



Syllabus

Fourth Semester Course in **Zoology**

2024 – 2025

Contents:

- Syllabus for Open Elective/s (OE):

USZOO5002OE1 – LIFE IN THE EXTREME


PRINCIPAL
ST. XAVIER'S COLLEGE
AUTONOMOUS
MUMBAI - 400 001.



APPROVED SYLLABUS

20 JAN 2024



LIFE IN THE EXTREMECredits: **Theory 2 (Total 30 hrs)**Prerequisite: **None****Course Objectives:**

1. To know different types of habitats present on the planet earth and in short outside. Understand various types of extreme habitats are such as those with extreme temperatures, extreme pressures, high salt concentrations, high acidic and alkaline, and arid environment. Some of these regions also have prolonged brightness or darkness.
2. To understand how animals manage to live in varieties of extreme habitats that are present on the planet earth - what kind of structural, functional and behavioural features the animals have evolved.
3. To know the application of such studies.

Course Outcomes:

CO	Course Outcomes	Bloom's Taxonomy Level
1.	know about the different types of habitats	Knowing
2.	understand how animals manage to live in habitats with extreme physical features.	Understanding
3.	Understand where such studies are applied	Understanding

UNIT 1

(15 lectures)

Animals in extreme pressure and chemical conditions

- Introduction to different types of habitats on earth
- Animals living in extreme high pressure conditions – oceanic trenches
- Animals living in high salt, high acidic and high alkaline conditions

UNIT 2

(15 lectures)

Animals in extreme temperature and dryness

- Animals living in extreme cold conditions – polar regions, high altitudes.
- Animals living in extreme hot conditions – hot deserts, hydrothermal vents
- Application of study of extremophiles – such as in early earth environment and extraterrestrial environments

List of Recommended Reference Books:

1. Wharton, D. A. (2007). Life at the Limits (Reissue edition). Cambridge University Press
2. Various educational documentaries

Evaluation (Theory): Total marks per course – 50

I. Formative Assessment ‘for’ Learning (continuous internal assessment - CIA to improve learning).

CIA - 20 marks

- CIA: Written Test – 20 marks

II. Summative Assessment ‘of’ Learning

End Semester Examination – 30 marks

- One question from each unit for 15 marks, with internal choice. Total marks per question with choice -22 to 23.

Template for the End Semester examination in Semester III for the Open Elective course in Life in the Extreme.

UNITS	REMEMBERING	UNDERSTANDING	TOTAL MARKS Per unit
1	8	7	15
2	7	8	15
TOTAL	15	15	30
% WEIGHTAGE	50	50	100
