

B.Sc. Zoology

Semester : II

Name of the Course: **Chordate Zoology**

Course code : **ZC1721**

Teaching Plan

Unit	Module	Description	Hours	Learning Outcome	Pedagogy	Assessment
I	Prochordata (12 Hrs)					
	1	Introduction to Chordata: General characters of chordates and classification up to classes with names of examples only, Prochordata: General characters and classification up to classes with examples only.	3	Outline the general characters of chordates	Lecture, PPT, You Tube	MCQ, Short test, Mind Map, Assignment, Formative Assessment I (1,2,3), Quiz I
	2	Type study: Amphioxus – external features Digestive system Excretory system	4	Describe the external and internal features of Amphioxus	Lecture, Chalk and talk, PPT, Discussion	Formative Assessment II (4), Quiz II
	3	External features and biological significance of the following: <i>Ascidian</i> , <i>Balanoglossus</i> , <i>Salpa</i> .	3	Discuss on the external features and biological significance of Prochordates	Lecture, Chalk and talk, Jigsaw	
	4	Agnatha: <i>Petromyzon</i> – External morphology. Ammocoetes larva.	2	Explain the external features and biological significance of Agnatha.	Lecture, Chalk and talk, PPT	
II	Pisces (12 Hrs)					
	1	Pisces: General characters and classification up to	2	List the general characters and	Probing and interactive session,	

		sub classes with names of the examples only		classification of pisces	Lecture	Short test Mind map Objective test Formative Assessment II (1,2,3), Quiz II Formative Assessment III (4)	
	2	Type study: <i>Scoliodon</i> - external characters, placoid scales.	2	State the general characters of <i>Scoliodon</i> .	Lecture, Chalk and talk		
	3	Digestive system, respiratory system Circulatory system Nervous system Receptor organs, urino-genital system.	4	Describe the physiology of the different systems of shark.	Lecture, PPT, You tube		
	4	Accessory respiratory organs in fishes Migration of fishes Lung fishes (Dipnoi).	4	Explain respiration and migration of fishes.	Lecture, video Discussion		
III	Amphibia & Reptilia (12 Hrs)						
	1	Amphibia: General characters and classification up to orders with names of the examples only.	2	List the general characters and classification of amphibian.	Lecture, PPT	Short test, MCQ, Objective test, Assignment, Formative Assessment I (4,5), Quiz I, Formative Assessment III (1,2,3)	
	2	Type study: Frog – External characters Endoskeleton: Skull, typical vertebra, atlas, girdles and limbs.	3	Recall the characteristics of frog	Lecture, PPT Specimen		
	3	Biological significance of Axolotl larva, Ichthyophis Parental care in Amphibia.	2	Discuss the biological significance and parental care in axolotl larva and ichthyophis	Video, Lecture, Group discussion		
	4	Reptilia: General characters and classification up to orders with names of the examples only.	2	Outline the general characters and classification of reptiles.	Lecture, PPT, Flip class		

	5	Type study: <i>Calotes</i> – External characters, Circulatory system Excretory system. Identification and study of few poisonous snakes in India - first aid for snake bite and anti-venom.	3	Explain external characters of Calotes and functions of internal organs, Identify poisonous snakes	Lecture, PPT, Chalk and talk, Demonstration on identification of poisonous snakes	
IV	Aves (12 Hrs)					
	1	Aves: General characters and classification up to sub classes with names of the examples only.	1	List the general characters and classification of birds.	Probing and interaction, Discussion	Open book test, MCQ, Formative Assessment I (1,2), Quiz I, Formative Assessment II (3,4), Quiz II
	2	Type study: <i>Columba livia</i> - external characters, exoskeleton Flight muscles.	3	Explain the external characters and importance of flight muscles.	Observation of pigeon- Field study	
	3	Digestive system, Respiratory system, Urino-genital system	4	Discuss the systems of <i>Columba livia</i>	Interactive session, Lecture	
	4	Migration of birds Flight adaptation in birds Flightless birds (Ratitae): general characters and examples.	4	Compare the Flight adaptation in birds and their migratory behaviour.	Video, Lecture	
V	Mammalia (12 Hrs)					
	1	Mammalia: General characters and classification up to subclasses with names of the examples only.	2	Identify the key taxonomic characters and classify mammals.	Lecture, Chalk and talk	Short test, Quiz, Formative Assessment II (1) Quiz

