

**Lesson Plan for Postgraduate course in Zoology for the period July 2015- June 2016,**

**Dr Madhumita Manna, Associate Professor and Head**

Academic Quarter	Class	Name of the Teacher	Topics to be covered	No. Of Lectures	Tests
July 15 to September 15	PG Sem I		Theory: Paper III: Cell division and cell cycle, Mitosis and meiosis, their control, steps in cell cycle, and control of cell cycle Paper IV: ELISA, Western Blotting and RIA	06 10	Continuous evaluation tests for Sem I and Sem III
	PG Sem II			Final Exams. For Sem II and Sem IV	
	PG Sem III		Paper 11 Microbiology – Classification and biology of Microbes-Protozoa		06
			Paper 12 Cloning- vectors, Restriction enzymes, restriction mapping, expression Practical: Gel electrophoresis and staining of DNA		10 12
			Elective paper: Parasitology & Immunology: Paper 14 Epidemiology of Leishmania, Antigen-antibody reaction and its role in clinical parasitology: common methods like ELISA, Immunoblot and MCAB  Dissertation paper work for Sem III Elective paper students	06 12 08 08	
PG Sem IV					
September '15 to December '15	PG Sem I		Paper II: Gene and somatic cloning techniques- animals as bioreactors, knockout model systems and their utility Paper IV: pH and buffer, Gel Electrophoresis and Chromatography	06 04 10	Continuous evaluation tests for Sem I and Sem III
			Practical: Spectrophotometric analysis of DNA and protein purity	06	
	PG Sem II				
	PG Sem III		Paper 11 Immunology: Monoclonal antibodies, uses of Abzyme Immunological techniques Different types of PCR and their utilities Fingerprinting, footprinting, RAPD, RFLP	04 06	

			Elective paper: Parasitology & Immunology: Paper 14 Ultrastructure of important protozoa Metabolism –carbohydrate of protozoa	12	
	PG Sem IV		Practical: Preparation of antigen (SLA)	12	
			Dissertation paper work for Sem III Elective paper students		
January '16 To March'16	PG Sem I				Final Examinations for Sem I and Sem III
	PG Sem II		Paper 9: Polymerase chain reaction	06	Continuous evaluation tests for Sem II and Sem IV
			Practical Paper 10C Microbial culture maintenance Gram staining	10 06	
	PG Sem III				
	PG Sem IV		Paper 16: Evolution Population Genetics and problems Elective –Some important diseases of human	24 08	
April'16 To June'16	PG Sem II		Paper 9: RFLP, RAPD, AFLP & Forensic utilities Genomics principles Practical Paper 10C PCR	12 06 18	Continuous evaluation tests for Sem II and Sem IV
	PG Sem III		Dissertation paper work for Sem IV Elective paper students		
	PG Sem IV		Elective – Probe technology for parasitic diagnosis	12	
			Practical – Visit to Laboratory by all Elective paper faculty Growth curve preparation for parasites	1 day 24	
			Dissertation paper work for Sem IV Elective paper students		

