

**"ज्ञान, विज्ञान आणि सुसंस्कार यांसाठी शिक्षण प्रसार"** -शिक्षणमहर्षी डॉ. बापूजी साळुंखे



Shri Swami Vivekanand Shikshan Sanstha, Kolhapur's

Ramkrishna Paramhansa Mahavidyalaya, Osmanabad

(Affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad)

|| NAAC Reaccredited 'B+' Grade || || DBT-STAR College by Govt. of India || || UGC STATUS: College with Potential for Excellence ||

## Course Outcomes

## **Department of Zoology**

	B.Sc. I –Year
	Paper: I Animal Diversity –I (PROTOZOA TO Echinodermata)
CO1	To introduce general characters and classification of protista
CO2	To understand general characters and classification porifera
CO3	To understand the general character and life cycle of Platyhelminthes
CO4	knowledge about the species of Nemathelminthes
CO5	knowledge about General characters of Annelida, Arthropoda, Mollusca and Echinodermata (water vascular system in star fish)
	Paper II- cell Biology
CO1	General character and structure of prokaryotic and eukaryatic cell.
CO2	To understand structure of various cell organelles and types of cancer
CO3	To understand use of various Instruments in the methods of cell biology.
CO4	To understand cancer biology and Ageing
	Paper: IV
	Diversity of Chordata -II protochordate to mammals
CO1	To Introduce General features of protochordate
CO2	knowledge about agnatha general character, classification and affinities of cyclistomata
CO3	knowledge about general characters, and classification of phylum chordates up to classes
CO4	To introduce general features, migration, and parental care in fishes and amphibia.
CO5	To understand general character of reptilia and identification of poisonous and non- poisonous snakes.
	Paper V – Genetics
CO1	To understand mendelian genetics and its extension like Epistasis, Hypostasis, multiple gene and multiple alleles. Sex-linked, sex-limited sex influence inheritance
CO2	To provide knowledge about chromosome structure and types of eukaryotic chromosome (Based on centromere position). Eukaryotic and prokaryotic organization and Giant chromosome.
CO3	To provide knowledge about sex determination, genic balance theory in Drosophila and Gynandromorphs in drosophila, and sex-linked inheritance