	2	Type study: Rabbit - external morphology Structure of skin, dentition.	2	Describe the external morphology, skin and dentition of rabbit.	Observation of rabbit - to analyse the general characters	II Formative Assessment III (2,3,4,5)
	3	Digestive system, Respiratory system Urinogenital system.	3	Explain the structure of digestive, respiratory and urinogenital system of rabbit.	Lecture, PPT	
	4	Structure of heart Structure of brain.	2	Describe the structure of heart and brain.	Lecture, Video class	
	5	Egg laying mammals- Pouched mammals Adaptations of aquatic mammals.	3	Compare egg laying and pouched mammals.	Lecture, PPT, Chalk and talk	

Course instructors

Dr. J. Vinoliya Josephine Mary
Dr. A. Punitha

Head of the Department

Dr. S. Mary Mettilda Bai

Semester : II

Major Practical II

Name of the Course : Chordate Zoology

Course code : ZC17P2

Teaching Plan

Module	Description	Hours	Learning outcome	Pedagogy	Assessment
1	Shark: Mounting of Placoid scales	2	Mount placoid scales	Practical	Pre assessment Performance assessment. Model Practical
2	Frog: Arterial system	2	Recall the parts of arterial system	Demonstration	
3	Frog: Brain	2	Identify the parts of frog brain		
4	Reptiles: Key for Identification of poisonous and non-poisonous snakes	2	Recollect the key points	Charts	
5	Pigeon: External features and	6	Identify different types	Observation of pigeon and PPT	

	identification of feathers, Digestive system, Respiratory system		of feathers and parts of internal organs.	of systems	
6	<i>Amphioxus</i> , Balanoglossus, Ascidian, <i>Petromyzon</i> , Ammocoetes larva, <i>Narcine</i> , <i>Hippocampus</i> , <i>Anguilla</i>	4	Identify and explain the biological significance	Specimens	
7	<i>Rhacophorus</i> , Axolotl larva, <i>Ichthyophis</i> , Salamander, House Lizard, Chamaeleon, <i>Draco</i> , <i>Chelone</i> , Cobra	4			
8	Sparrow, Woodpecker, Kingfisher, Pelican, Penguin, Owl, Pangolin, Kangaroo, Bat, Squirrel, Loris, Whale	4			
9	Typical vertebra (frog), atlas (frog), pectoral girdle (frog), pelvic girdle (frog), forelimb skeleton (frog), and hind limb skeleton (frog)	4			
10	Submission of an “Animal Album” containing photographs or paper cuttings of the locally available chordates of different taxa with brief write up		Familiarize the animals and documentation	Field visit	
11	Maintenance of campus Bird-watcher’s Diary (group work).				
12	Field visit to places of Zoological importance				

Course instructors

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Dr. S. Mary Mettilda Bai

B.Sc. / B.A (Non-Major Elective Course)

Semester : II
Name of the Course : Common Ailments and Simple Remedies
Course code : ZNM172

Teaching Plan

Unit	module	Topics	Hours	Learning outcome	Pedagogy	Assessment
I	(12 Hrs)					
	1	Anaemia and types of anaemia.	2	Explains the details about anaemia	Lecture, Chalk and Talk	Evaluation through MCQ, Short test, Mind Map, Oral presentations, Formative Assessment I (1,2,3,4)
	2	Blood pressure-types, symptoms, treatments and prevention.	4	Summarize the pros and cons of blood pressure	Lecture, PPT	
	3	Stroke and Heart attack.	3	Compare the symptoms of stroke and heart attack	Lecture, Mind map	
	4	Diabetes- causes, symptoms, diagnosis and treatment.	3	Analyse the diagnosis and treatment of diabetes.	Lecture, PPT	
II						
II	(12 Hrs)					
	1	Dental caries and Pyorrhoea-causes, symptoms, treatment and prevention	3	Point out the dental problems	Lecture, Chalk and Talk	Short test, Mind map, Objective test, Submission of summary report,
2	Jaundice- causes, types, symptoms, treatment and prevention, Typhoid- causes, types, symptoms and treatment	4	Differentiate the symptoms and treatment of jaundice and typhoid	Lecture, Chart		

