

GUJARAT UNIVERSITY

Ahmedabad



ZOOLOGY MINOR SYLLABUS [THEORY AND PRACTICAL]

BASED ON NEP 2020 Guidelines

Effective from June - 2024

B. Sc. - ZOOLOGY

Semester –IV

Course Structure with respect to credits, hours and marks

Course Type	Course	Credits	Work Hours / week	Exam hours	Marks		Total Marks
					Internal	External	
Minor Courses	DSC-M-244 T	2	2	2	25	25	50
	DSC-M-244 P	2	4	3	25	25	50

N.B: No. of students per batch during practical exam=10

Zoology Paper – DSC-M-244 T

Semester – 4

Insect vectors & vector – borne diseases, Cytology.

Learning Objectives:

- To learn entomological aspects of insect vectors and vector-borne diseases affecting the Human population.
- To study fundamental Cell Biology.
- To apply the theoretical knowledge in practical.
- To make the student aware of the wide scope of Zoology as a Minor subject.

Learning Outcomes

By the end of the course, the students will be able to:

- Acquire knowledge about different branches of Zoology that will guide them to succeed in the same.
- Comprehend the spread of various vectors, diseases, their prevention and cure.
- Create awareness about public health.
- Students will gain knowledge about advance research techniques and applied branches of Zoology.

Unit- 1: Arthropod vectors and vector- borne diseases

1. Introduction of vectors (Mechanical and biological)
2. Vector Insects: Mosquitoes, House Flies, Fleas, Ticks, Bed Bug, Human Louse, Mites, Black Flies and Cockroach.
3. Insect borne diseases- Malaria, Dengue, Chikungunia, Filariasis, Visceral Leishmaniasis, Plague, Tick-borne encephalitis, Crimean-congo haemorrhagic fever, Trypanosomiasis, River blindness.

Unit- 2: Cytology

Structure and function of following cell organelles:

1. Lysosome
2. Endoplasmic Reticulum
3. Golgi Complex
4. Mitochondria
5. Ribosomes

Zoology Paper – DSC-M-244 P- Practical
(Based on theory papers DSC-M-244 T)
Semester – 4

Instructions

- Students must record the laboratory work done in a journal. The journal is to be certified by the Teacher in-charge and Head of the department.
- Duly certified journals have to be produced while appearing at the time of university exam.

Unit: 1 Arthropod vectors and Vector-borne diseases:

Study of Arthropod Vectors and Vector borne diseases through slides/charts/multimedia:

Mosquitoes, House Flies, Fleas, Ticks, Bed Bug, Human Louse, Mites, Black Flies and Cockroach.

Unit: 2 Cytology

- Identification of following cell organelles:
 1. Lysosome
 2. Endoplasmic Reticulum
 3. Golgi Complex
 4. Mitochondria
 5. Ribosomes

Reference books:

1. Textbook of Invertebrates, R. L. Kotpal, Rastogi Publishers, Meerut.
2. Invertebrate Zoology, Jordan and Verma, S. Chand & Company, Delhi.
3. Text book of practical zoology - Invertebrates, S. S. Lal Rastogi Publication, Meerut.
4. Entomology and Pest Management. Pedigo L. P. (2002), Prentice Hall Publication.
5. Integrated Vector Management: Controlling Vectors of Malaria and other Insect Vector borne Diseases. Methews, G. (2011) Wiley-Blackwell
6. Cytology, P. S. Verma & V. K. Agarwal, S. Chand & Company, Delhi.
7. Cell Biology, C. B. Power, Himalaya Publishing House.
8. Introduction to cytology, Veer bala Rastogi, Kedarnath Ramnath, Meerut.

GUJARAT UNIVERSITY
EFFECTIVE FROM JUNE-2024
MULTIDISCIPLINARY/INTERDISCIPLINARY COURSE PRACTICAL
B.SC. SEMESTER-IV ZOOLOGY
DSC-M-244 P (MINOR PRACTICAL) (2- CREDITS)

(Based on theory paper DSC-M-244 T)

SKELETON QUESTION PAPER FOR PRACTICAL EXAMINATION

Time: 3 Hours.

Marks: 25

- Q. 1 Identify and give brief account.
(Mosquitoes, House Flies, Fleas, Ticks, Bed Bug, Human Louse, Mites, Black Flies and Cockroach.) 5
- Q. 2 Identify and describe its pathogenicity, prevention and controlling measures.
(Mosquitoes, House Flies, Fleas, Ticks, Bed Bug, Human Louse, Mites, Black Flies and Cockroach.) 5
- Q. 3 Identify and give brief account. (Mitochondria, Endoplasmic Reticulum, Golgi Complex.) 6
- Q. 4 Identify and give brief account. (Lysosomes, Ribosomes.) 4
- Q. 5 Viva. 2
- Q. 6 Journal. 3
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