



GOVT. GENERAL DEGREE COLLEGE , MOHANPUR
OFFICE OF THE PRINCIPAL
SRIRAMPUR : SIYALSAI

MOHANPUR : Paschim Medinipur – 721436

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LESSON PLAN IN ZOOLOGY GENERAL (CBCS)

1 ST SEMESTER	Topic DSC-1A (CC-1): Animal diversity Credits: 06 DSC1AT: Animal diversity	Teacher	No. of classes	Duration	Cerdit
Unit 1: Kingdom Protista	General characters and classification up to classes; Locomotory Organelles and locomotion in Protozoa	PPM	10	Odd Semester July to December. Internal exam in November provisionally	4
Unit 2: Phylum Porifera	General characters and classification up to classes; Canal System in Sycon	PPM	5		
Unit 3: Phylum Cnidaria	General characters and classification up to classes; Polymorphism in Hydrozoa	AC	5		
Unit 4: Phylum Platyhelminthes	General characters and classification up to classes; Life history of Taenia solium	AC	5		
Unit 5: Phylum Nematelminthes	General characters and classification up to classes; Life history of Ascaris lumbricoides and its parasitic adaptations	AC	5		
Unit 6: Phylum Annelida	General characters and classification up to classes; Metamerism in Annelida	AM	5		
Unit 7: Phylum Arthropoda	General characters and classification up to classes; Vision in Arthropoda, Metamorphosis in Insects	AM	5		
Unit 8: Phylum Mollusca	General characters and classification up to classes; Torsion in gastropods	AM	5		
Unit 9: Phylum Echinodermata	General characters and classification up to classes; Water-vascular system in Asteroidea	AC	5		
Unit 10: Protochordates	General features and Phylogeny of Protochordata	PPM	5		
Unit 11: Agnatha	General features of Agnatha and classification of cyclostomes up to classes	PPM	5		
Unit 12: Pisces	General features and Classification up to orders; Osmoregulation in Fishes	AM	5		
Unit 13: Amphibia	General features and Classification up to orders; Parental care	AC	5		



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Unit 14: Reptiles	General features and Classification up to orders; Poisonous and non-poisonous snakes, Biting mechanism in snakes	AC	5		
Unit 15: Aves	General features and Classification up to orders; Flight adaptations in birds	AM	5		
Unit 17: Mammals	Classification up to orders; Origin of mammals	AC	5		
DSC1AP: Animal diversity (Practical)	1. Study of the following specimens: Amoeba, Euglena, Plasmodium, Paramecium, Sycon, Hyalonema, and Euplectella, Obelia, Physalia, Aurelia, Tubipora, Metridium, Taenia solium, Male and female Ascaris lumbricoides, Aphrodite, Nereis, Pheretima, Hirudinaria, Palaemon, Cancer, Limulus, Palamnaeus, Scolopendra, Julus, Periplaneta, Apis, Chiton, Dentalium, Pila, Unio, Loligo, Sepia, Octopus, Pentaceros, Ophiura, Echinus, Cucumaria and Antedon, Balanoglossus, Herdmania, Branchiostoma, Petromyzon, Sphyrna, Pristis, Torpedo, Labeo, Exocoetus, Anguilla, Ichthyophis/Ureotyphlus, Salamandra, Bufo, Hyla, Chelone, Hemidactylus, Chamaeleon, Draco, Vipera, Naja, Crocodylus, Gavialis, Any six common birds from different orders, Sorex, Bat, Funambulus, Loris	AC&AM	15		2
	2. Study of the following permanent slides: 1. T.S. and L.S. of Sycon, 2. Study of life history stages of Taenia, 3. T.S. of male and female Ascaris	PPM	10		
	3. Key for identification of poisonous and non-poisonous snakes An “animal album” containing photographs, cut outs, with appropriate write up about the above mentioned taxa. Different taxa/ topics may be given to different sets of students for this purpose	AM	5		



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PPM=Pratha Pratim Mondal

AM= Ayan Mondal

Ac= Avisake Chakraborty



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LESSON PLAN IN ZOOLOGY GENERAL (CBCS)

