Semester II
Paper 1: Gymnosperms, Palaeobotany and Evolution

Unit I
Evolutionary tendencies in Gymnosperms. Origin, relationship and economic importance; Classification past and present, distribution of Gymnosperms with special reference to India, heterospory and seed habit

Unit II
A study of the morphology, structure, life history, interrelationship and phylogeny of the following groups (I): cyacdiopsida-pteridospermales, cycadales, nilssoniales; Cycadeoideales-Benettitales, pentoxyales; related fossil gymnosperms

Unit III
A study of the morphology, structure, life history, interrelationship and phylogeny of the following groups (II): coniferopsida-cordaitales, ginkgoales, coniferales, taxales; gnetopsida-gnetales, ephedrales, welwitschiales, related fossil gymnosperms

Unit IV
Palaeobotany: Plant fossils, their methods of preservation, investigation and their importance in Stratigraphy and economic geology, contribution of Prof. Birbal Sahni in Palaeobotany. Evolutionary biology: basic concepts of evolution, study of the standard stratigraphic scale and the succession of representative floras in the various geological epochs and their bearing on plant morphology and evolution.

References: