

CBO-1002

BRYOPHYTES, PTERIDOPHYTES, GYMNOSPERMS AND FOSSILS

Unit-I Bryophytes

General characters and classification (Rothmaler and Proskauer) of Bryophytes.

Study of gametophytes and sporophytes of:

Marchantiales

Jungermaniales

Sphagnales

Bryales

Evolution of sporophytes in Bryophytes.

Economic importance of Bryophytes.

Unit-II Pteridophytes

General characters and classification of Pteridophytes.

Telome theory (evolution of sporophytes), Types of Stele and Stelar evolution.

Soral evolution in ferns, Heterospory and seed habit.

Study of gametophytes and sporophytes of:

Psilotales

Lycopodiales

Filicales

Unit-III Gymnosperms

General characters and classification (Bierhorst) of Gymnosperms.

Comparative account of:

Cycadales, Coniferales, Gnetales.

Structure and evolution of male and female gametophytes of Gymnosperms.

Rise and fall of Gymnosperms.

Unit-IV Fossils

Nomenclature of Fossils

Geological Time-scale, Fossilization.

Detailed study of following fossils:

Rhynia, *Asteroxylon*, *Protolpidodendron*

General account of following fossils:

Bennettitales, Pentoxylales, Cordaitales