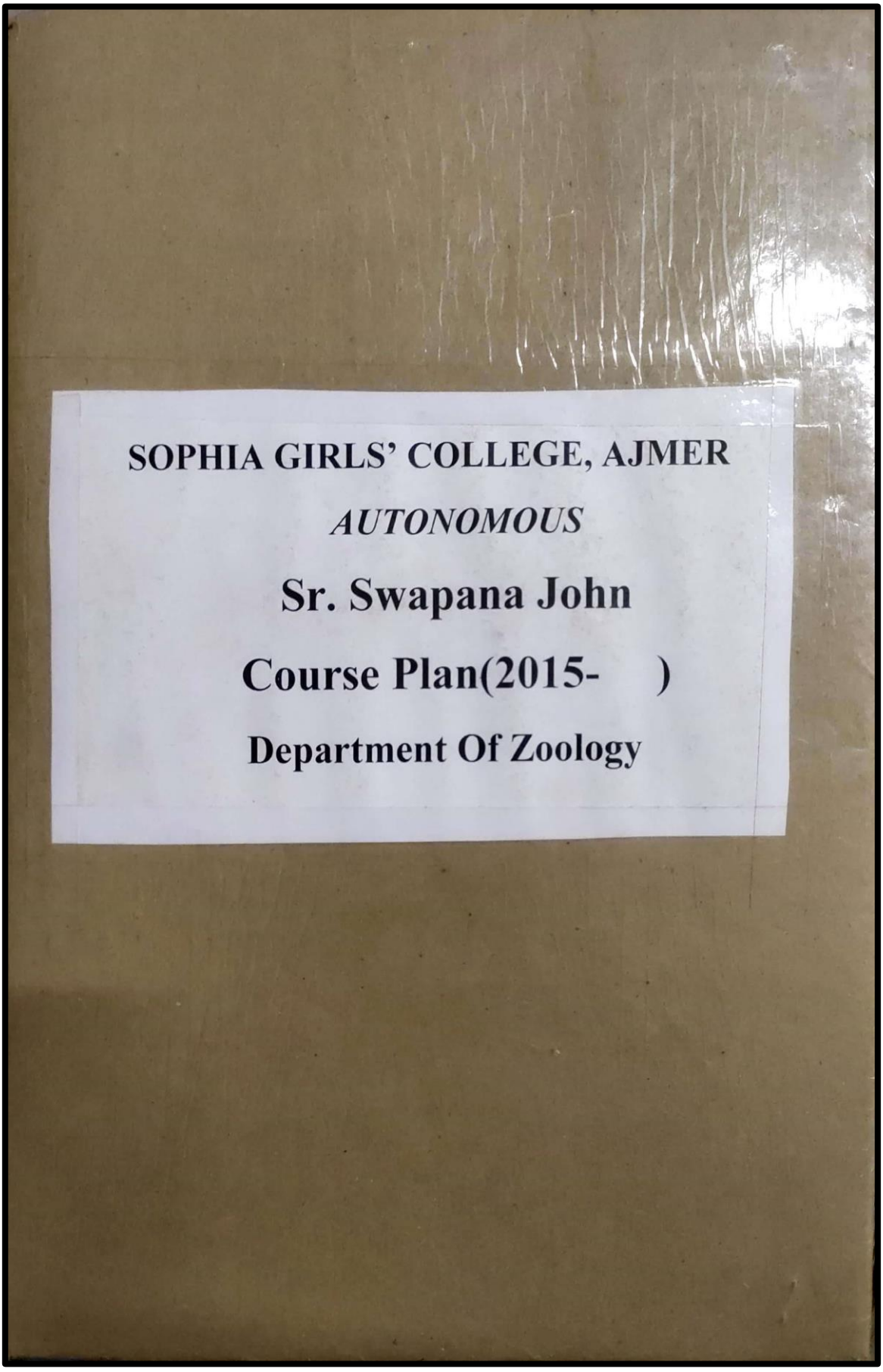
SOPHIA GIRLS' COLLEGE, AJMER
AUTONOMOUS
Sr. Swapana John
Course Plan(2015-)
Department Of Zoology

TEACHING PLAN
2017-18

B.Sc. (Zoology) (Semester –I)

PAPER : 101 Invertebrate: Classification & Special Features

Month	Unit and Topics Covered	Other activities
July	**Unit – I** **Invertebrate classification**: salient features of various phyla and their classification upto Classes: Protozoa,Porifera,Colenterata,Aschelminthes,Platyhelminthes,Annelida,Arthropoda,Mollusca, Echinodermata. **General principles of taxonomy** - concept of the Five Kingdom scheme. **Concept of Protozoa, Parazoa, Metazoa, Eumetazoa** and levels of organization.	Group discussion Quiz Open book test
August	**Basis of classification of non-chordata**: Symmetry, coelom, segmentation and embryogeny. **Unit - II** **Protozoa**: Reproduction and Mode of locomotion:Cilia, Flagella and pseudopodia. **Porifera**: Spicules: calcareous, silicious. Canal system: Ascon, Sycon and Leucon	Assignment
September	**Coelenterata:** Polymorphism, Corals and Coral reefs **Platyhelminthes**: Parasitic adaptations: Morphological and Physiological **Aschelminthes**: Life cycle with reference to Ascaris and its Economic Importance	Test

October	**Unit - III** **Annelida:** Reproduction with reference to Earthworm. Locomotion:Setae and Parapodia **Arthropoda:** Metamorphosis:Ametabolous,Hemimetabolousand Holometabolous Social organization in termites and Bees :Life Cycle.Caste System and its Economic Importance	CIA Power Point Presentations Mock test
November	**Mollusca:** Foot and shells, Torsion with reference to Pila **Echinodermata:** Water vascular system and its function **END SEMESTER EXAMINATION**	Revision

