

UNIVERSITY OF JAMMU

SYLLABI AND COURSE OF STUDY IN ZOOLOGY

For the Examination to be held in Year 2022, 2023 & 2024

MULTIDISCIPLINARY ZOOLOGY COURSE (UMDZO)

UG SEMESTER I & II UNDER NEP-2020

UNIVERSITY OF JAMMU
SYLLABI AND COURSE OF STUDY IN ZOOLOGY
For the Examination to be held in Year 2022, 2023 & 2024
(MULTIDISCIPLINARY COURSE)
UG SEMESTER-I
UNDER NEP-2020

MULTIDISCIPLINARY COURSE NO.	:	UMDZO-101
MULTIDISCIPLINARY COURSE TITLE	:	BIODIVERSITY THREATS & CONSERVATION STRATEGIES
CREDIT	:	03
MAXIMUM MARKS	:	75
I) External (University Exam):	:	60
II) Internal Assessment	:	15
MINIMUM PASS MARKS		
I) External	:	22
II) Internal	:	05
TIME DURATION	:	02 Hours and 30 Minutes

Objectives and Expected Learning Outcomes

To acquaint the students with basic understanding of the biodiversity, its threats, conservation strategies and management and planning of ecotourism opportunities. Upon successful completion of this course, the student should be able to identify and manage for ecological impacts to soil, water, vegetation, and wildlife resulting from recreation and tourism development.

Unit 1: Environment and Health (15 Hrs.)

- 1.1. Pollution: Introduction and its Types
- 1.2. Air Pollution
 - 1.2.1. Effect of Quality of Air on Health
 - 1.2.2. Emphysema: Symptoms, Prevention and Treatment
- 1.3. Water Pollution
 - 1.3.1. Effect of Quality of Water on Health
 - 1.3.2. Cholera & Diarrhoea: Symptoms, Prevention and Treatment
- 1.4. Global Warming: Causes and Consequences
- 1.5. Ozone Depletion: Causes and its impact on Human Health

Unit 2: Wild Life Management and Conservation (15 Hrs.)

- 2.1. Wildlife: Introduction & Its Values
- 2.2. Jammu & Kashmir as a rich resource of wild life
- 2.3. Wild life Depletion
 - 2.3.1. Causes and Prevention of Depletion of Wildlife
- 2.4. Wildlife Conservation
 - 2.4.1. Introduction to Wildlife Conservation
 - 2.4.2. In situ and ex situ conservation.
 - 2.4.3. Concept and types of Protected areas
 - 2.4.4. Red Data Book
- 2.5. Human Wild conflict: Causes and control measures

Unit 3: Ecotourism**(15 Hrs.)**

- 3.1. Ecotourism: Definition and Types (Extreme & Mass Ecotourism)
- 3.2. Environmental, socio-cultural and economic impacts of ecotourism
- 3.3. Ecotourism Planning & Development
- 3.4. Role of Media in Tourism
- 3.5. Endemic animal species of Jammu & Kashmir
- 3.6. Wildlife protected areas as venues of ecotourism in J&K

NOTE FOR CONDUCTING EXAMINATION IN UMDZO-101 & PAPER SETTERS

Total Marks of the MDZO-101 is 75. 20% marks shall be reserved for internal assessment (15 marks). 80% of the marks (60 marks) shall be reserved for external examination to be conducted by the University/Colleges.

Internal Assessment Test (15 Marks)

The Internal assessment under NEP-2020 shall be of 1 hour duration and shall comprise of two parts:

Part A: Total weightage of Part A will be 06 marks and shall comprise of Five short answer questions selecting atleast from one to two units (50% of syllabus covered). A candidate will have to attempt any three questions each carrying 02 marks.

Part B: Total weightage of Part B will be 09 marks and shall comprise of two long answer questions from first one to two units. A candidate will have to attempt only one question of 9 Marks.

For Paper Setters: External End Semester University Examination

The External Examinations in Theory shall be of 60 Marks and consist of 3 sections:

Section A: It shall be of 09 Marks and comprise of Three short answer type questions, one from each of the units and carrying 03 Marks each. Answers should be precise having 70-80 words only and without any detailed explanation (All Compulsory).

Section B: It shall be of 21 Marks and will comprise of Three Medium answer type questions, two from each of the units and carrying 07 Marks each. A candidate will have to attempt one question from each unit. Answers should be comprehensive having 250-300 words only and with detailed explanation.

Section C: It shall be of 30 Marks and will comprise of Three long answer type questions, one from each of the units. A candidate will have to attempt only Two questions and will carry 15 Marks each. Answers should be of 500-600 words with detailed analysis/explanation/critical evaluation to the question.