2nd SEMESTER	Topic DSC-1B (CC-2): Comparative Anatomy and Developmental Biology of Vertebrates	Teacher	No. of classes	Duration	Credits:
	Credits: 06 DSC1BT: Comparative Anatomy and Developmental Biology of Vertebrates			Even Semester January to June	
Unit 1: Integumentary System	Derivatives of integument w.r.t. glands and digital tips	AC	8	Internal exam in may provisionally	4
Unit 2: Skeletal System	Evolution of visceral arches	AC	4		
Unit 3: Digestive System	Brief account of alimentary canal and digestive glands	AC	4		
Unit 4: Respiratory System	Brief account of gills, lungs, air sacs and swim bladder	AC	4		
Unit 5: Circulatory System	Evolution of heart and aortic arches	AC	4		
Unit 6: Urinogenital System	Succession of kidney, Evolution of urinogenital ducts	AC	4		
Unit 7: Nervous System	Comparative account of brain	AC	2		
Unit 8: Sense Organs	Receptors and its types.	AM	5		
Unit 9: Early Embryonic Development	Gametogenesis: Spermatogenesis and oogenesis w.r.t. mammals, vitellogenesis in birds; Fertilization: external (amphibians), internal (mammals), blocks to polyspermy; Early development of frog and humans (structure of mature egg and its membranes, patterns of cleavage, fate map, up to formation of gastrula); types of morphogenetic movements; Fate of germ layers; Neurulation in frog embryo	AM	5		
Unit 10: Late Embryonic Development	Implantation of embryo in humans, Formation of human placenta and functions, other types of placenta on the basis of histology; Metamorphic	PPM	10		



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	events in frog life cycle and its hormonal regulation				
Unit 11: Control of Development	Fundamental processes in development (brief idea) – Gene activation, determination, induction, Differentiation, morphogenesis, intercellular communication, cell movements and cell death	PPM	10		
DSC1BP: Comparative Anatomy and Developmental Biology of Vertebrates (Practical)					2
	1. Osteology: a) Disarticulated skeleton of fowl and rabbit b) Carapace and plastron of turtle /tortoise c) Mammalian skulls: One herbivorous and one carnivorous animal	AC&AM	8		
	2. Frog - Study of developmental stages - whole mounts and sections through permanent slides – cleavage stages, blastula, gastrula neurula, tail bud stage, tadpole external and internal gill stages	AC	10		
	3. Study of the different types of placenta- histological sections through permanent slides or photomicrographs	PPM	3		
	4. Study of placental development in humans by ultrasound scans.	PPM	3		
	5. Examination of gametes - frog/rat - sperm and ova through permanent slides or photomicrographs	AM	3		



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3 rd SEMESTER	Topic DSC-1C (CC-3): Physiology and Biochemistry Credits: 06 DSC1CT: Physiology and Biochemistry	Teacher	No. of classes	Duration	Credit
Unit 1: Nerve and muscle	Structure of a neuron, Resting membrane potential, Graded potential, Origin of Action potential and its propagation in myelinated and non-myelinated nerve fibres, Ultra-structure of skeletal muscle, Molecular and chemical basis of muscle contraction	AC	10	Odd Semester July to December. Internal exam in November provisionally	4
Unit 2: Digestion	Physiology of digestion in the alimentary canal; Absorption of carbohydrates, proteins, lipids	AC	6		
Unit 3: Respiration	Pulmonary ventilation, Respiratory volumes and capacities, Transport of oxygen and carbon dioxide in blood	AM	5		
Unit 4: Excretion	Structure of nephron, Mechanism of Urine formation, Counter-current Mechanism	AC	5		
Unit 5: Cardiovascular system	Composition of blood, Hemostasis, Structure of Heart, Origin and conduction of the cardiac impulse, Cardiac cycle	AM	5		
Unit 6: Reproduction and Endocrine Glands	Physiology of male reproduction: Hormonal control of spermatogenesis; Physiology of female reproduction: hormonal control of menstrual cycle Structure and function of pituitary, thyroid, parathyroid, pancreas and adrenal	AC	5		
Unit 7: Carbohydrate Metabolism	Glycolysis, Krebs Cycle, Pentose phosphate pathway, Gluconeogenesis, Glycogen metabolism, Review of electron transport chain	PPM	5		
Unit 8: Lipid Metabolism	Biosynthesis and β oxidation of palmitic acid	AC	3		
Unit 9: Protein metabolism	Transamination, Deamination and Urea cycle	PPM	3		
Unit 10: Enzymes	Introduction, Mechanism of action, Enzyme kinetics, inhibition and regulation	PPM	3		



