

DEGLOOR COLLEGE, DEGLOOR**Annual Teaching Plan**

Department :- Zoology		Class :- B.Sc. First year		
Name of Teacher : Mr. Paikrao S.M.		Year :-2020-21		
Subject :- Zoology		Semester:- I		
Paper Name & No : - Paper –I Biodiversity of Invertebrates				
Chapter No	Topic-Title	Expected Lectures	Expected Duration	
			From	To
I	1. Introduction of Non-chordates. 2. Protozoa: General characters and classification up to class level with suitable examples; Locomotory Organelles and locomotion's in Protozoa. Brief account of each of Structure, Life Cycle, Pathogenicity and Control Measures of Plasmodium vivax.	11	01-NOV	31- NOV
II	3.Porifera:-General characters and classification up to class level with suitable examples; Canal System in Sycon; Economic importance of Porifera..1.Coelenterata: General characters and classification up to class level with suitable example; Polymorphism in Hydrozoa. 2.Platyhelminthes:General characters and classification up to class level with suitable	12	01-DEC	14-DEC
III	3.Nemathelminthes: General characters and classification up to class level with suitable example; Brief account of each of Structure, Life Cycle, Pathogenicity and Control Measures of Ascaris lumbricoides. 2.Arthropoda: General characters and classification up to class level with suitable examples; Metamorphosis in Insects. Cockroach-External Morphology, Digestive system, Respiratory system, Nervous system. Economic importance of insects.	12	14-DEC	28-DEC
IV	1.Mollusca: 2.Echinodermata: 3.Hemichordata:	11	28-DEC	2-FEB

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Name of Teacher : Mr. Paikrao S.M.		Year :-2020-21		
Subject :- Zoology		Semester:- I		
Paper Name & No : - Paper –II Chordata				
Chapter No	Topic-Title	Expected Lectures	Expected Duration	
			From	To
I	1. Introduction of Chordates Salient features and classification of chordates up to class level. Origin and Ancestry of Chordata 2. Protochordata: Urochordata-General feature and Phylogeny of Urochordata; Cephalochordata-General feature and Phylogeny of Cephalochordata. 3. Agnatha: General characters and classification of agnatha with suitable examples.	12	1-NOV	22-NOV
II	1. Pisces: General characters and classification up to order level with suitable examples; Scoliodon(Dogfish): External morphology, Digestive system, Respiratory system, Circulatory system, Nervous system, Urinogenital system. Economic importance of Fishes. 2. Amphibia: General characters and classification up to order level with suitable examples; Parental care in Amphibians.	11	22-NOV	11-DEC
III	1. Reptiles: General characters and classification up to order level with suitable examples; Poisonous and non-poisonous snakes; Biting mechanism in snakes; Importance of snake Venom. 2. Aves: General characters and classification up to order level with suitable examples; Flight adaptations in birds; Migration in birds	11	11-DEC	22-DEC
IV	1. Mammals: General characters and classification up to order level with suitable examples; Rat- External characters, Digestive system, Respiratory system, Circulatory system, Nervous system- Brain and spinal cord, Eye and Ear.	11	22-DEC	2-FEB

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Department :- Zoology		Class :- B.Sc. First year		
Name of Teacher : Mr. Paikrao S.M.		Year :-2020-21		
Subject :- Zoology		Semester:- II		
Paper Name & No : - Paper –III Comparative Anatomy of vertebrates				
Chapter No	Topic-Title	Expected Lectures	Expected Duration	
			From	To
I	1. General characters, origin and Ancestry of Vertebrates. 2. Integumentary System: Development, General structure and function of integument; Derivatives of integument-Epidermal and Dermal derivatives; 3. Skeletal System- Evolution of visceral arches; Comparative account of limbs and girdles	11	1-APRIL	22-APRIL
II	1. Digestive System: Brief account of alimentary canal and digestive glands. 2. Respiratory System: Brief account of different respiratory organs in vertebrates-Gills, lungs, skin, air sacs and Accessory respiratory organs.	12	22-APRIL	08-APRIL
III	1. Circulatory System: Brief account of Evolution of heart in vertebrates. Modifications of aortic arches in vertebrates; Blood circulation in various vertebrate groups-Single and Double circulation. 2. Urinogenital System: Developmental Succession of kidney, Evolution of urinogenital system in vertebrates.	11	08-APRIL	18-MAR
IV	1. Nervous System : Structure of Neuron; comparative account of Brain of Vertebrates. 2. Sense Organs – Types of receptors- Mechanoreceptors; Photoreceptors; Phonoreceptors.	12	18-MAR	04-JUNE