Recommended Readings

1. Environmental Chemistry by Sodhi
2. Principals of Environmental chemistry by Manhan
3. Environmental Hazards & Human health by R.B. Philip
4. Wildlife and Forest Conservation by Sinha, P.C. Anmol Publishing Pvt., New Delhi.
5. Wildlife management by Robert, G.H. W.H. Freeman and Co., San Francisco, U.S.A.
6. Biodiversity and its conservation in India by Negi, S.S. Indus Publishing Co., New Delhi.
7. Wild Life conservation and management by Reena Mathur
8. Development of Animal Behaviour by W.K. Balwan & N Saba, Random Publication, Delhi.
9. Text book of Wild Life Management by S. K. Singh
10. Wood, M. E. (2002). Ecotourism: Principles, Practices and Policies for Sustainability
11. Biodiversity and Conservation by W.K. Balwan & N Rasool, Book Enclave Publishers, Jaipur.
12. Principles of Ecology by Verma P.S and V.R. Agarwal (New Delhi S. Chand)

UNIVERSITY OF JAMMU
SYLLABI AND COURSE OF STUDY IN ZOOLOGY
For the Examination to be held in December 2022, 2023 & 2024
(MULTIDISCIPLINARY COURSE)
UG SEMESTER-II
UNDER NEP-2020

MULTIDISCIPLINARY COURSE NO.	:	UMDZO-201
MULTIDISCIPLINARY COURSE TITLE	:	APPLIED ZOOLOGY
CREDIT	:	03
MAXIMUM MARKS	:	75
I) External (University Exam)	:	60
II) Internal Assessment	:	15
MINIMUM PASS MARKS		
I) External	:	22
II) Internal	:	05
TIME DURATION	:	02 Hours and 30 Minutes

Objectives and Expected Learning Outcomes

To acquaint the students with basic understanding of the Epidemiology, Economic Zoology & Parasitology. Upon successful completion of this course, the student should be able to have some knowledge of epidemiology of common infectious diseases, management of poultry & Cattle breeds and about the immunity.

Unit 1: Epidemiology (15 Hrs.)

- 1.1. Epidemiology: Definition, Scope and Applications.
- 1.2. Communicable Diseases: Cause, Mode of transmission, Symptoms, Prevention and Treatment of:
 - 1.2.1. Tuberculosis
 - 1.2.2. AIDS
 - 1.2.3. Covid-19
- 1.3. Non-communicable Diseases: Cause, Mode of transmission, Symptoms, Prevention and Treatment of
 - 1.3.1. Hypertension
 - 1.3.2. Cancer
 - 1.3.4. Diabetes

Unit 2: Economic Zoology (15 Hrs.)

- 2.1. Apiculture
 - 2.1.1. Apiculture: Definition, Status and Scope
 - 2.1.2. Products of Apiculture and their uses
 - 2.1.3. Life Cycle of Honey bee
- 2.2. Sericulture
 - 2.2.1. Definition, Status and Scope
 - 2.2.2. Life cycle of Silkworm
 - 2.2.3. Silk: Types & Uses
- 2.3. Dairy and Poultry Farming
 - 2.3.1. Introduction to Dairy and Poultry farming
 - 2.3.2. Cattle Breeds: Characters of Red Sindhi, Sahiwal & Jersey

2.3.3. Poultry Breeds: Characters of Rhode Island Red, White Leghorn & Black Minorca

Unit 3: Parasitology

(15 Hrs.)

- 3.1. Immunity: Definition & its types.
- 3.2. Concept and Types of Symbiotic Relationships
- 3.3. Parasite, Vectors and Hosts
 - 3.3.1. Parasites: Definition and Types
 - 3.3.2. Vectors: Definition and Types
 - 3.3.3. Vector borne Diseases: Dengue and Malaria
 - 3.3.4. Host: Definition and Types

NOTE FOR CONDUCTING EXAMINATION IN UMDZO-201 & PAPER SETTERS

Total Marks of the MDZO-101 is 75. 20% marks shall be reserved for internal assessment (15 marks). 80% of the marks (60 marks) shall be reserved for external examination to be conducted by the University/Colleges.

Internal Assessment Test (15 Marks)

The Internal assessment under NEP-2020 shall be of 1 hour duration and shall comprise of two parts:

Part A: Total weightage of Part A will be 06 marks and shall comprise of Five short answer questions selecting atleast from one to two units (50% of syllabus covered). A candidate will have to attempt any three questions each carrying 02 marks.

Part B: Total weightage of Part B will be 09 marks and shall comprise of two long answer questions from first one to two units. A candidate will have to attempt only one question of 9 Marks.

For Paper Setters: External End Semester University Examination

The External Examinations in Theory shall be of 60 Marks and consist of 3 sections:

Section A: It shall be of 09 Marks and comprise of Three short answer type questions, one from each of the units and carrying 03 Marks each. Answers should be precise having 70-80 words only and without any detailed explanation (All Compulsory).

Section B: It shall be of 21 Marks and will comprise of Three Medium answer type questions, two from each of the units and carrying 07 Marks each. A candidate will have to attempt one question from each unit. Answers should be comprehensive having 250-300 words only and with detailed explanation.

Section C: It shall be of 30 Marks and will comprise of Three long answer type questions, one from each of the units. A candidate will have to attempt only Two questions and will carry 15 Marks each. Answers should be of 500-600 words with detailed analysis/explanation/critical evaluation to the question.

Recommended Readings

1. Book of Bee Keeping by Sharma P.L. and Singh, S.H.
2. Prospective in Indian Apiculture by R.C. Mishra.
3. Rearing queen bees in India by M.C. Suryanarayana et. al.
4. Bee Keeping in India by G. K. Ghosh.
5. Applied Zoology by W.K. Balwan and A.K. Verma
6. Poultry by Banerjee, G C (1982), Oxford and IBM Publication
7. DBS Handbook of Poultry Management by W.K. Balwan and A.K.Verma.
8. Economic Zoology by Shukla and Upadhyay.
9. Education of Communicable and Non-Communicable Diseases S.L. Goel Published by Deep & Deep Publications Pvt. Ltd., 2009
10. Entomology and Pest Management by Pedigo L P. Prentice Hall Publication