	3	Digestive disorders: Diarrhoea - causes and treatment	3	Summarize the digestive disorders	Discussion, PPT	Formative Assessment I (1,2,3,4)	
	4	Chronic constipation-causes, prevention	2	Describe chronic constipation	Lecture, Chalk and Talk		
III	(12 Hrs)						
	1	Common cold, cough-treatment	3	Identify the treatment of common cold	Lecture, PPT, Flash cards	Short test, MCQ, Assignment, Poster presentation Formative Assessment II (1,2), Quiz II Formative Assessment III (3,4)	
	2	primary complex-causes and treatment	3	State the causes of primary complex	Lecture, Video, Group discussion		
	3	Asthma- causes, symptoms and treatment	4	Gain knowledge about Asthma	Lecture, PPT		
	4	Headache- causes and types	2	Classify the types of headache	Lecture, Mind map, Flash cards		
IV	(12 Hrs)						
	1	Dengue fever- causes, types, symptoms and treatment	4	Understand the treatment of dengue fever	Lecture, PPT, Flow chart	MCQ, Poster presentation, Formative Assessment II (1,2) Formative Assessment III (3)	
	2	Malaria - causes, types, symptoms and treatment	4	Recognize the symptoms of malaria	Lecture, Mind map, Flipped learning		
	3	Filariasis (Elephantiasis) - causes, types, symptoms and treatment.	4	Explains Elephantiasis	Lecture, PPT, Group discussion		
V	(12 Hrs)						
	1	Aging- old age related ailments- Depression of loneliness and some remedies to keep them engaged.	4	Summarize old age related ailments.	Lecture, Discussion, Video class	Short test, Quiz, Assignment, Oral presentation, Formative Assessment III (1,2,3)	
	2	loss of memory, osteoporosis, Parkinson's disease, Alzheimer's disease	4	Interrelate various diseases	Lecture, Video, Team teaching		

	3	Fomentation and cleansing enema. Arthritis- causes, types, symptoms and treatments.	4	Point out the symptoms and distinguish the types of Arthritis.	Lecture, PPT, PPT	
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Course instructors
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Dr. S. Mary Mettilda Bai

Semester : IV
Name of the Course : Genetics
Course code : ZC1741

Teaching Plan

Unit	Module	Description	Hours	Learning outcome	Pedagogy	Assessment
I	1	Mendelian laws of inheritance - Monohybrid cross.	2	Explain Mendel's principles of segregation, and independent assortment and solve the problems.	Lecture , Flipped, Problem solving	Short test, MCQ, Formative assessment I (1,2,3,4,5) Quiz I Mind map Formative assessment II (6). Quiz II
	2	Dihybrid - back cross and test cross.	2	Solving dihybrid cross genetic outcomes utilizing Punnett squares. Differentiate test cross and back cross.	Lecture, Problem solving, Q and A session	
	3	Complete, incomplete and codominance inheritance	1	Differentiate different dominance	PPT, Flip class, Discussion, Mind map	
	4	Interactions of genes: Complementary genes, Supplementary genes, Epistasis, Lethal genes.	3	Recognize different interactions of genes in inheritance.	Lecture , Chalk and talk, Jigsaw, Discussion , Q & A Session	
	5	Polygenic inheritance (Skin colour in man),	2	Differentiate the polygenic and Multiple allelic	Lecture, Chalk and talk	

