

MORPHOLOGY AND TAXONOMY OF ANGIOSPERMS (B.Sc., 2008 – 2009)

Core Theory

UNIT I

Morphology of roots, stems, leaves, inflorescences, flowers and fruits.

UNIT II

A history of Angiosperm Classification – Artificial, Natural and Phylogenetic systems of classification. An outline of Bentham and Hooker's system of Classification.

UNIT III

Plant nomenclature: Taxonomic hierarchy. Binomial and Polynomial. Author citation. Synonyms and homonym. Principle of Priority, Holotype and isotypes.

UNIT IV

Field and herbarium methods: collection, pressing, drying, poisoning, mounting and preserving of plant specimens. Floras and keys

UNIT V

Study of the following Dicotyledonous families and their economic importance: Annonaceae, Menispermaceae, Nymphaeaceae, Malvaceae, Rutaceae, Fabaceae (including the subfamilies), Cucurbitaceae, Rubiaceae, Asteraceae, Asclepiadaceae, Solanaceae, Acanthaceae and Lamiaceae
Amaranthaceae, Euphorbiaceae, Moraceae

UNIT VI

Study of the following Monocotyledonous families and their economic importance: Orchidaceae, Liliaceae, Araceae and Poaceae.

Suggested Reading

DUTTA, A. C. AND T. C. DUTTA, 1996. Botany for Degree Students. Oxford University Press, Chennai

GAMBLE, J. S, AND C.E.C. Fischer. 1967. Flora of the Presidency of Madras. Vols. I - III. Botanical Survey of India. Calcutta

HENRY, A. N. AND M.CHANDRABOSE. 1980. An Aid to International Code of Botanical Nomenclature. Today & Tomorrow's Printers and Publishers. New Delhi

HUTCHINSON, J. 1973. The Families of Flowering Plants. 3rd Edition. Oxford University Press. Oxford

JAIN, S.K. and R.R. RAO. 1977. A Handbook of Field and Herbarium Methods. Today and Tomorrow's Printers and Publishers, New Delhi

LAWRENCE, G. H. M. 1951. Taxonomy of Vascular Plants. The Macmillan Company. New York.

NAIK, V. N. 2000. Taxonomy of Angiosperms. Tata McGraw – Hill Publishing Company Limited. New Delhi.

NARANASWAMY,R.V., K.N. RAO, AND A. RAMAN 2003. Outlines of Botany. S. Viswanathan Pvt. Ltd. Chennai.

SINGH, G. 2005. Plant Systematics – Theory and Practice. Oxford & IBH, New Delhi.

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Core Practical

Study of Trees and other useful plants of M.C.C. Campus. Systematic study of locally available plants belonging to the families mentioned in theory. Construction of Dichotomous keys

Field trips will be undertaken to study the vegetation and flora. A set of 10 herbarium specimens will be submitted by each student during practical examination. Field diary will also be submitted during the practical examination.