structure; general characters;
- b). Algae in diverse habitats (Terrestrial, Fresh water, Marine water and In Association);
- c). Economic importance of Algae ( Algal blooms, Algal Biofertilizers, Algae as food, Feed and Medicines

### UNIT- II Bryophytes:

- a). Origin, Distribution, Morphology, Structure, Reproduction and Evolution of Sporophyte;
- b). Life History, Classification

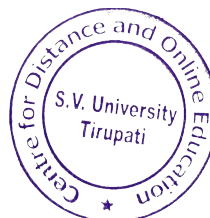
### UNIT- III Pteridophytes:

- a). Origin, Morphology, Anatomy and Reproduction; Classification of Pteridophytes.
- b). Ecological and economic importance, chemical factors controlling Gametophyte; Antheridia, Archegonia. Strobilus and Evolution of Sorus..

### UNIT- IV Gymnosperms:

- a).Introduction,
- b).Fossil Gymnosperms: Brief account of families Pteridospermales (Lyginopteridaceae, Medulloaceae, Caytoniaceae and Glossopteridaceae) General account of Cycadeodiales and Cordaitales. Economic importance of Gymnosperms.

  
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Centre for Distance and  
Online Education (CDCO)  
Sri Venkateswara University  
TIRUPATI - 517 502.



  
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## DETAILED CONTENT

### UNIT- I Phycology:

- 1.1 Introduction
- 1.2 Classification of Algae; Cell ultra structure; general characters; Algae in diverse habitats (Terrestrial, Fresh water, Marine water and In Association);
- 1.3 Thallus organization (Range of thallus structure and interactions in evolution; pigmentation, reserve food and reproduction (veg, ) of different groups of Cyanophyceae, Chlorophyceae, Xanthophyceae, Bacillariophyceae, Phaeophyceae & Rhodophyceae.
- 1.4 Economic importance of Algae ( Algal blooms, Algal Biofertilizers, Algae as food, Feed and Medicines; Algae in Industry; Algae as Biodiesel source; Single cell proteins.

### UNIT- II

- 2.1 Bryophytes: Origin, Distribution, Morphology, Structure, Reproduction and Evolution of Sporophyte;
- 2.2 Life History, Classification. Fossil Bryophytes. General account of Marchantiales, Jungermaniales and Polytrichales; Economic and Ecological importance. Lichens:
- 2.3 Types of Lichens, Anatomy, Biology and Ecological importance.

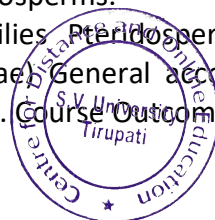
### UNIT- III

- 3.1 Pteridophytes: Origin, Morphology, Anatomy and Reproduction;
- 3.2 Classification of Pteridophytes. Evolution of Stele. Heterospory and Origin of Seed habit; Apogamy and Apospory;
- 3.3 Ecological and economic importance, chemical factors controlling Gametophyte; Antheridia, Archegonia. Strobilus and Evolution of Sorus. Fossil Pteridophytes:
- 3.4 Brief account on Psilophytopsida, Psilopsida, Lycopsida, Sphanopsida and Pteropsida

### UNIT- IV Gymnosperms:

- 4.1 Introduction,
- 4.2 Classification and Distribution of Gymnosperms.
- 4.3 Structure and Reproduction in Cycadales, Ginkgoales, Coniferales, Ephedrales, Welwitschiales, and Gnetales. Evolution of Gymnosperms.
- 4.4 Fossil Gymnosperms: Brief account of families Pteridospermales (Lyginopteridaceae, Medulloaceae, Caytoniaceae and Glossopteridaceae). General account of Cycadeoidales and Cordaitales. Economic importance of Gymnosperms. Course Outcomes 1. Discuss the importance

  
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Centre for Distance and  
Online Education (CDOE)  
Sri Venkateswara University  
TIRUPATI - 517 502.



  
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