				inheritance		
	6	Multiple alleles: ABO blood group in man, Rh factor in man; coat colour in rabbit.	2	Comprehend multiple allelism	Lecture, Chalk and talk	
II	1	Linkage - kinds, theories of linkage, linkage groups.	1	Summarize the theories of linkage and its groups	PPT, Discussion, Mind map,	Short test, MCQ Formative assessment II (1,2,3,4,5). Quiz II Formative assessment III (6)
	2	Crossing over - mechanism, theories of crossing over, cytological evidence (Stern's experiment and Tetrad analysis), significance of crossing over.	3	Explain the mechanism of crossing over, its evidences and significance.	Lecture, Chalk and talk, Video	
	3	Chromosome map: two point and three point cross, construction of chromosome map.	3	Describing the methods to generate genetic maps and calculate gene distances.	Lecture, Chalk and talk, PPT	
	4	Sex determination in man and <i>Drosophila</i> .	1	Explain how genetics can influence gender determination.	Lecture, Chalk and talk, PPT	
	5	Nondisjunction - Primary and secondary nondisjunction in <i>Drosophila</i> .	2	Summarizing genetic anomalies caused by changes in chromosome number.	Lecture, PPT, Discussion, Jigsaw	
	6	Syndromes in man: Turner's, Klinefelter's and Down syndrome.	2	Relating variations in chromosome number and structure to phenotypic variation.	Lecture, PPT, Jigsaw, Flip class	
III	1	Cytoplasmic inheritance - Kappa particles in <i>Paramecium</i> , milk factor in mice, shell coiling in <i>Limnaea</i> .	3	Summarize the concept of inheritance by means of different models	Lecture, Chalk and talk, Discussion	Short test, MCQ, Formative assessment I (1, 2,3)

	2	DNA as genetic material - Bacterial transformation, conjugation and transduction.	3	Comparing the process of transformation, conjugation and transduction	Lecture, Chalk and talk, PPT	Quiz I Mind map Formative assessment II (4) Quiz II
	3	Mutation: Chromosomal mutation - changes in structure and number, aneuploidy and euploidy.	3	Summarize mutation and the resulting structural changes.	Lecture, PPT, Jigsaw, Mind map	
	4	Gene mutation - mutagens. DNA repair mechanisms.	3	Describe mutagens and repair mechanisms occurring in the human body.	Lecture, Chalk and talk	
IV	1	Human chromosomes: autosomes and allosomes – Karyotype and idiogram.	2	Relating the various mechanisms taking place in human chromosomes	Lecture, PPT	Short test, MCQ, Formative assessment II (1,2,3,4), Quiz II Mind map Formative assessment III (5, 6)
	2	Simple Mendelian traits in man.	2	Explain Mendelian traits	Lecture, Chalk and talk, Mind map	
	3	Twins - types, development and application.	2	Evaluating the mechanism of formation of twins	Lecture, Flipped learning, Discussion	
	4	Inborn errors of metabolism. (Phenylketonuria, Alkaptonuria, Albinism).	2	Summarize the inborn errors in metabolism using a few examples	Lecture, PPT, Flip class	
	5	Sex - Linked genes and their inheritance.	2	Describe sex-linked inheritance	Lecture, Chalk and talk, Jigsaw	
	6	X - Linked genes (Colour blindness and Haemophilia), holandric genes.	2	Summarizing the expression of X-linked genes.	Lecture, Chalk and talk, Flipped class	

V	1	Population genetics – Hardy Weinberg equilibrium – calculation of gene frequency.	3	Describe the genetics profile of populations as specified by Hardy Weinberg.	Lecture, Chalk and talk, Problem solving	Formative assessment III (1,2,3,4, 5)
	2	Factors affecting gene frequency – selection, mutation, genetic drift and migration.	3	Evaluating the mechanisms that change gene frequencies in populations.	Lecture, Chalk and talk, Role play	
	3	Inbreeding, outbreeding and heterosis.	2	Describe the process leading to speciation.	Lecture, Chalk and talk, PPT	
	4	Eugenics, Euthenics and Euphenics. Pedigree analysis.	2	Identify ethical issues related to gene inheritance.	Lecture, Chalk and talk, Discussion	
	5	Genetic prognosis - Genetic counseling.	2	Describe the major trends in genetic analysis.	Lecture, Chalk and talk, Discussion	