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DSC1CP: Physiology and Biochemistry (Practical):	1. Preparation of hemin and hemochromogen crystals.	AM	2		2
	2. Study of permanent histological sections of mammalian pituitary, thyroid, pancreas, adrenal gland.	AC	2		
	3. Study of permanent slides of spinal cord, duodenum, liver, lung, kidney, bone, cartilage	AC	4		
	4. Qualitative tests to identify functional groups of carbohydrates in given solutions (Glucose, Fructose, Sucrose, Lactose).	PPM	4		
	5. Estimation of total protein in given solutions by Lowry's method	AM	4		
	6. Study of activity of salivary amylase under optimum conditions	PPM	4		



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3rd SEMESTER	TopicSEC - 1: Apiculture Credits: 02 SECT: Apiculture	Teacher	No. of classes	Duration
Unit 1: Biology of Bees	History, Classification and Biology of Honey Bees. Social Organization of Bee Colony	AC	5	
Unit 2: Rearing of Bees	Artificial Bee rearing (Apiary), Beehives – Newton and Langstroth. Bee Pasturage. Selection of Bee Species for Apiculture. Bee Keeping Equipment. Methods of Extraction of Honey (Indigenous and Modern)	AC	8	
Unit 3: Diseases and Enemies	Bee Diseases and Enemies. Control and Preventive measures.	AC	4	
Unit 4: Bee Economy	Products of Apiculture Industry and its Uses (Honey, Bees Wax, Propolis), Pollen etc	AM	5	
Unit 5: Entrepreneurship in Apiculture	Bee Keeping Industry – Recent Efforts, Modern Methods in employing artificial. Beehives for cross pollination in horticultural gardens	PPM	5	



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4TH SEMESTER	Topic DSC-1D (CC-4): Genetics and Evolutionary Biology Credits: 06	Teacher	No. of classes	Duration	Credit
Unit 1: Introduction to Genetics	Mendel's work on transmission of traits, Genetic Variation, Molecular basis of genetic information	PPM	8	Even Semester January to June Internal exam in may provisionally	04
Unit 2: Mendelian Genetics and its Extension	Principles of Inheritance, Chromosome theory of inheritance, Incomplete dominance and codominance, Multiple alleles, Lethal alleles, Epistasis, Pleiotropy, sex linked inheritance, extra-chromosomal inheritance	PPM	10		
Unit 3: Linkage, Crossing Over and Chromosomal Mapping	Linkage and crossing over, Recombination frequency as a measure of linkage intensity, two factor and three factor crosses, Interference and coincidence, Somatic cell genetics – an alternative approach to gene mapping	PPM	8		
Unit 4: Mutations	Chromosomal Mutations: Deletion; Duplication; Inversion; Translocation; Aneuploidy and Polyploidy; Gene mutations: Induced versus Spontaneous mutations, Back versus Suppressor mutations,	AM	5		
Unit 5: Sex Determination	Chromosomal mechanisms, dosage compensation	PPM	5		
Unit 6: History of Life	Major Events in History of Life	AC	5		
Unit 7: Introduction to Evolutionary Theories	Lamarckism, Darwinism, Neo-Darwinism	AC	5		
Unit 8: Direct Evidences of Evolution	Types of fossils, Incompleteness of fossil record, Dating of fossils, Phylogeny of horse	AC	5		



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Unit 9: Processes of Evolutionary Change	Organic variations; Isolating Mechanisms; Natural selection (Example: Industrial melanism); Types of natural selection (Directional, Stabilizing, Disruptive), Artificial selection	AC	5		
Unit 10: Species Concept	Biological species concept (Advantages and Limitations); Modes of speciation (Allopatric, Sympatric)	AM	5		
Unit 11: Macro-evolution	Macro-evolutionary Principles (example: Darwin's Finches)	AC	5		
Unit 12: Extinction	Mass extinction (Causes, Names of five major extinctions, K-T extinction in detail), Role of extinction in evolution	AC	5		
DSC1DP: Genetics and Evolutionary Biology (Practical)					2
	1. Study of Mendelian inheritance and gene interactions (Non- Mendelian inheritance) using suitable examples. Verify the results using Chi-square test.	PPM	4		
	2. Study of Linkage, recombination, gene mapping using the data.	PPM	4		
	3. Study of Human Karyotypes (normal and abnormal).	PPM	5		
	4. Study of fossil evidences from plaster cast models and pictures	AC	4		
	5. Study of homology and analogy from suitable specimens/ pictures	AC	4		
	6. Charts: a. Phylogeny of horse with diagrams/ cut outs of limbs and teeth of horse ancestors b. Darwin's Finches with diagrams/ cut outs of beaks of different species	AC	4		



