

Paper -II (304102): Angiosperms Anatomy Economic Botany Biotechnology and Instrumentation

Angiosperms

Herbarium, Herbarium Techniques and Botanical Gardens

A brief account of modern trends in Taxonomy; Chemotaxonomy, Numerical Taxonomy, Cytotaxonomy and Molecular Taxonomy

Bentham and Hooker's System of classification up to orders[family] with respect to the following prescribed families:

Rubiaceae, Apocynaceae, Convolvulaceae, Acanthaceae, Urticaceae, Euphorbiaceae, Commelinaceae, Scitamineae

Anatomy

Normal Secondary Growth in Roots and Stem

Mechanical Tissue System and Stellar Evolution

Economic Botany

A brief account on the utility of the following plants, specifying the Binomial, family and

morphology of the useful parts.

Cereals and millets - Wheat and Ragi

Pulses - Black gram and Bengal gram

Sugar yielding Plants –Sugar cane and Beet

Spices - Pepper and Cardamom

Beverages –Tea and Coffee

Biotechnology

DNA – Structure, Replication and Recombination

Recombinant DNA Technology and Manipulation of DNA,

Selectable Markers, Reporter Genes, Promoters used in Plant Vectors,

Transgenic Plants used for improving quality of Seeds, Edible vaccines

Instrumentation

pH Meter and its application. Buffers - Use of buffers in biological research,

Principles and applications of Colorimeter, Spectrophotometer and Centrifuge.