

K. T. S. P. Mandal's
Hutatma Rajguru Mahavidyalaya, Rajgurunagar
Department of Zoology
A.Y. 2021- 2022

Syllabus completion Report

T.Y.B.Sc. Zoology Sem I

ZO – 351 Pest Management

Sr. No	Month	Topic	Professor
1	October	1. Pest: 1.1. Definition. 1.2. Types of pests. 1.3. Types of damages caused by the pest.	SVT
2	October	2. Pest management using Regulatory control: 2.1. Quarantine. 2.2. Eradication. 2.3. Control districts. 2.4. "Crop-free" periods.	SVT
3	November	3. Pest management using Cultural control: 3.1. Sanitation. 3.2. Tillage. 3.3. Crop rotation. 3.4. Cropping systems.	SVT
4	November	4. Pest management using Biological control: 4.1. Ecological considerations. 4.2. Biological control of insects. 4.3. Biological control of plant disease. 4.4. Biological control of weeds.	SVT
5	November	5. Biotechnology approaches in pest management: 5.1. Introduction. 5.2. Recent advance in use of fungi and viruses. 5.3. Methodology in Biotechnology. 5.4. Somaclonal variability. 5.5. Concept of Genetic engineering and Transgenic plants.	SVT
6	December	6. Integrated pest management (IPM): 6.1. Principles and its components. 6.2. Advantages and disadvantages. 6.3. Biological control - Predators, Parasitoids,	SVT

		Entomopathogens, Weed killers and their mass production.	
7	December	7. Insecticides: 7.1. Classification of insecticides based on mode of entry. 7.2. Action and chemical nature. 7.3. Insecticides formulations and their uses. 7.4. Safe handling of insecticides.	SVT
8	January	8. Insecticide residue: 8.1. Methods of residue detection - Organochlorine, Organophosphates, Synthetic Pyrethroids, Systemic. 8.2. Problems in fruits, vegetables, medicinal plants. 8.3. Maximum permissible residue limits (MRLs).	SVT

As per above mention SPPU T.Y.B.Sc Zoology theory syllabus of Semester I completed successfully. For completion of this syllabus 45 lectures are conducted.



Prof. Dr. Theurkar S.V.

Department of Zoology

Syllabus completion Report (A.Y. 2021-2022)

T.Y.B.Sc. Zoology Sem I ZO – 3511 Poultry Management

Sr. No	Month	Topic	Professor
1	November	Introduction to Poultry Farming: 1.1 Definition of Poultry, Importance of Poultry Farming and Poultry Development in India. 1.2 Present and future prospects.	SVT
2	December	Breeding Management: 2.1 Male and female reproductive system of chicken. 2.2 Breeds and strains of broilers and layers of chicken. 2.3 General aspects of breeding for better egg production and body weight gain. 2.4 Selection and culling. 2.5 Artificial insemination.	SVT
3	December	Housing Management: 3.1 Establishment of poultry farm. 3.2 Housing and equipment. 3.3 Incubation and hatching of eggs. 3.4 Broiler and layer management. 3.5 Lighting schedule for poultry. 3.6 Transport strategy of Poultry birds.	SVT
4	January	Feeding Management: 4.1 Digestive system and Digestion Mechanism of chicken. 4.2 Feed ingredients. 4.3 Feed processing.	SVT

		4.4 Formulation of feed viz., Starter, Grower, Layer, Finisher and Breeder ration, Feed conversion ratio (FCR), Nutritional deficiency conditions.	
5	January	Health Management: 5.1 Vaccination schedule for poultry birds. 5.2 Common poultry diseases, i. e. Ranikhet, Marek, Chicken pox, Gumboro, Infectious bronchitis and Chronic Respiratory Disease (CRD). 5.3 Control of internal and external parasites.	SVT
6	February	Poultry Products: 6.1 Preservation and storage of eggs. 6.2 Grading of eggs and AGMARK standard of egg. 6.3 Egg powder. 6.4 Slaughtering and processing of chicken. 6.5 Poultry By Products - Feathers and Poultry Manure.	SVT