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B.Sc (Zoology) (Semester –III)

PAPER : 301 Structure and Function of Invertebrates

Month	Unit and Topics Covered	Other activities
July	**Unit – I** Structural and functional organization of vital systems of nonchordates **Skeleton:** Endoskeleton (spicules of *Sycon*), exoskeleton, chitinous (*Palaemon*). **Nervous System:** Sensory and nerve cells (*Obelia*); brain ring and longitudinal nerves (*Fasciola*), brain and ventral nerve cord (*Palaemon*), nervous system of *Pila*	Group discussion Quiz
August	**Unit - II** **Sense-organs:** Statocyst and osphradium (*Pila*), compound eye (*Palaemon*) and simple eye (*Nereis*), tactile and olfactory organs (*Palaemon*), nuchal organs (*Nereis*). **Food, Feeding, Digestive structures and Digestion:** Autotrophic (*Euglena*), heterotrophic: through food vacuole (*Paramecium*) and in hydroid and medusoid zooids (*Obelia*), parasitic, (*Taenia, Hirudinaria*), predatory(*Palaemon,*).	Assignment Project
September	**Respiration:** Aquatic general body surface (Earthworm), dermal branchiae (*Asterias*), parapodia (*Nereis*), gills (*Pila*), aerial, pulmonary sac (*Pila*), trachea (Insect), anaerobic (*Fasciola*	Test
October	**Unit – III** **Excretion:** General body surface (Paramecium), protonephridial system and flame cells (*Fasciola*), nephridia (*Earthworm*), malpighian tubules (insect); organ of Bojanus (*Pila*). **Circulation:** Cyclosis (*Paramecium*), diffusion (*Sycon, Taenia*), open circulatory	

	system (*Palaemon*), closed circulatory system (*Nereis*).	CIA
November	**Reproduction:** Asexual (*Paramecium, Sycon*), alternation of generation (*Obelia*), sexual(*Fasciola, Neries*) **END SEMESTER EXAMINATION**	Revision

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B.Sc (Zoology) (Semester –V)

PAPER : 501 Classification, Structure and Special Features of Chordate

Month	Unit and Topics Covered	Other activities
July	**Unit – III** **Reptilia** – Venomous and non-venomous snakes, Poison apparatus / venom gland **Aves** - Flight adaptation, Bird migration **Mammals** - Adaptive radiation, Dentition	Group discussion Quiz
August	**Unit - II** **Pisces** - Scales and fins, Migration, Parental care. **Amphibia** - Parental care Habit, Habitat and Salient features of ***Petromyzon*, Ammocoete larva**	Assignment Project
September	**Unit – II** Habit, habitat, external features and anatomy of ***Branchiostoma*** *(*excluding development) Salient Features of **Hemichordata** Habit, habitat, external features and anatomy of **Herdmania** (excluding development)	Test
October	**Unit – I** Classification and characters of phylum **Chordata** (excluding extinct forms) up to classes (up to subclass in mammals).	**C I A**
November	Classification continued **END SEMESTER EXAMINATION**	Quiz

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B.Sc (Zoology) (Semester –II)
PAPER : 201 Genetics and Evolution

Month	Unit and Topics Covered	Other activities
January	**Unit III** **History of evolutionary thought –** Lamarckism, Neo-Lamarckism, Darwinism and Neo- Darwinism. Evidence of evolution. **Natural selection** (differential reproduction), genetic basis of evolution, speciation **Variations, Isolation and Adaptations** and their role in evolution.	Group Discussion Project
February	**Study of extinct forms**: Dinosaurs, Archaeopteryx .Geological time scale (Basic idea). **UNIT I** **Cell reproduction:** **Interphase** nucleus and cell cycle S, G-1, G-2 M-phase. **Mitosis**: Phases and process of mitosis, structure and function of spindle apparatus, anaphasic movement. **Meiosis**: Phases and process of meiosis, synapses and synaptonemal complex, formation and fate of chiasmata and significance of	Quiz

of Feb	events during contraction and relaxation of muscle fibers.	**C.I.A**
March	**Unit – III** **Physiology of Nerve Impulse and Reflex Action**: Functional architecture of a neuron, origin and propagation of nerve impulse, synaptic transmission, spinal reflex arc, central control of reflex action. **Hormonal control** of male and female reproduction and implantation, parturition and lactation in mammals.	Discussion on important topic Mock test
April	**END SEMESTER EXAMINATION**	Revision

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B.Sc (Zoology) (Semester –VI)

PAPER : 602 Ethology, Biostatistics and Applied Zoology

Month	Unit and Topics Covered	Other activities
January	**UNIT II** Introduction and understanding the concepts of descriptive and inferential statistics Frequency distribution, t-test, graphical presentation Mean, mode, median, Variance, Coefficient of correlation and Chi square test Standard deviation, standard error	Practice of Questions
February	**Unit - I** Introduction and history of **Ethology** **Concepts of Ethology**: fixed action pattern, sign stimulus, innate releasing mechanism, action specific energy, motivation, imprinting and learning. **Methods of studying behaviour**: Neuroanatomical neurophysiological, neurochemical techniques. **Territory and Home range**- Role of pheromones. **Social behaviour**: Characteristics and advantages with special reference to deer and monkey	Assignment Observation through visits. **C.I.A**
March	**Unit - III** **Honey bee**: Social life and communication, life history, Apiculture. **Lac culture**: life cycle, lac culture,	Project Power Point Presentation

	composition, and uses of lac. **Silk moth**: Life history, Sericulture, Economic Importance.	Mock test
April	**END SEMESTER EXAMINATION**	Revision

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