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Department :- Zoology		Class :- B.Sc. First year		
Name of Teacher : Mr. Paikrao S.M.		Year :-2020-21		
Subject :- Zoology		Semester:- II		
Paper Name & No : - Paper –IV Developmental Biology of Vertebrates.				
Chapter No	Topic-Title	Expected Lectures	Expected Duration	
			From	To
I	1. Introduction of Developmental Biology 2. Gametogenesis: a) Spermatogenesis b) Oogenesis 3. Types of eggs a) On the basis of amount of yolk b) On the basis of distribution of yolk	11	1-APRIL	18-APRIL
II	1. Gametes of frog: a) Structure of sperm b) Structure of ovum 2. Frog Embryology : a) Fertilization b) Cleavage c) Blastulation d) Gastrulation e) Formation of three germinal layers. 3. Regeneration in Non-chordates and chordates.	11	18-APRIL	06-MARCH
III	1. Chick Embryology: (Extra-embryonic membranes) a) Yolk sac, structure & its functions b) Amnion, structure & its functions c) Chorion, structure & its functions d) Allantois, structure & its functions 2. Placentation in mammals: Classification on the basis of a) Mode of origin b) Mode of distribution of Villi c) Function of placenta.	11	06-MAR	22-MAR
IV	1. Stem Cell : a) Sources b) Type-Embryonic, Haemopoietic, Adult, Nervous c) Role of stem cells in Human welfare 2. Embryo Transfer Techniques: a) Gamete Intra-Fallopian Transfer (GIFT) b) Test Tube baby c) Infertility in male d) Infertility in female 3. Parthenogenesis: a) Natural b) Artificial	12	22-MAR	06-APRIL

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Department :- Zoology		Class :- B.Sc. Second year		
Name of Teacher : Mr. Paikrao S.M.		Year :-2020-21		
Subject :- Zoology		Semester:- III		
Paper Name & No : - VI Physiology				
Chapter No	Topic-Title	Expected Lectures	Expected Duration	
			From	To
I	1.Enzymes. i) Nature and Classification of enzymes. ii) Mechanism of enzyme action. iii) Factors affecting on enzymes activity.	11	01-AUG	09-AUG
II	2. Nutriton. i) Digestion of carbohydrates, proteins and lipid. ii) Vitamins-Fat soluble and Water soluble vitamins.	11	09-AUG	04-SEP
III	1.Respiration. i) Definition of Aquatic and Aerial respiration. ii) Respiratory organs in man. iii) Mechanism of respiration. iv) Transport of O ₂ and CO ₂ . 2.Circulation. i) Blood-composition & functions. ii) Structure & working of heart. iii) E.C.G. and blood pressure. iv) Blood Clotting	11	04-SEP	30-OCT
IV	1.Excretion i) Modes of excretion in animals. ii) Structure of kidney. iii) Structure of uriniferous tubules. iv) Physiology of urine formation. v) Composition of urine. 2. Nerve physiology. I) Structure & types of neurons. Ii) Structure of synapse. Iii) Conduction of nerve impulse. 3.Muscle physiology. I) Types of muscles-smooth muscles, skeletal muscles & cardiac, ii) Ultra structure of skeletal muscles.	11	01-NOV	31-DEC

