

**SARDAR PATEL UNIVERSITY**  
**Programme: BSC (BOTANY)**  
**Semester: III**  
**Syllabus with effect from: June 2012**

<b>Paper Code:</b> US03CBOT02	<b>Total Credit: 3</b>
<b>Title Of Paper:</b> Plant Histology, Taxonomy, Economic Botany and Physiology	

Unit	Description in detail	Weighting (%)
<b>1</b>	<b>Plant Histology</b> Meristem: Introduction, classification ,cytological characters Parenchyma: Shape and arrangement, structure and contents Collenchyma: Position in the plant body, structure and arrangement Sclerenchyma: structure and types Xylem: cell types and their cytology Phloem : cell types and their cytology	
<b>2</b>	<b>Plant Taxonomy</b> Biological concept of species Characters , Examples and Economic importance of : Annonaceae,Meliaceae,Leguminosae Rubiaceae, Lamiaceae, Euphorbiaceae, Asteraceae, Brassicaceae, Myrtaceae and Liliaceae.	
<b>3</b>	<b>Economic Botany</b> A general account of Fibers (Cotton and Jute) Oil ( Mustard and Ground Nut) Pulses (Gram and Mung) Cereals (Rice, Wheat, Maize) Beverages : Tea, Coffee Timber Yielding plant: Teak and Sal.	
<b>4</b>	<b>Plant Physiology</b> Transpiration and Guttation Photosynthesis: Photosynthetic pigments, PS-I, PS-II, Cyclic and Non-cyclic Photophosphorylation, Calvin cycle ,C4 path way, CAM Pathway, Factors affecting photosynthesis Mineral nutrition: Mineral uptake, Essential macro ( Potassium, Nitrogen) and micro (Iron, Zinc) nutrients and their role, Deficiency symptoms. Seed dormancy and germination Photoperiodism	

**Basic Text & Reference Books:**

- College Botany Vol 1: Gangulee , Das and Dutta
- Taxonomy of angiosperms: B. P. Pandey
- Plant Physiology: V. Verma
- Cell and Molecular Biology: De Robertis and De Robertis 5. Economic botany : Hill

