

SARDAR PATEL UNIVERSITY
Programme: B.Sc
Semester: I
Syllabus with effect from: June-2011

Paper Code: US01CBIO02	Total Credit: 2
Title of Paper: Plant Cytology & Taxonomy	

Unit	Description in Detail	Weightage (%)
I	Viruses : History, Properties, Structure and symmetry, Lytic and Lysogenic cycle Bacteriophage, TMV, Prokaryotic cell . Ultra structure of Bacterial cell, Morphological types of Bacteria, Vegetative, Asexual and Sexual (Transformation, conjugation and Transduction) reproduction in brief.	25%
II	Eukaryotic Cell: Ultrastructure of eukaryotic cell. Ultrastructure and functions of Cell organelles: Cell wall, Plasma, membrane, Mitochondria, Chloroplast, Endoplasmic Reticulum, Golgi, Complex, Lysosomes and Ribosomes. Cell Division: Mitosis and its significance.	25%
III	Plant Morphology, Phyllotaxy and its types . Alternate, Opposite and Whorled Leaf Morphology . Parts of simple leaf Compound leaf and its types . Pinnate compound and Palmate compound Inflorescence, Racemose : Raceme, Spike, Catkin, Spadix, Corymb, Umbel, Capitulum. Cymose: Monochasial, Dichasial and Polychasial Special types: Verticillaster, Hypanthodium, Cyathium Solitary: Terminal and Axillary Flower . Introduction to four Whorls of flower, types of flower based on position of ovary	25%
IV	Gymnosperms: General characters Cycas: Distribution, Plant Habit, morphology, anatomy (with include leaflet and coralloid root only), Spore producing structures Angiosperms: General Characters Outline classification of Bentham and Hooker.s system General characters of Families . Malvaceae, Solanaceae, Cucurbitaceae Plant of economic importance of . Malvaceae : Jasud (Hibiscus rosa-sinensis), Bhoy Kanski(Abutilon indicum), Bhindi (Abelmoschus esculentus), Cotton(Gossypium arboretum) Solanaceae : Brinjal (Solanum melongena), Ashwagandha (Withania somnifera) Tobacco (Nicotiana tabacum), Chilli(Capsicum annum) Cucurbitaceae: Galka (Luffa cylindrical), Pumpkin(Cucurbita maxima) Kakdi (Cucumis sativus), Karela(Momordica charantia)	25%

