Department of Zoology, Basirhat College

Session-2018-2019 (Jan '19-June '19)

Lesson Plan -For Even Semesters

Honours

Semester: II Honours

Lesson Plan for Course: Non-Chordates II Code…… ZOOACOR03T … Credit……4

- Course coordinator:……**Subharaj Paul**…….
- Course Outcome

1. CO1: Upon completion the course the students will learn different classes of non chordate.
2. CO2: Enhancing their observation power and analyzation ability.
3. CO3: Undarstand many biological process related to different phylum.

Course planner

Month	Course Topic	Teacher	Class-hour	Remarks*
Jan	**UNIT 1: COELOM**	SP	2	Classroom Lecture, provide notes
	UNIT 2: ANNELIDA	SP		Classroom Lecture, provide notes
	annelida classification		1	
	Annelida excretion		1	
	Annelida excretion		1	
	practical		2	
	Annelida excretion		1	
	Practical		3	
	Class test			
Feb	**Unit 3: Arthropoda**	RM	5	Classroom Lecture, provide notes
	Practical		1	
	Metamorphosis in Insects		2	
	Social life in bees and termites		2	
March	**UNIT 4 : CLASSIFICATION OF Onychophora** General characteristics	RM	5	Classroom Lecture, provide notes
	CLASS TEST			
	Unit 5: Mollusca General characteristics and Classification up to classes	CG	5	Classroom Lecture, provide notes
	PRATICAL		1	

For CBCS

	Respiration in Mollusca		2	
	Torsion and detorsion in Gastropoda		2	
April	**Unit 6: Echinodermata INTRODUCTION**	CG		Classroom Lecture, provide notes
	General characteristics and Classification up to classes		2	
	Mid- Term Examination			
	Water-vascular system in Asteroidea		1	
	Larval forms in Echinodermata		**1**	
May	**Unit 7: Hemichordata** General characteristics of phylum Hemichordata	AM	2	Classroom Lecture, provide notes
	Phylogenetic relationship with non-chordates and chordates (only recent concept)*		1	
	PRACTICAL		2	
	Hemichoedata		1	
	Question discussion		1	
	End-term Examination			
			Total 47 hrs	

Resources :

Text Book:

- Biology of the Invertebrates by Jan A Pechenik, Mcgrew-Hill, 2014
- Invertebrates by Brusca and Brusca 2nd Ed, Sinauer Associates

Referrence: • An introduction to Invertebrates by Janet Moore 2nd ed. • Barnes, R.S.K., Calow, P., Olive, P.J.W., Golding, D.W. and Spicer, J.I. (2002). The Invertebrates: A New Synthesis, III Edition, Blackwell Science • Barrington, E.J.W. (1979). Invertebrate Structure and Functions. II Edition, E.L.B.S. and Nelson • Chaudhury,S.(2017). Economic Zoology. New Central Book Agency

Lesson Plan for Course: CELL BIOLOGY…… Code: ZOOACOR04T…. Credit: 4….

1. Course coordinator:..**Chinmoy Ghosh**…
2. Course Outcome :
   i) CO1: Can understand the structure and functions of various cell organelles involved in diverse cellular processes.
   ii) CO2: Can comprehend the different phases of cell cycle and cellular death and their importance in maintaining stability of body system.
   iii) CO3: Relate the cellular processes with the process of cell signalling.
   iv) CO4: Perform the laboratory tests for detecting various cellular components and processes.

Course planner

Month	Course Topic	Teacher	Class-hour	Remarks*
Jan	**Unit 1: Overview of cells**	**Chinmoy Ghosh**		Classroom Lecture, provide notes
	Prokaryotic cell and Eukaryotic cell		2	
	Virus, Viriods		1	
	Mycoplasma, Pirions		1	
	Unit 2:Plasma Membrane	**Chinmoy Ghosh**		Classroom Lecture, provide notes
	Various Models of plasma membrane structure		3	
	Transport across membranes: Active and passive transport, Facilitated transport		3	
	Cell Junctions: Tight junctions, Gap junctions, Desmosomes,		2	
May	**Unit 2:Plasma Membrane**	**Chinmoy Ghosh**		Classroom Lecture, provide notes
	Extracellular matrix cell interaction		1	
	Unit 3: Endomembrane System	**Chinmoy Ghosh**		Classroom Lecture, provide notes

	Structure and functions: Endoplasmic reticulum		2	
	Golgi apparatus		1	
	Lysosomes		1	
	Class Test		1	
	Unit 4: Mitochondria and Peroxisomes	**Subharaj Paul**		Classroom Lecture, provide notes
	Mitochondria: structure, Semi-autonomous nature		2	
	Endosymbiotic hypothesis		1	
	Mitochondrial respiratory chain		3	
June	**Unit 4: Mitochondria and Peroxisomes**	**Subharaj Paul**		Classroom Lecture, provide notes
	Chemi-osmotic hypothesis		2	
	Peroxisomes		2	
	Unit 5: Cytoskeleton	**Rajashree Mallick**		Classroom Lecture, provide notes
	Structure and function: Microtubules		2	
	Microfilament		2	
	Intermediate filaments		2	
	Unit 6: Nucleus	**Rajashree Mallick**		Classroom Lecture, provide notes
	Structure of Nucleus		2	
	Nuclear Envelope		1	
	Nuclear pore complex, Nucleolus		1	
	Euchromatin and heterochromatin		3	
	Chromatin packaging(nucleosome)		2	
	Class test		1	
	End-term Examination			
			Total: 45 Hrs	

Resources :

1. Books: Lodish 7th edition, The cell (Cooper 4th edition),Karp 6th edition, The molecular biology of the cell (Alberts 5th)
2. Other resources : Youtube animation links, Wikipedia, some ebooks

*Remarks will specify

- The nature of the class-topic (viz. Theoretical, Practical, and Tutorial).
- Methodology of teaching (whether using ICT, engaging students in group discussion, quiz etc. etc.)
- Different modes of assessment. (Please check UGC evaluation reform

For CBCS