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	7. Visit to Natural History Museum and submission of reportPP	AM	4		
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4th SEMESTER	SEC - 2: Aquarium Fish Keeping Credits: 02 SEC2T: Aquarium Fish Keeping	Teacher	No. of classes	Duration	Credit
Unit1: Introduction to Aquarium Fish Keeping	The potential scope of Aquarium Fish Industry as a Cottage Industry, Exotic and Endemic species of Aquarium Fishes	AM	5		02
Unit 2: Biology of Aquarium Fishes	Common characters and sexual dimorphism of Fresh water and Marine Aquarium fishes such as Guppy, Molly, Sword tail, Gold fish, Angel fish, Blue morph, Anemone fish and Butterfly fish	AM	5		
Unit 3: Food and feeding of Aquarium fishes	Use of live fish feed organisms. Preparation and composition of formulated fish feeds	AM	5		



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Unit 4: Fish Transportation	Live fish transport - Fish handling, packing and forwarding techniques	AC	4		
Unit 5: Maintenance of Aquarium	General Aquarium maintenance – budget for setting up an Aquarium Fish Farm as a Cottage Industry	PPM	4		



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5TH SEMESTER	TopicDSE- 1: Immunology	Teacher	No. of classes	Duration	Credit
Unit 1: Overview of the Immune System	Introduction to basic concepts in immunology, components of immune system, principles of innate and adaptive immune system	AC	7	Odd Semester July to December. Internal exam in November provisionally	04
Unit 2: Cells and Organs of the Immune System	Haematopoeisis, Cells of immune system and organs (primary and secondary lymphoid organs) of the immune system	AC	7		
Unit 3: Antigens	Basic properties of antigens, B and T cell epitopes, haptens and adjuvants	AC	7		
Unit 4: Antibodies	Structure, classes and function of antibodies, monoclonal antibodies, antigen antibody interactions as tools for research and diagnosis	AC	7		
Unit 5: Working of the immune system	Structure and functions of MHC, exogenous and endogenous pathways of antigen presentation and processing, Basic properties and functions of cytokines, Complement system: Components and pathways	AM	7		
Unit 6: Immune system in health and disease	Gell and Coombs' classification and brief description of various types of hypersensitivities, Introduction to concepts of autoimmunity and immunodeficiency	PPM	6		
Unit 7: Vaccines	General introduction to vaccines, Various types of vaccines	PPM	4		
DSE1P: Immunology (Practical)	1. Demonstration of lymphoid organs	AC	3		
	2. Histological study of spleen, thymus and lymph nodes through slides/ photographs	AC	3		
	3. Preparation of stained blood film to study various types of blood cells.	AC	3		



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	4. Ouchterlony's double immuno-diffusion method.	PPM	3		02
	5. ABO blood group determination.	PPM	3		
	6. Cell counting and viability test from splenocytes of farm bred animals/cell lines.	AM	3		
	7. Demonstration of a. ELISA b. Immuno-electrophoresis	AM	3		



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5TH SEMESTER	SEC-3: Medical Diagnostics Credits: 02 SEC3T: Medical Diagnostics	Teacher	No. of classes	Duration	Credit
Unit 1: Introduction to Medical Diagnostics and its Importance		AM	2		02
Unit 2: Diagnostics Methods Used for Analysis of Blood	Blood composition, Preparation of blood smear and Differential Count (D.C) using Leishman's stain, Platelet count using haemocytometer, Erythrocyte Sedimentary Rate (E.S.R), Packed Cell Volume (P.C.V.)	PPM	4		
Unit 3: Diagnostic Methods Used for Urine Analysis	Urine Analysis: Physical characteristics; Abnormal constituents	PPM	4		
Unit 4: Non-infectious Diseases	Causes, types, symptoms, complications, diagnosis and prevention of Diabetes (Type I and Type II), Hypertension (Primary and secondary), Testing of blood glucose using Glucometer/Kit	AM	4		
Unit 5: Infectious Diseases	Causes, types, symptoms, diagnosis and prevention of Tuberculosis and Hepatitis	AC	4		
Unit 6: Tumours	Types (Benign/Malignant), Detection and metastasis; Medical imaging: X-Ray of Bone fracture, PET, MRI and CT Scan (using photographs).	PPM	4		