Course instructors
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Semester : IV
Name of the Course : **Biostatistics and Computer Applications**
Course code : **ZC1742**

Teaching Plan

Unit	Module	Topics	Hours	Learning outcome	Pedagogy	Assessment
I	Basic concepts of biostatistics (12 Hrs)					
	1	Basic concepts of Biostatistics: Population, Data, Sample and variable.	2	State the Basic concepts of Biostatistics	Lecture, PPT,	MCQ, Class test,
	2	Collection of data - sampling methods.	2	Discuss the collection of data.	Lecture, PPT, video	Assignment, Formative Assessment I (1,2,3,4)
	3	Processing of data: classification and tabulation.	4	Classify and tabulate the data.	Lecture, PPT, exercise	Quiz I
	4	Presentation of data:	4	Draw	Lecture,	

		Diagrams and graphs.		diagrams and graphs using the data.	PPT, exercise	
II	Measures of central tendency & dispersion (12 Hrs)					
	1	Measures of central tendency – Arithmetic Mean, Median, Mode.	4	Apply Arithmetic Mean, Median & Mode.	Lecture, PPT	Quiz, Assignment, Formative Assessment I (1)
	2	Measures of dispersion – Range, Quartile deviation, Percentiles, Mean deviation, Coefficient deviation - standard deviation.	5	Apply and relate the appropriate statistical methods.	Lecture, PPT, Exercise	Quiz I Formative Assessment II (2,3,4)
	3	Variance, coefficient of variation	2	Differentiate Variance, coefficient of variation.	Lecture, PPT, Problem solving	Quiz II
	4	Standard error.	1	Find the Standard error.	Lecture, PPT, Problem solving	
III						
	1	Probability: Basic concepts – Types: a priori and a posteriori	1	Explain the Basic concepts of Probability.	Lecture, PPT, Exercise	Short test MCQ
	2	Probability theorems: Addition and multiplication – permutation and combination.	3	Identify and apply the probability theorems.	Lecture, PPT, Exercise	Quiz, Assignment Objective test
	3	Test of significance: Chi square test	4	Relate and apply hypothesis testing.	Lecture, PPT, Problem solving	Formative Assessment III (1,2,3,4)
	4	Test of significance: Student's <i>t</i> - test.	4	Find the significance using Student's <i>t</i> - test.	Lecture, Chalk and talk, Exercise	
IV	Components of computer & MS Office (12 Hrs.)					
	1	Introduction to computers: Types of computers.	1	Know the types of computers	Lecture, PPT, Video	Short test, MCQ

	2	Components of computer: input devices, output devices, CPU, storage devices.	3	Identify the components of computer.	Lecture, video, Q & A session	Formative Assessment I (1 & 2) Quiz I	
	3	Operating system	3	Explain Operating system of computer.	Lecture, PPT, Q & A session		Formative Assessment II (3 & 4)
	4	MS-Office: MS word - Creating word document – editing - aligning – bulleting – printing.	5	Create a word document.	Lecture, Video, Jigsaw		Quiz II
V	MS – Excel, Power point & Information network (12Hrs.)						
	1	MS - Excel: Entering and editing cell entries – adjusting row and column height.	3	Edit cell entries in MS - Excel	Lecture, PPT Exercise	Short test, Quiz Formative Assessment II (1) Formative Assessment III (2,3 & 4)	
	2	MS - Excel: charts	3	Create charts and graphs using MS - Excel	Lecture, PPT,		
	3	MS – Power Point: Steps to create a presentation – slide presentation.	4	Prepare MS - PowerPoint	Lecture, video, Exercise		
	4	Information network: Internet, email, mail transfer, web site, internet browsing.	2	Send mail and Internet browsing	Lecture, PPT, Exercise		

