

SARDAR PATEL UNIVERSITY
Programme: BSC (BOTANY)
Semester: V
Syllabus with effect from: June 2013

Paper Code: US05CBOT06	Total Credit: 3
Title Of Paper: Plant physiology	

Unit	Description in detail	Weighting (%)
1	Growth and growth substances- Growth and development, growth pattern, factors affecting growth in plants, Structure, biosynthesis, analysis, physiological effects and mechanism of action of the following plant growth regulators: Auxins, Gibbrellin, Cytokinin, ABA, Ethylene, and Polyamines.	
2	Control of flowering - Flowering, physiological definition, role of light-Photoperiodism, discovery, variation in response, long day, short day and day neutral plants, inductive, non inductive cycles, role of temperature, Vernalisation, mechanism, bolting in long day plants, role of growth regulators, nutrient status, nature of flowering stimulus, diffusibility & florigen concept.	
3	Senescence and aging: Pattern of senescence Cellular, tissue, organ, whole plant. Physiological changes during senescence, Photosynthesis, respiration, N ₂ fixation, mineral uptake, protein and nucleic acids, membrane and organelles. Post harvest physiology of flowers, fruits and vegetables.	
4	Stress physiology- Characteristics of stress response to water deficit (drought), flooding, high temperature, low temperature, salinity and heavy metal stress.	

Basic Text & Reference Books:

- Plant physiology: S. Mukherjee and A. K. Ghose
- Plant physiology: Verma and Agrawal
- Plant physiology: Salisbury and Rose