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6TH SEMESTER	DSE- 2: Insect, Vector and Diseases Credits: 06	Teacher	No. of classes	Duration	Credit
Unit I: Introduction to Insects	General Features of Insects, Morphological features, Head – Eyes, Types of antennae, Mouth parts w.r.t. feeding habits	PPM	7	Even Semester January to June	4
Unit II: Concept of Vectors	Brief introduction of Carrier and Vectors (mechanical and biological vector), Reservoirs, Host-vector relationship, Vectorial capacity, Adaptations as vectors, Host Specificity	PPM	6	Internal exam in may provisionally	
Unit III: Insects as Vectors	Classification of insects up to orders, detailed features of orders with insects as vectors – Diptera, Siphonaptera, Siphunculata, Hemiptera	AM	7		
Unit IV: Dipteran as Disease Vectors	Dipterans as important insect vectors – Mosquitoes, Sand fly, Houseflies; Study of mosquito-borne diseases – Malaria, Dengue, Chikungunya, Viral encephalitis, Filariasis; Control of mosquitoes Study of sand fly-borne diseases – Visceral Leishmaniasis, Cutaneous Leishmaniasis, Phlebotomus fever; Control of Sand fly Study of house fly as important mechanical vector, Myiasis, Control of house fly	AM	10		
Unit IV: Siphonaptera as Disease Vectors	Fleas as important insect vectors; Host- specificity, Study of Flea-borne diseases – Plague, Typhus fever; Control of fleas	AC	6		
Unit V: Siphunculata as Disease Vectors	Human louse (Head, Body and Pubic louse) as important insect vectors; Study of louse-borne diseases –Typhus fever, Relapsing fever, Trench fever, Vagabond's disease, Phthiriasis; Control of human louse	AC	7		
Unit VI: Hemiptera as Disease Vectors	Bugs as insect vectors; Blood-sucking bugs; Chagas disease, Bed bugs as	AC	6		



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	mechanical vectors, Control and prevention measures				
DSE2P: Insect Vector and Diseases (Practical)					2
	1. Study of different kinds of mouth parts of insects	PPM	3		
	2. Study of following insect vectors through permanent slides/ photographs: Aedes, Culex, Anopheles, Pediculus humanus capitis, Pediculus humanus corporis, Phthirus pubis, Xenopsylla cheopis, Cimex lectularius, Phlebotomus argentipes, Musca domestica, through permanent slides/ photographs	AC	5		
	3. Study of different diseases transmitted by above insect vectors	AC	4		
	4. Submission of a project report on any one of the insect vectors and disease transmitted	AM			



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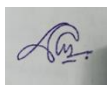
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5TH SEMESTER	SEC - 4: Sericulture Credits: 02 SEC4T: Sericulture	Teacher	No. of classes	Duration	Credit
Unit 1: Introduction	Sericulture: Definition, history and present status; Silk route, Types of silkworms, Distribution and Races, Exotic and indigenous races, Mulberry and non-mulberry Sericulture	AC	6		2
Unit 2: Biology of Silkworm	Life cycle of Bombyx mori, Structure of silk gland and secretion of silk	AC	4		
Unit 3: Rearing of Silkworms	Selection of mulberry variety and establishment of mulberry garden, Rearing house and rearing appliances, Disinfectants: Formalin, bleaching powder, RKO, Silkworm rearing technology: Early age and Late age rearing, Types of mountages, Spinning, harvesting and storage of cocoons	AC	10		
Unit 4: Pests and Diseases	Pests of silkworm: Uzi fly, dermestid beetles and vertebrates, Pathogenesis of silkworm diseases: Protozoan, viral, fungal and bacterial. Control and prevention of pests and diseases Kit	PPM	8		
Unit 5: Entrepreneurship in Sericulture	Prospectus of Sericulture in India: Sericulture industry in different states, employment, potential in mulberry and non-mulberry sericulture. Visit to various, sericulture centres	AM	8		

Countersigned



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In-charge, Zoology

Govt. Gen. Degree College,

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Lesson Plan (1+1+1) Old Pattern

Sl. no	PART -I Paper – I	Name of the teacher	No of classes	Remarks
1	Group – A : Non-chordata	Avisake Chakraborty	15	Annual final examination with internal in between
2	Group B : Taxonomy, Evolution, Adaptation & Distribution :	Partha Pratim Mondal	12	
3	Group C : Developmental Biology	Avisake Chakraborty	8	
4	Group D : Ecology, Ethology & Wildlife	AyanMondal	8	
	PART-II Paper – II			
1	Group – A : Chordata	Avisake Chakraborty	12	Annual final examination with internal in between
2	Group B : 30 Marks Cell Biology, Genetics & Molecular Biology	Partha Pratim Mondal	10	
3	Group – C Physiology & Biochemistry	AyanMondal	8	
4	Group – D Parasitology, Histology & Endocrinology	Avisake Chakraborty	8	
	Practical Paper – III			
1	1. Dissection : (two major dissections – one invertebrate & one vertebrate). Earthworm – digestive & nervous systems. Apple snail – digestive & nervous systems. Cockroach – digestive, nervous & female reproductive system. Rohu/ Lata – afferent & efferent, urinogenital system, brain, cranial nerves (IXth & Xth origin & distribution).	Avisake Chakraborty	15	
2	2. Mounting & preparations (Two) (a) Mouth parts of cockroach & mosquito. (b) Radula & osphradium of <i>Pila</i> . (c) Setae of earthworm. (d) Mounting of mosquito larva.	Avisake Chakraborty /AyanMondal	5	



