



Syllabus and Courses of Study in Zoology UG. Semester-VI th

For examinations to be held in 2024-25, 2025-2026, 2026-2027

Maximum Marks	100
Core Course No.	UZOMNT- 603
Minimum Pass Marks	External-29, Internal-7
Core Course Title	Fundamentals of Endocrinology and Basics of Immunology
Credits	4
Marks (External)	80 marks
Internal Assessment	20 marks
Duration of external Exam.	3 Hours
Date of BOS	12-06-24

SYLLABUS

Unit - 1. Structure and function of endocrine glands. 12 hrs

- Structure of glands and role of hormones secreted by them :

1.1 Hypothalamus - hypophyses system

1.2 Pineal

1.3 Thyroid

1.4 Parathyroid

1.5 Thymus

Unit -2 Structure and function of endocrine glands. 12hrs

2.1 Adrenals

2.2 Gonads as endocrine gland

2.3 Pancreas

2.4 Gastro intestinal hormones

2.5 Putative endocrine glands

Unit - 3. Hormones in action 12 hrs

3.1 Endocrine disorders

3.1.1 Disorder of hypothalamus and pituitary

3.1.2 Disorders of thyroid

3.1.3 Disorders of adrenal

3.1.4 Disorders of Parathyroids, calcium and bones

- 3.2 Mechanism of hormone action
- 3.3 Homeostasis and feedback mechanism

UNIT -4 Introduction to immune system **12 hrs**

- 4.1 Innate and adaptive immunity
- 4.2 Cells of immune system
 - 4.2.1 Type of cells and their role in immunity.
- 4.3 General properties of cytokines and chemokines
- 4.4 Antibody: Type, structure & functions

UNIT - 5 Humoral immunity **12 hrs**

- 5.1 Antigen , antigenicity & immunogenicity
- 5.2 Signal transduction:
 - 2.2.1 B- cells
 - 2.2.2 T- cells
- 5.3 T- cell receptors and types
- 5.4 Monoclonal antibodies
- 5.5 B-cell and T-cell activation, differentiation & memory

NOTE FOR PAPER SETTING:

The paper shall comprise 5 units having 100 marks weightage.

Internal assessment: 20 marks

The scheme for External Examination of 80 marks shall be as follows:

Weightage: 80 marks

Question paper shall have three sections (A, B and C)

Section A shall comprise of 5 questions of 3 marks each. All questions shall be compulsory.

Section B shall comprise of 5 questions of 7 marks each. All questions shall be compulsory.

Section C shall comprise of 5 Long answer type questions of 15 marks each, one from each unit. The students are required to attempt any one question.

The paper shall comprise 5 units having 80 marks weightage.

Committee members (External)

1	Prof. (Dr.) Seema Langer Head, Department of Zoology & Dean, Life Sciences, University of Jammu	
2	Dr. N. K. Tripathi, Professor (Retd.) Department of Zoology, University of Jammu	
3	Dr. Surya Partap Singh, Assistant Prof. & Head, Department of Zoology, GDC Basholi	
4	Dr. Shvetambri Jasrotia, Assistant Prof., Department of Zoology, Central University of Jammu	
5	Mr. Munish Sharma Assistant Director Fisheries, Jammu.	
6	Col. (Retd.) Sunil Sambyal ,Biofloc Expert & Entrepreneur	