Course instructors
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Semester : IV Major Practical III
 Name of the course : Genetics, Biostatistics and Computer Applications
 Course Code : ZC17P4

Teaching Plan

Module	Description	Hou rs	Learning outcome	Pedagogy	Assessment
1	Observation of simple Mendelian traits in man.	2	Identify Mendelian traits in man.	Practical	Pre-assessment.
2	Verification of monohybrid and dihybrid ratio using beads.	4	Verify monohybrid and dihybrid cross.	Practical	Performance-based Assessment. Self-assessment Model examinations
3	Culture of <i>Drosophila</i> (wild) in the laboratory to study the various stages of life cycle, eye colour and sexual dimorphic characters.	4	Culture <i>Drosophila</i> and identify the stages of life cycle.	Demonstration	
4	Observation and study of polygenic inheritance of quantitative traits to be interpreted in graphs - length of pods / leaves.	2	Recollect the key points associated with polygenic inheritance.	Practical	
5	Blood group identification.	2	Identify different types of blood groups.	Practical	
6	Analysis of data (ungrouped) - mean, median, mode, standard deviation (using Neem leaves).	6	Analyse Central tendency of ungrouped data.	Calculation	
7	Study of Probability using coin tossing with one coin and testing the significance using chi square test.	2	Test the significance using chi square test.	Practical	
8	MS word	4	Create word document.	Demonstration	
9	Syndromes (Klinefelter's, syndrome, Turner's syndrome, Down syndrome)	2	Identify the characteristics of syndromes.	Charts	
10	Sex-linked inheritance (Color Blindness,	2	Identify sex-linked	Charts	

	Haemophilia, Hypertrichosis), Bar diagram, Histogram, Pie diagram.		inheritance. Represent data as graph and diagram		
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Course instructors

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Head of the Department

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Allied Zoology

Semester : IV

Name of the Course : Applied Zoology

Course code : ZA1741

Teaching Plan

Unit	Module	Topics	Hou rs	Learning outcome	Pedagogy	Assessment
I	Apiculture (12 Hrs)					
	1	Classification and kinds of bees, Bees and their society.	3	Distinguish the kinds of bees and their features.	Lecture, Video class	Evaluation through MCQ,
	2	Caste distinction and their functions.	3	Point out the functions	Chalk and talk, E-learning	Short test, Mind Map,
	3	Methods of beekeeping (primitive and modern).	3	Describe the methods of beekeeping.	Flipped learning, Chalk and Talk	Assignment, Formative Assessment I (1,2,3,4), Quiz I
	4	Honey Bee products: honey, bee wax, bee venom.	3	Identify the various honey bee products.	Lecture, team teaching, Video class	
II	Sericulture (12 Hrs)					
	1	Moriculture – methods of propagation.	3	Discuss the methods in Moriculture.	Lecture, Team teaching, vocabulary drill	Short test, Mind map, Formative Assessment I (1,2,3),
	2	Common species of Silkworm, Life cycle of mulberry silkworm (egg, larva, pupa and adult).	3	Relate the various stages of Silkworm.	Lecture/ Digital learning/	Quiz I Formative

