

SYLLABUS

Unit—1

General characteristics and economic importance of gymnosperms; differences between gymnosperms and angiosperms; differences between manoxylic and pycnoxylic wood.

Unit—2

Fossil gymnosperms : Brief account of fossils, their formation and types (excluding details).

Lyginopteris : Introduction, external structure of stem; internal structure of primary stem, root and leaf; reproduction.

Williamsonia : Introduction, external morphology; internal structure; reproductive organs, male and female flowers.

Unit—3

Structure, reproduction (male and female strobilus, structure of ovule; development of male and female gametophytes; pollination, fertilization, development of embryo and structure of seed) and life cycle of *Cycas*.

Unit—4

Structure, reproduction (male and female strobilus, structure of ovule; development of male and female gametophytes, pollination, fertilization, development of embryo and structure of seed) and life cycle of — *Pinus*

— *Ephedra*