

Practical Plan

Name of the college: Government College of Arts, Science & Commerce, Sanquelim-Goa				
Name of Faculty: DR Jyosna Gawas		Subject: Botany		
Paper code: BOT-101		Program: B.Sc.		Batch: I
Academic year: 2026-2027		Semester: I		Total Practicals/Labs: 15
Credits: 01				
Course Objectives: 1. To introduce students to the structural and functional diversity of plant organs, tissues, and physiological processes through hands-on experiments and demonstrations. 2. To develop competence in using basic botanical instruments and experimental techniques for studying plant morphology, anatomy, physiology, and responses to environmental stimuli.				
Expected Course Outcome: 1. Apply fundamental botanical concepts to identify and describe different plant organs, tissues, and physiological processes through laboratory experiments. 2. Demonstrate proficiency in handling basic botanical instruments and perform experiments related to photosynthesis, respiration, water relations, and plant movements.				
Student Learning Outcome: 1. Identify and differentiate various types of roots, stems, leaves, inflorescences, fruits, seeds, and tissues with reference to morphology and anatomy. 2. Conduct simple physiological experiments (e.g., photosynthesis, osmosis, transpiration) and interpret results to understand plant responses and functions.				
Month	Practicals/Labs Scheduled Date	No. of Practicals/Labs planned	List of Experiments	Reference books
June	20/06/2026	0		
	27/06/2026	1	Study of different types of fossils	
July	04/07/2026	1	To study different types of roots and stem	
	11/07/2026	1	Study of different characters of leaves with respect to types, phyllotaxy, shape, apex, margin and venation.	
	18/07/2026	1	Study of whorls of a flower, types of inflorescence and fruits.	
	25/07/2026	2	a. Demonstration of epigeal and hypogeal seed germination. b. Study of effect of UV light on germinating seeds.	

August	01/08/2026	2	Study of types of meristems, simple and complex tissues using permanent slides.
	08/08/2026	2	a. Demonstration of phototropism and geotropism in plants. b. Demonstration of nyctinasty and seismonasty in plants.
	15/08/2026	0	Independence Day
	22/08/2026	1	Comparison of oxygen evolution during photosynthesis in bright light and diffused light by inverted funnel method.
	29/08/2026	1	Comparison of carbon dioxide evolution during respiration at room temperature and RT+10°C in germinating seeds using phenol red indicator.
September	05/09/2026	2	a. Study of plasmolysis in <i>Rheo</i> leaf cells using sucrose solution. b. Study of imbibition in seeds.
	12/09/2026	1	Study of basic instruments used for preparation of culture media and inoculation of seeds (demonstration).
	19/09/2026	0	Ganesh Chaturthi brake
	26/09/2026	1	Understanding the use of Agribuddy App (or similar agriculture apps) for farm planning and crop management.
October	03/10/2026	1	Visit to research institution. / Field visit to observe the plant diversity (Algae, Bryophytes, Pteridophytes, Gymnosperms and Angiosperms) and identification of any two plant species using Google Lens or similar app.
	10/10/2026		Practical Exam

Assessment Rubrics

Component	Max Marks
ISA 1	NA
ISA 2	NA
ISA 3	NA
Practical	25
Project	NA
Semester End Exam	NA