

SYLLABUS FOR THE BATCH FROM YEAR 2026 TO 2027

FOR
Certificate Course in Wildlife
Ecology and Conservation

(Credit Based Evaluation and Grading System)

Semester: I

EXAMINATIONS: 2026-2027

Certificate Course Offered:

Certificate Course in Wildlife Ecology and Conservation (6 Months Duration)



Department of Zoology

In collaboration with

Directorate of Open & Distance Learning and Online Studies

GURU NANAK DEV UNIVERSITY
AMRITSAR

**Certificate Course in Wildlife Ecology and Conservation (Semester System) Offered by
Department of Zoology in Collaboration with Directorate of Open & Distance Learning
and Online Studies, Guru Nanak Dev University Amritsar**

Eligibility:

- +2 or equivalent Examinations
- Any student pursuing Bachelor Degree, Master Degree, M.Phil., Ph.D. from GNDU campus constituted or affiliated college.

Paper code	Subject	Marks			Credits
		Internal Assessment	End Term	Total	
ODWEC111T	Wild Life Ecology	30	70	100	4
ODWEC112T	Wild Life Conservation	30	70	100	4
ODWEC113T	Wild Life Conservation Schemes in India	30	70	100	4
ODWEC114P	Project/Assignment	-	-	100	4
Total Marks & Credits		90	210	400	16

**Certificate Course in Wildlife Ecology and Conservation (Semester System) Offered by
Department of Zoology in Collaboration with Directorate of Open & Distance Learning
and Online Studies, Guru Nanak Dev University Amritsar**

Course Title: Wildlife Ecology

Subject Code: ODWEC111T

(Semester – I)

Time: 3 Hours

Max. Marks: 100 Marks

Internal Assessment: 30 Marks

End Term exam: 70 Marks

Instructions for the Paper-Setter/examiner:

1. Question paper shall consist of **Four sections**.
2. Paper setter shall set **Eight questions** in all by selecting **Two questions** of equal marks from each section. However, a question may have sub-parts (not exceeding four sub-parts) and appropriate allocation of marks should be done for each sub-part.
3. Candidates shall attempt **Five questions** in all, by at least selecting **One question** from each section and the **5th question** may be attempted from any of the **Four sections**.
4. The question paper should be strictly according to the instructions mentioned above. In no case a question should be asked outside the syllabus.

Section-A

Ecology: Subdivisions of Ecology, Relations and scope of Ecology

Environmental factors affecting wildlife:

- Abiotic Factors (Temperature, Light, Soil, Fire, Humidity)
- Biotic Factors (Autotrophs, Heterotrophs)

Section-B

Ecological relationships:

- Competition, Parasitism, Predation, Antibiosis (Negative interactions)
- Commensalism, Mutualism, Protocooperation (Positive interactions)

Section-C

Ecological Niche

Food chain (Simple, Complex)

Food web, Ecotone, Ecological Pyramids, Trophic Levels

Section-D

Population Dynamics (Individual, Population, Communities)

Population Growth (Logistic growth, Exponential Growth), Life tables

Movement (Migration)

Suggested Reading Material:

Agrawal, K. C., (2000), Wildlife of India: Conservation and Management, Nidhi Publishers.

Ali, S., (1971), The Book of Indian Birds, Bombay Natural History Society.

Sharma, B.D. (1999), Indian Wild Life Resources Ecology and Development. Daya Publishing House Delhi.

Sharma, P. D., (2011), Ecology and Environment, Rastogi Publications.

Verma, P. S., Aggarwal, V. K. (2003), Environmental Biology(Principles of Ecology), S. Chand Limited.

**Certificate Course in Wildlife Ecology and Conservation (Semester System) Offered by
Department of Zoology in Collaboration with Directorate of Open & Distance Learning
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**Course Title: Wildlife Conservation
Subject Code : ODWEC112T
(Semester- I)**

Time: 3 Hours

Max. Marks: 100 Marks

Internal Assessment: 30 Marks

End Term exam: 70 Marks

Instructions for the Paper-Setter/examiner:

1. Question paper shall consist of **Four sections**.
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Section- A

Importance of Wildlife, Current status of Wildlife in India

Important wildlife zones of India

Protected Species of India

Endangered fauna of India (Amphibians, Reptiles, Birds and Mammals)

Section-B

Threats to Wildlife (Deforestation, climate change, Poaching)

Ancient and current methods of conservation

Legal aspects of Wildlife conservation

Section-C

Protected areas for Wildlife:

- National Parks
- Wildlife Sanctuaries
- Biosphere Reserves

Role of Zoos, National Parks and Sanctuaries in Conservation of Wildlife

Section-D

Wildlife laws and Policies:

- Wildlife Protection Act 1972
- Role of NGOs in Wildlife Conservation
- International Treaties and Conservations

Suggested Reading Material:

Giles, R.H. (1984), Wildlife Management Techniques, Natraj Publishers, Dehradun.

Hosetti, B. B. (1997), Concepts in Wildlife Management, Chawla Press, Delhi.

Sharma, B.D. (1999), Indian Wild Life Resources Ecology and Development, Daya Publishing House Delhi.

Sharma, S. C., (2024), Wildlife Conservation: Challenges and Opportunities , Notion Press.

Singh, S. K., (2020), Textbook of Wildlife Management (3rd ed.), CBS Publishers.

**Certificate Course in Wildlife Ecology and Conservation (Semester System) Offered by
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Course Title: Wildlife Conservation Schemes of India

**Subject Code : ODWEC113T
(Semester- I)**

Time: 3 Hours

Max. Marks: 100 Marks

Internal Assessment: 30 Marks

End Term exam: 70 marks

Instruction for the Paper-Setter/Examiner:

1. Question paper shall consist of **Four Sections**.
2. Paper setter shall set **Eight questions** in all by selecting **Two questions** of equal marks from each section. However, a question may have sub-parts (not exceeding four sub-parts) and appropriate allocation of marks should be done for each sub-part.
3. Candidates shall attempt **Five questions** in all, by at least selecting **One question** from each section and the **5th** question may be attempted from any of the **Four sections**.
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Section-A

National and state animals of India

Project Tiger: Status of Tiger in the world, Threats to Tiger and Achievements of Tiger Project

Asiatic Lion Project: Threats to Asiatic Lion and Achievements of Asiatic Lion Project

Section-B

Crocodile Breeding Project: Threats to Crocodiles and Achievements of Crocodile Breeding Project

Project Elephant: Threats to Elephants and Achievements of Project Elephant

Section-C

Himalayan Musk Deer Conservation Project: Threats to Musk Deer and Achievements of Musk Deer conservation Project

Manipur Brow Antlered Deer Project: Threats to Brow Antlered Deer and Achievements of Antlered Brow Deer project

Section-D

Project Hangul: Threats to Hangul and Achievements of Project Hangul

Snow Leopard Project: Threats to Snow Leopard and Achievements of Snow Leopard Project

Suggested Reading Material:

Dasman, R. F. (1982), Wildlife Biology, Wiley Eastern, New Delhi.

Sharma, B. D. (1999), Indian Wildlife Resources Ecology and Development, Daya Publishing House, New Delhi.

Singh, H. R. Environment Biology. S. Chand and Company Limited.