

Practical Plan

Name of the college: Government College of Arts, Science and Commerce, Sanquelim Goa

Name of Faculty: Mrs. Preethi M. Pednekar, Ms.Aishwarya Nene

Subject: Zoology

Paper code: ZOO 201
Cell Biology and Genetics

Program: S.Y,B.Sc

Division/Batch: 1

Academic year: 2024-25

Semester: III

Total Practicals/Labs: 30

Credits: 01

Course Objectives: 1.Imparting understanding of the cellular organisation.
2. Understanding the genetic basis of inheritance.
3. Analyze the structure and function of cells, organelles, and cellular components.
4. Gain practical experience in laboratory techniques used in cell biology and genetics research

Expected Course Outcome: Knowledge of the cellular organisation.
2. Distinction between prokaryotic and eukaryotic cell
3. Interpretation of the transmission of traits based on the laws of inheritance.
4.Predicting the outcome of monohybrid and dihybrid genetic crosses

Student Learning Outcome

At the end of the course, students will be able to

1. Explain the cellular organisation.
2. Distinguish between prokaryotic and eukaryotic cell
3. Interpret the transmission of traits based on the laws of

inheritance.

4. Predict the outcome of monohybrid and dihybrid genetic crosses

Month	Practicals/Labs Scheduled Date	No. of Practical/Labs planned	List of Experiments	Reference books
July 2024	2 July 2024	1	Gram staining to observe bacteria from curd/ tartar.	
	9 July 2024	1	Use of a suitable staining technique to mount buccal epithelial cells.	
	16 July 2024	1	Temporary mount of onion root tip cells to study mitotic stages.	
	23 July 2024	1	Use of photomicrographs /permanent slides to study the meiotic stages	
	30 July 2024	1	. Study of Polytene Chromosome	
August 2024	6 August 2024	1	. Study of cell organelles—Mitochondria, Endoplasmic reticulum, Golgi complex using Electron micrographs	
	13 August 2024	1	. Study of Human Karyotype- Normal male,	
	20 August 2024	1	. Study of Human Karyotype- Normal female , Cri-du-chat syndrome	
	27 August 2024	1	Study of Human Karyotype- Down's syndrome Turner's Syndrome	
September 24	3 September 2024	1	Preparation of Pedigree chart of tongue rolling, hitch hikers thumb, Widows peak, folding of arms, clasping of hands, attached/free ear lobes.	
		1	Problems on Mendelian monohybrid and dihybrid crosses using beads.	
	17 September 2024	1	Problems on Multiple genes	
	24 September 2024	1	Human blood grouping---(Rh and ABO)	
October 24	1 October 2024	1	Repetition/revision practical	

	8 October 2024	1	certification	
	15 October 2024		Exam	