

Course code	Course Title	C	H	I	E	T
17U1BMC1	CRYPTOGAMS	5	5	25	75	100

Unit I Algae 20 Hrs

A brief account of phycology - Indian Phycologists - M.O.P. Iyyengar and Desikachary - General characters of algae. Classification of algae by Fritsch . Occurrence, structure, reproduction and life cycle of *Nostoc* (Cyanophyceae), *Caulerpa* (Chlorophyceae), *Sargassum* (Phaeophyceae) and *Polysiphonia* (Rhodophyceae). Economic importance of Algae.

Unit II Lichens 15 Hrs

Occurrence, salient features of lichens, types - crustose, foliose and fruticose. Special vegetative structure – Soredia and Isidia. Structure and reproduction of *Usnea*. Economic importance of lichens.

Unit III Bryophytes 15 Hrs

Occurrence, general characters, classification of bryophytes by Rothmaler. Structure, reproduction and life cycle of *Riccia* and *Funaria*. Economic importance of Bryophytes.

Unit IV Pteridophytes 15 Hrs

Occurrence, general characters. Classification by Smith. Stelar organization. Alternation of generations. Structure, reproduction and life cycle of *Lycopodium* and *Marsilea*. Economic importance of Pteridophytes.

Unit V Palaeobotany 10 Hrs

Contribution of Indian Paleobotanist (Birbhal Sahni). Geological time scale. Age determination of fossil by carbon dating. Methods of plant fossilization - compression, impression and petrification. Brief account on fossils - *Rhynia* and *Lepidodendron*.

REFERENCES

1. Hale, M. E., The Biology of Lichens, 1983, Edward Arnold, London.
2. Rashid, A., An Introduction to Bryophyta, 2000, Vikas Publishing House Pvt. Ltd., New Delhi.
3. Sharma, O. P., Text Book of Algae, 2007, Tata McGraw Hill Publishing Pvt. Ltd., New Delhi.
4. Parihar, N. S., An Introduction to Embryophyta Bryophyta, 2013, Surjeet Publications, New Delhi.

PRACTICALS

1. Study of the morphology of above selected genera of all groups.
2. Make micro- slide preparations of aerial and reproductive structures.
3. Submission of records.
4. Study trip for a period of 3-5 days is obligatory.