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Department :- Zoology		Class :- B.Sc. First year		
Name of Teacher : Mr. Paikrao S.M.		Year :-2021		
Subject :- Zoology		Semester:- IV		
Paper Name & No : - Paper –VIII GENETICS				
Chapter No	Topic-Title	Expected Lectures	Expected Duration	
			From	To
I	1. Introduction to Genetics 2. Mendelism i) Mendal's. Laws inheritance ii) Monohybrid dihybrid cross and ratio. iii) Incomplete dominance. iv) Back cross and ratio. 3. Interaction of genes i) Complementary factor ii) Supplementary factor. Iii) Inhibitory factor. Iv) Duplicate genes. v) Lethal genes.	11	14-JAN	09-FEB
II	1. Multiple Alleles and Genes i) Inheritance of ABO Blood groups in Man. ii) Rh factor & Erythroblastosis foetalis in man. iii) Multiple genes-skin pigmentation in man 2. Linkage & crossing over. i) Linkages-definition, types & crossing over, factor affecting crossing over, Significance of crossing over.	11	10-FEB	04-MAR
III	1. Sex determination i) Chomosomal methods of sex determination. ii) Bridge's ratio theory of genic balance. 2. Sex linked inheritance i) Sex kinked inheritance in man-colorblindness, haemophilia, Hypertichisis. 3. Cytoplasmic Inheritance 4. Mutation i) Chromosomal mutations-Structural alterations & Numerical alternation. ii) Genemutations- Sickle cell Anaemia. iii) Mutagenic agents.	12	04-MAR	2-APRIL
IV	1. Human Genetics i) Syndromes-Turner, Klinefelter, Down, Cat-Cry, Patus. ii) Inborn errors of metabolism-Phenylketonuria, Alkaptonura, Albinism. Iii) Human pedigree analysis with symbols. 2. Nature and functions of genetic materials. I) DNA-structure, functions, Replications. Ii) RNA-structure, types & functions. Iii) Genetic code.	11	02-APR	30-APR

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Department :- Zoology		Class :- B.Sc. Third year		
Name of Teacher : Mr. Paikrao S.M.		Year :-2020-21		
Subject :- Zoology		Semester:- V		
Paper Name & No : - Paper-XII ECOLOGY & ZOOGEOGRAPHY				
Chapter No	Topic-Title	Expected Lectures	Expected Duration	
			From	To
I	1. Introduction to ecosystem A. Components of an ecosystem. A) Abiotic components- Temperature & Water. B) Biotic components-Producers, consumers & Decomposers. B. Pond ecosystem C. Desert ecosystem 2. Spheres of Earth A. Biosphere E. Ecological Succession-Hydrarch and Xerarch 3.Biogochemical cycles A.	11	01-AUG	06-AUG
II	4. Population Ecology- Characteristics of Population A. Natality, B. Mortality, C. Population density D. Age distribution E. Population Growth Form 5.Biotic interactions A. Positive interactions-Commensalism, Mutualism B. Negative interactions-competition, Predation, Parasitism.	11	06-AUG	11-SEP
III	6. Pollution-Sources, Effects & Control A. Natality, B. Water Pollution C. Noise Pollution Resources & their limitations. A. 1 Fossil fuels B.2 Nuclear power C.3 Hydel Power B. Non-conventional energy resources-Advantages, limitations & Latest developments A.1 Solar energy B.2 Wind energy C.3 Tidal energy	11	11-SEP	22-OCT
IV	4. Wildlife conservation and endangered species A. Aim & necessity of wildlife conservation B. Wild Life & Endangered species of India. C. Measures to Protect endangered species 5. Zoogeographical Realms- Physical features and fauna A. Australian realm B. Indian/Oriental realm	11	22-OCT	31-DEC

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Name of Teacher : Mr. Paikrao S.M.		Year :-2020-21		
Subject :- Zoology		Semester:- V		
Paper Name & No : - Paper-XIII(A) Applied Zoology- Aquaculture.				
Chapter No	Topic-Title	Expected Lectures	Expected Duration	
			From	To
I	1. Introduction to aquaculture i) Definition, Scope and importance of aquaculture ii) Concepts of extensive, intensive. 2. Types of aquaculture i) Monoculture ii) Polyculture iii) Integrated fish farming- a) Paddy cu fish culture b) Fish-cum pig farming c) Cattle-cum fish farming d) Fish-cum duck farming.	11	01-AUG	11-AUG
II	3. Culture methods i) Pen culture ii) Cage culture 4. Sewage fed fish culture i) Composition of sewage ii) Use in culture iii) Fish species suitable for sewage fed fishery. 5. Manmade Hazards and Aquaculture i) Domestic Sewage ii) Agricultural Sewage iii) Industrial Effluents.	11	11-AUG	11-SEP
III	6. Aquatic weeds & their control. i) Types of weeds ii) Advantages & Disadvantages of weeds iii) Weed Control-Manual, Mechanical, Chemical & Biological 7. Culture of Non Fish organisms i) Fresh water prawn Culture ii) Pearl oyster Culture. iii) Edible oyster culture.	12	11-SEP	26-OCT
IV	8. Characteristics of water i) Physical properties of Water. ii) Chemical properties of water iii) Biological properties of water. 9. Aquarium keeping-i) Construction of Aquarium keeping v) aquarium fishes.	11	26-OCT	31-DEC