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T.Y.B.Sc. Zoology Sem II

ZO- 364 Entomology

Sr. No	Month	Topic	Professor
1	March	1. Fundamentals of Entomology 1.1 Definition and scope of Entomology. 1.2 General Classification of Insects. 1.3 General Characters of Insects.	SVT
2	March	2. Insect Morphology: 2.1 Insect Integument and its derivatives. 2.2 Insect Head, Head Orientations, Head articulations, Insect antennae and Mouth parts. 2.3 Insect Thorax, Insect Wing and modifications, Insect Leg and Modifications - a) Cursorial - Cockroach, b) Fossorial - Mole cricket, c) Saltorial - Grasshopper, d) Raptorial - Praying mantis, e) Pollen basket - Honey bee. 2.4 Insect Abdomen, Genital and Pre - genital appendages of Grasshopper.	SVT
3	April	3. Insect Anatomy (Grasshopper): 3.1 Digestive System. 3.2 Circulatory System. 3.3 Nervous System. 3.4 Respiratory System. 3.5 Reproductive System.	SVT
4	April	4. Insect Ecology: 4.1 Definition of Insect Ecology.	SVT

		4.2 Abiotic Factors (Photoperiod, Temperature and Humidity) and Biotic Factors (Food, Foraging and Nesting). 4.3 Mimicry in insects with suitable examples.	
5	April	5. Insect Metamorphosis: 5.1 Definition. 5.2 Types and examples of Metamorphosis.	SVT
6	April	6. Insects as social groups: 6.1 Definition & significance of Eusociality, Intraspecific and Interspecific relationships among insects. 6.2 Social organization in Wasps and Termites.	SVT
7	May	7. Economic Importance of Insects: 7.1 Insects in Research. 7.2 Insects in Medicines and Cosmetics. 7.3 Insects as Vectors. 7.4 Insects as food.	SVT

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T.Y.B.Sc. Zoology Sem II

ZO - 3610 Environmental Impact Assessment

Sr. No	Month	Topic	Professor
1	April	1. Environment: 1.1 Definition. 1.2 Divisions. 1.3 Importance.	SVT
2	April	2. Pollution: 2.1 Definition and types. 2.2 Impact on wildlife, natural resources, development	SVT
3	May	3. Sustainable development: 3.1 Definition and need. 3.2 Exploitation of natural resources. 3.3 Concept of carrying capacity. 3.4 Three pillars of Sustainability. 3.5 UN 17 Sustainable Development Goals (SDGs)	SVT
4	May	4. Overview of Environmental Protection acts: 4.1 The Air (Prevention and Control of Pollution) Act 1981. 4.2 The Water (Prevention and Control of Pollution) Act 1974. 4.3 The Environment Protection Act 1986. 4.4 The National Green Tribunal Act 2010. 4.5 Biological Diversity Act 2002	SVT

5	May	5. Environmental Impact Assessment (EIA): 5.1 Definition, need and importance of EIA. 5.2 EIA notification 2006 - key elements, History and Evolution of EIA. 5.3 Categories of Industries / establishments requiring EIA, Types of EIA - strategic EIA, regional EIA, sectoral EIA, project level EIA and life cycle assessment. 5.4 Rapid and comprehensive EIA	SVT
6	May	6. EIA Process: 6.1 Screening, Scoping and consideration of alternatives. 6.2 Baseline data collection, Impact analysis, Mitigation, Reporting, Public hearing. 6.3 Review of EIA. 6.4 Decision-making, monitoring clearance conditions	SVT
7	June	7. Stakeholders in EIA process: 7.1 Project proponent, Environmental consultant. 7.2 CPCB / MPCB. 7.3 Public, EIA agency (IAA).	SVT
8	June	8. Overview of Scheme for Accreditation of EIA Consultant Organizations (NABET / QCI): 8.1 Eligibility and benefits. 8.2 EIA coordinator (EC), Functional area experts (FAEs). 8.3 Functional area associate (FAA) and team members: Role, educational qualification, experience and functions.	SVT

As per above mention SPPU T.Y.B.Sc Zoology theory syllabus of Semester II completed successfully.

A handwritten signature in blue ink, reading 'Theurkar', with a horizontal line underneath.

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T.Y.B.Sc. Zoology Sem II

Project

Students have successfully completed the research project in the stipulated time and present the dissertation at the time of the examination in a proper format. Students were encouraged from laboratory work, hands-on practical investigation and design experimental setup. Field work to be carried out under proper supervision and permissions from the concerned authorities.

Possible key aspects of the project work -

- 1. Planning the project**
- 2. Selecting a suitable title**
- 3. Significance of the work**
- 4. Hypothesis, Objectives**
- 5. Reviewing the available literature**
- 6. Methodology to be used**
- 7. Outcomes of the Project work**
- 8. Conclusion and Discussion**
- 9. Future plans**

Future Plan:

All the students Research projects will be publish in UGC care list Research Journal having impact factor.



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