CO4	To understand about Human karyotype, pedigree analysis and sickle cell anemia, PKU
CO5	To understand about Human genetics Dizygotic and monozygotic Twins, use of human genetics in medical science, gene therapy and DNA fingerprinting.
CO6	To understand Knowledge about population genetics
	B.Sc. II Year
	Zoology paper: ZOL-201 Developmental Biology of vertebrates
CO1	To Introduce knowledge about fertilization
CO2	To understand knowledge about cleavage
CO3	Knowledge about Gametogenesis
CO4	To understand fate maps Gastrulation and Tubulation
CO5	To provide Knowledge about embryonic Adaption
	Zoology paper: ZOL-202 Biochemistry and Endocrinology
CO1	Knowledge about Enzyme nomenclature, mechanism of enzyme action and Factor affecting enzyme action.
CO2	To provide knowledge about classification and metabolism of carbohydrates.
CO3	Knowledge about classification of protein and Lipid and its metabolism.
CO4	To understand the vitamin, source and deficiency
CO5	To understand the various endocrine glands like pituitary, Thyroid, Adrenal gland, pancrease, testis, Ovaries and pineal gland
	B.Sc. IV Semester
	Zoology paper :ZOL – 209 Ecology
CO1	Zoology paper :ZOL – 209 Ecology   To introduce what is ecology? It's terms and scope of ecology
CO1 CO2	
	To introduce what is ecology? It's terms and scope of ecology   To understand abiotic and biotic (non-living factors) factors present in ecosystems and
CO2	To introduce what is ecology? It's terms and scope of ecologyTo understand abiotic and biotic (non-living factors) factors present in ecosystems and their effects on animals as well as on plants.To understand Types of ecosystems, food chain, food web, energy flow, structure of community, ecological niche, ecotone and edge effect Structure of community, community
CO2 CO3	To introduce what is ecology? It's terms and scope of ecologyTo understand abiotic and biotic (non-living factors) factors present in ecosystems and their effects on animals as well as on plants.To understand Types of ecosystems, food chain, food web, energy flow, structure of community, ecological niche, ecotone and edge effect Structure of community, community succession and climax
CO2 CO3 CO4	To introduce what is ecology? It's terms and scope of ecologyTo understand abiotic and biotic (non-living factors) factors present in ecosystems and their effects on animals as well as on plants.To understand Types of ecosystems, food chain, food web, energy flow, structure of community, ecological niche, ecotone and edge effect Structure of community, community succession and climaxTo understand Biogeochemical cycles, Oxygen cycle and sulphar cycle
CO2 CO3 CO4	To introduce what is ecology? It's terms and scope of ecologyTo understand abiotic and biotic (non-living factors) factors present in ecosystems and their effects on animals as well as on plants.To understand Types of ecosystems, food chain, food web, energy flow, structure of community, ecological niche, ecotone and edge effect Structure of community, community succession and climaxTo understand Biogeochemical cycles, Oxygen cycle and sulphar cycleDescribe sphere of earth and population ecology
CO2 CO3 CO4 CO5	To introduce what is ecology? It's terms and scope of ecology   To understand abiotic and biotic (non-living factors) factors present in ecosystems and their effects on animals as well as on plants.   To understand Types of ecosystems, food chain, food web, energy flow, structure of community, ecological niche, ecotone and edge effect Structure of community, community succession and climax   To understand Biogeochemical cycles, Oxygen cycle and sulphar cycle   Describe sphere of earth and population ecology   Zoology paper : ZOL – 210 Evolution
CO2 CO3 CO4 CO5 CO1	To introduce what is ecology? It's terms and scope of ecology   To understand abiotic and biotic (non-living factors) factors present in ecosystems and their effects on animals as well as on plants.   To understand Types of ecosystems, food chain, food web, energy flow, structure of community, ecological niche, ecotone and edge effect Structure of community, community succession and climax   To understand Biogeochemical cycles, Oxygen cycle and sulphar cycle   Describe sphere of earth and population ecology   Zoology paper : ZOL – 210 Evolution   To introduce concept of evolution and organic evolution and their theories
CO2 CO3 CO4 CO5 CO1 CO2	To introduce what is ecology? It's terms and scope of ecology   To understand abiotic and biotic (non-living factors) factors present in ecosystems and their effects on animals as well as on plants.   To understand Types of ecosystems, food chain, food web, energy flow, structure of community, ecological niche, ecotone and edge effect Structure of community, community succession and climax   To understand Biogeochemical cycles, Oxygen cycle and sulphar cycle   Describe sphere of earth and population ecology   Zoology paper : ZOL – 210 Evolution   To introduce concept of evolution and organic evolution and their theories   To introduce or describe the evidences of organic evolution
CO2 CO3 CO4 CO5 CO1 CO2 CO3	To introduce what is ecology? It's terms and scope of ecology   To understand abiotic and biotic (non-living factors) factors present in ecosystems and their effects on animals as well as on plants.   To understand Types of ecosystems, food chain, food web, energy flow, structure of community, ecological niche, ecotone and edge effect Structure of community, community succession and climax   To understand Biogeochemical cycles, Oxygen cycle and sulphar cycle   Describe sphere of earth and population ecology   To introduce concept of evolution and organic evolution and their theories   To introduce or describe the evidences of organic evolution   Describe the key components of natural selection.
CO2 CO3 CO4 CO5 CO1 CO2 CO3 CO4	To introduce what is ecology? It's terms and scope of ecology   To understand abiotic and biotic (non-living factors) factors present in ecosystems and their effects on animals as well as on plants.   To understand Types of ecosystems, food chain, food web, energy flow, structure of community, ecological niche, ecotone and edge effect Structure of community, community succession and climax   To understand Biogeochemical cycles, Oxygen cycle and sulphar cycle   Describe sphere of earth and population ecology   To introduce concept of evolution and organic evolution and their theories   To introduce or describe the evidences of organic evolution   Describe the key components of natural selection.   Describe Elementary forces of evolution on genetics base changes   Describe evidence from microevolution, macroevolution and mega evolution.   To understand species, speciation and their types of speciation
CO2 CO3 CO4 CO5 CO1 CO2 CO3 CO4 CO5	To introduce what is ecology? It's terms and scope of ecology   To understand abiotic and biotic (non-living factors) factors present in ecosystems and their effects on animals as well as on plants.   To understand Types of ecosystems, food chain, food web, energy flow, structure of community, ecological niche, ecotone and edge effect Structure of community, community succession and climax   To understand Biogeochemical cycles, Oxygen cycle and sulphar cycle   Describe sphere of earth and population ecology   Zoology paper : ZOL – 210 Evolution   To introduce concept of evolution and organic evolution and their theories   To introduce or describe the evidences of organic evolution   Describe Elementary forces of evolution on genetics base changes   Describe evidence from microevolution, macroevolution and mega evolution.

	Paper XVIII – Parasitic protozoa and Helminthes-I
CO1	Knowledge about parasite, host, parasitism and types of parasites and its host parasite relationship.
CO2	Knowledge about classification of parasite
	To understand the structure life cycle, pathogenecity and control measure of the following. Entamoeba coli Entamoeba gingivalis Giarida Intestinalis Trichomonas vaginalis Trypanosoma Gambience Balantidium coli Plasmodium vivax Plasmodium falciparum Plasmodium ovale
	Plasmodium mealariae
	Eimeria tenella
	Paper XXII – Parasitic protozoa and Helminthes-II
CO1	Knowledge about general character and classification of helminthes.
	Knowledge about general enalacter and classification of neminities.
CO2	To understand the stracture life cycle, pathogenecity and controal measure of the following. Schistoma haematobium Amphilina Taenia saginata Echinococcus granulossus Trichinella spiralis Enterobius Vermicularis Ancylostoma duodenale Wachereria bancroftill Dracunculus medinesis.
	cestodes and Nematodes.
	B.Sc. VI Semester
001	Paper –XVII Ecology
CO1	To introduce what is ecology? It's terms and scope of ecology
CO2	To understand abiotic and biotic (non-living factors) factors present in ecosystems and their effects on animals as well as on plants.
CO3	To understand Types of ecosystems, food chain, food web, energy flow, structure of community, ecological niche, ecotone and edge effect Structure of community, community succession and climax
CO4	To understand Biogeochemical cycles, Oxygen cycle and sulphar cycle
CO5	Describe sphere of earth and population ecology
	Paper – XXI Evolution
CO1	To introduce concept of evolution and organic evolution and their theories

CO2	To introduce or describe the evidences of organic evolution
CO3	Describe the key components of natural selection.
CO4	Describe Elementary forces of evolution on genetics base changes
CO5	Describe evidence from microevolution, macroevolution and mega evolution.
CO6	To understand species, speciation and their types of speciation
CO7	To describe elemental forces of evolution like Mutation, Recombition, Natural selection,
	Isolation and Genetic drift.