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	(e) Cycloid, ctenoid & placoid scales. (f) Blood film of rat and haemolymph of cockroach (Leishman/Giemsa stain). (g) Seminal vesicle of earthworm for Monocystid gregarines (Ehrlich hematoxylene). (h) Gut contents of cockroach for protozoa. (i) Whole mount of aquatic micro-arthropods. (j) Epithelial cells from buccal smears.			
3	3. Identification with reasons : (a) Bones : Skull, vertebrae, limb & girdle bones of <i>Columba & Cavia</i> . (b) Histological slides : T.S. of mammalian stomach, duodenum, ileum, lung, liver, pancreas, testis, ovary, kidney, thyroid (c) Non-chordate specimens : <i>Amoeba, Plasmodium vivax, Paramoecium, Scypha, Obelia, Sea-anaemone, Ascaris Ancylostoma, Hirudinaria, Centiped, Milliped, Scorpion, Bombyx mori, Lamellidens, Achatina, Loligo, Star fish, Balanoglossus.</i> (d) Chordate specimens : <i>Achatina, Branchiostoma, Petromyzon, Scoliodon, Lates, Anabas, Racophorus, Axolotl larva, Tylotriton, Gekko, Hemidactylus, Mabuia, Turtle, Naja, Chiroptera</i>	Avisake Chakraborty & Partha Pratim Mondal	15	
4	4. Report on field study tours :	AyanMondal		
	Part – III Paper – IV			
	1. Sericulture :	Avisake Chakraborty	4	Annual final examination with internal in between
	2. Aquaculture :	AyanMondal	4	
	3. Pest & Pest management	Partha Pratim Mondal	4	
	4. Apiculture :	Avisake Chakraborty	4	



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	5. Lac culture	AyanMondal	4	
	7. Environment, Wildlife & Biodiversity	Partha Pratim Mondal	4	
	8. Biotechnology & Immunology :	Partha Pratim Mondal	4	
	Group B : Applied Zoology Practical 1. Experimental works i. Estimation of dissolved O ₂ content of water. ii. Estimation of salinity of water.	Avisake Chakraborty	10	
	iii. Pedegree analysis : sex-linked recessive, autosomal recessive & dominant. iv. Determination of ABO blood group & rh factor in man. v. Differential count of human blood.	Partha Pratim Mondal	5	
	vi. LD ₅₀ dose determination for any toxicant on any model. vii. Measurement of water & soil pH handling pH meter. viii. Sampling of zooplankton & extraction of soil micro-arthropods. ix. Narcotisation of earthworm and <i>Achatina</i> using suitable techniques. x. Tests for food colours/ adulteration : mustard oil, red chilli powder, turmeric powder, toxic colours in vegetables/sweets.	AyanMondal	5	
	2. Field training:			
	3. Identification : (write specimen characters & applied importance) <i>Plasmodium vivax</i> , <i>P. falciparum</i> , microfilaria of <i>Wuchereria bancrofti</i> , <i>Taenia solium</i> , <i>Scirpophaga incertulus</i> , <i>Sitophilus oryzae</i> , <i>Tanymecus indicus</i> , <i>Leucinodes orbonalis</i> , <i>Anomis sabulifera</i> , <i>Lepisma</i> , <i>Termite</i> , <i>Bandicoota</i>	Avisake Chakraborty	5	



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<i>bengalensis, Labeo rohita, L bata, L. calbasu, Catla catla, Cirrhinus nirigala, Hypophthalmichthyes molitrix, Cyprinus carpio, Ctenopharyngodon idella, Ilsa ilisha, Penaeus monodon, Macrobrachium rosenbergi.</i>			
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Countersigned

PRINCIPAL

Govt. Gen. Degree College,

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In-charge, Zoology

Govt. Gen. Degree College,

MOHANPUR