		Practical Plan			
Name of the college: Govt. College of Arts, Science and Commerce, Sanquelim - Goa					
Name of Faculty: Ms. Preethi Pednekar			**Subject:** Zoology		
Paper code: ZOO 305 (Evolution)			**Program: T. Y. BSc**	**Division: Batch 1**	
Academic year: 2025- 2026			**Semester: VI**	**Total Practicals/Labs: 30**	
Credits:	01				

Course Objectives: 1. Understand the principles of evolutionary biology and its application

1. to the diversity and adaptation of animal species.
2. 2. Develop an understanding of genetic variability, isolating mechanisms and natural selection within a population.
3. 3. Learn how changes in the gene pool leads to evolution of species.
4. 4. Understand the Geo-biological history of earth and evolution of horse and man.

Expected Course Outcome:

Student Learning Outcome:

Month	Practicals/Labs scheduled Date	No. of Practical/ Labs planned	List of Experiments	Reference books
December 2025	2/12/25	1	Study of fossils (models/ pictures)-Trilobite, Ammonite, Ostrea, Graptolite, Archaeopteryx (Any four).	Rastogi VB (2018). Organic Evolution (Evolutionary biology). 13th Edition. MedTech, New Delhi. 8. V. B. Rastogi, Organic Evolution, 3rd Edition, MedTech, 2018.
	9/12/25	1	To understand evolutionary significance of Homologous organs (Using models/ pictures/Specimens).	
	23/12/25	1	To understand evolutionary significance of Analogous organs	

			(Using Models/ Pictures/Specimens).	M. Ridley, Evolution, 3rd Edition, Blackwell Publishing, 2004. P. S. Verma, Cell Biology, Genetics, Molecular Biology, Evolution and Ecology, S. Chand Limited, 2004.

January 2026	6/1/26	1	An exercise to illustrate the concepts of Genetic drift.	
Jan-Feb	13/1/26	1	Demonstration of role of natural selection in changing allele frequencies using simulation studies.	
	20/1/26	1	Study of Prehuman ancestors: Proconsul, Dryopithecus, Ramapithecus and Human ancestors: Australopithecus, Homo habilis, Homo erectus (Java man/ Peking Man), Homo sapiens (Neanderthal man/ Cro-Magnon Man) and Homo sapiens sapiens with the help of models/ pictures.	
	27/1/26	1	Study of Macroevolution using Darwin finches (Pictures/ Printed material).	
	3/2/26	1	Study of successive stages of evolution of horse with the help of pictures with special reference to limb digits, dentition, brain size and skull: Eohippus, Mesohippus, Merychippus, Pliohippus and Equus	
	10/2/26	1	Problems on Phenotype frequency, Allele frequencies and Genotype frequencies	
Feb-March	17/2/26	1	Study and verification of “Hardy-Weinberg Law of equilibrium” by Chi-square analysis.	
	24/2/26	1	Study of extinct species: Trilobites, Eurypterids and Dinosaurs (with the help of Models/ Pictures).	
	3/3/26	1	Study of vestigial organs as evidence of evolution (with the help of models/pictures).	
	10/3/26	1	Revision	
	17/3/26	1	Revision	
	24/3/26	1	Journal Certification	