					Video lesson	Assessment II (4), Quiz II
	3	Rearing of silkworm, mounting, spinning and harvesting of cocoons.	3	Describe the rearing of silkworm.	Lecture, Chalk and talk, visit	
	4	Silk Reeling, Silk Marketing.	3	Explain the process of silk reeling and Marketing.	Lecture, Video	
III	Poultry Farming (12 Hrs)					
	1	Poultry housing, Types of poultry houses.	3	Draw Pictures of poultry houses.	Lecture, PPT, Digital learning	Short test, MCQ,
	2	Management of chick, growers, layers and broilers.	4	Explain the management of chick, growers, layers and broilers.	Lecture, Chalk and Talk, video class	Formative Assessment II (1,2,3) Quiz II
	3	Sexing in chicks, Nutritive value of egg.	2	List the nutritive value of egg.	Lecture, Chalk and Talk, group discussion	Formative Assessment III (4)
	4	Diseases of poultry– Ranikhet, Fowl pox, Coryza, Coccidiosis, Polyneuritis.	3	Distinguish the diseases of poultry.	Lecture, PPT, Web based learning	
IV	Dairy Farming (12 Hrs)					
	1	Breeds of Dairy animals, Establishment of a typical Dairy farm.	4	Gain knowledge about dairy animals.	Lecture, video lesson, Flipped learning	Diagram test Open book test MCQ Formative Assessment II (1,2), Quiz II
	2	Management of cow(New born, calf, Heifer, milking cow).	3	Understand how to manage cows.	Lecture, video lesson, ppt	Formative Assessment III (3,4,5)
	3	Diseases (Mastitis, Rinderpest, Foot and Mouth Disease).	2	Compare the diseases of dairy animals.	Lecture, Tabulation	
	4	Dairy products (Standard milk, skimmed milk, toned milk and fermented milk - curd, ghee, cheese).	2	Identify dairy products.	Lecture, PPT, Gamification	

	5	Pasteurization.	1	Recognize the process involved in Pasteurization	Lecture, E-learning, video lesson	
V	Aquaculture (12 Hrs)					Short test, Quiz, Formative Assessment III (1,2,3)
	1	Aquaculture in India.	2	Express ideas about Aquaculture in India.	PPT/Lecture/Digital learning	
	2	Important cultivable organisms and their qualities.	4	Identify the cultivable organisms.	Lecture/ Flipped Learning / Video class	
	3	Culture of Indian major carps, Marine prawn culture, Pearl culture, Integrated fish culture (paddy cum fish culture)	6	Explain the culture of Indian major carps.	Lecture/ Web based learning/ PPT	

Course instructors
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Semester : IV **Allied Zoology Practical**
Name of the Course : **General Zoology & Applied Zoology**
Course code : **ZA17P1**

Teaching Plan

Unit	Module	Description	Hours	Learning Outcome	Pedagogy	Assessment
I	1	Dissection: Cockroach – Nervous system.	4	Dissect nervous system of Cockroach and identify the parts.	Practical	Pre assessment
	2	Mounting: Prawn appendages	4	Mount Prawns appendages and recollect the name and functions of appendages.	Practical	Performance based assessment
	3	Mounting: Shark – Placoid scale.	4	Mount placoid scales.	Practical	Internal assessment
	4	Observation of simple Mendelian traits in man.	2	Identify Mendelian traits in man.	Survey	
	5	Observation of frog's	2	Recall the structure	Observati	

	egg.		of egg of frog.	on
6	Analysis of glucose and albumin in Urine.	2	Analyse the components present in various solutions.	Practical
7	Testing milk using lactometer.	2	Analyse the water content of milk.	Practical
8	Estimation of oxygen in water samples.	4	Analyse the amount of oxygen in water samples.	Practical
9	Estimation of salinity in water samples.	4	Analyse the amount of salt in water samples.	Practical
10	Visit to places having importance related to theory.	10	Visit to the places and gets practical knowledge related to theory.	Visit
11	<i>Paramecium</i> , <i>Obelia</i> , <i>Ascaris</i> (male and female), <i>Panaeus</i> , Starfish (oral and aboral).	4	Observes the spotters and identify them and explains the structure of the animals and the models.	Observation
12	<i>Amphioxus</i> , Eel, <i>Najanaja</i> , Pelican, Rabbit.	2		
13	DNA (Watson & Crick Model), Colour blindness.	4		
14	Shark and <i>Echeneis</i> , Ancon Sheep, Industrial melanism.	2		
15	Honey bee (worker, queen and drone), Newton's bee-hive.	2		
16	Silkworm (egg, larva, pupa and adult), Chandrika, Rearing stand.	4		
17	Poultry feeders, Fowl pox, Coccidiosis.	2		
18	<i>Catla catla</i> , Rohu, Mrigala.	2		

Course instructors

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Head of the Department

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