

ENVIRONMENTAL STUDIES

(COMPULSORY COURSE)

Present module consists of **3 units**, covering **42 lecture** hours which are **classroom based** and **field work** intended to create awareness, enhance knowledge, develop skills and attitudes necessary to understand the Environment in its totality and enables students to participate proactively for the cause of the environment.

Environmental Studies is made compulsory core module syllabus framed by UGC for all the Indian Universities/Colleges. As per State Educational Policy and members of Board of Studies it is proposed to implement the details listed in the tabular column below, **mandatorily**.

Subject	ENVIRONMENTAL STUDIES (COMPULSORY COURSE)	Semester
Course	B.Com/B.B.M (B.B.A)/B.SW	I
	B.Sc./BCA/BA	II

Pattern of Examination: Total marks – 50 (Internal Assessment - 10 marks and Final Examination - 40 marks).

I. Summative Marks Distribution

Formative Assessment	
Assessment Occasion/Type	Weighting in Marks
Assessment Test – 1	5
Assessment Test – 2	5
Total	10

II. Term End Examination: Paper will be for maximum of 40 marks. The minimum mark to pass the examination is 40% (16 marks).

Multiple Choice Questions

- 1. Duration of the examination:** 1.5 hours
- 2. Teaching hours and credits:** 3 hours of teaching per week and 2 credits.
- 3. Course Outcomes (COs):**

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

1. Acquire knowledge about their immediate surrounding through experiences.
2. Evolve into ecologically informed and socially responsible.
3. Apply the scientific method and qualitative techniques to describe, monitor and understand environmental systems.
4. Live naturally without harming the ecosystem
5. Bring awareness among the society through practical knowledge and experience

ENVIRONMENTAL STUDIES (COMPULSORY COURSE)	
Total Contact Hours: 42	Course Credits: 2
No. of Teaching Hours/week: 3	Duration of ESA/Exam: 1.5 Hours
Formative assessment Marks: 10	Semester end assessment Marks: 40

Contents		42 hours
Unit 1:	<p>Introduction to Environmental Studies: Multidisciplinary nature of environmental studies, Scope and importance; Concept of sustainability and sustainable development.</p> <p>Ecosystem: Structure and function of ecosystem; Energy flow in an ecosystem: food chains, food webs and ecological succession. Case studies of Forest ecosystem, Grassland ecosystem, Desert ecosystem and Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries).</p> <p>Natural Resources:</p> <p>Renewable and Non-Renewable Resources: Land resources and land-use change; Land degradation, Soil erosion, and desertification.</p> <p>Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity, and tribal populations.</p> <p>Water: Use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (international & inter-state).</p> <p>Energy resources: Renewable and non-renewable energy sources, use of alternate energy sources, growing energy needs, case studies.</p> <p>Biodiversity and Conservation: Levels of biological diversity: Genetic, species and ecosystem diversity; Biogeographic zones of India Biodiversity patterns and global biodiversity hot spots. India as a mega-biodiversity nation; Endangered and endemic species of India.</p> <p>Threats to biodiversity: Habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.</p>	18
Unit 2:	<p>Environmental Pollution and Policies :</p> <p>Environmental pollution: types, pollutants causes, effects and controls; Air, water, soil and noise pollution, Nuclear hazards and human health risks, Solid waste management, Control measures of urban and industrial waste Pollution case studies.</p> <p>Social and Environmental Issues Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture.</p> <p>Environmental Policies and Practices: Environment Laws: Environment Protection Act; Air (Prevention & Control of Pollution) Act; Water (Prevention and control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act. International agreements: Montreal and Kyoto protocols and Convention on Biological Diversity (CBD).</p>	12

Unit 3:	<p>Human Communities and the Environment: Human population growth: Impacts on environment, human health and welfare. Resettlement and rehabilitation of project affected persons; case studies.</p> <p>Disaster management: floods, earthquake, cyclones and landslides.</p> <p>Environmental movements: Chipko, Silent valley, Bishnois of Rajasthan</p> <p>Environmental ethics: Role of Indian and other religions and cultures in environmental conservation Environmental communication and public awareness, case studies (e.g., CNG vehicles in Delhi).</p> <p>Field work (2hrs) Visit to near by areas to study different types of ecosystems and local biodiversity.</p>	12
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Reference

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2. Carson, R. (2002). *Silent Spring*. Houghton Mifflin Harcourt.
3. Climate Change: Science and Politics. (2021). *Centre Science and Environment*, New Delhi.
4. Gadgil, M., & Guha, R. (1993). *This Fissured Land: An Ecological History of India*. Univ. of California Press.
5. Gleeson, B. and Low, N. (eds.) (1999). *Global Ethics and Environment*, London, Routledge.
6. Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll. (2006). *Principles of Conservation Biology*. Sunderland: Sinauer Associates.
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Scheme of Examination

B.Com/B.B.M (B.B.A)/B.SW I/ B.Sc./BCA/BA II Semester Examination

(Semester),.....MONTHYEAR

(COMPULSORY COURSE)

Paper title:: Environmental Studies

Paper Code: 24ESCOMM1/2L

Duration: 1.5 Hours

Max. Marks: 40

Instruction: All questions are compulsory

All Multiple Choice Questions

40 Questions each question carries one mark

(40 x 1 = 40)

Members of BOS:

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| 1. Dr. Shashikanth H. Majagi | Chairman Dean Pure Science |
| 2. Dr. Arunkumar Lagshetty | Member, Chemistry BoS Chairman |
| 3. Dr. Shashikanth H. Majagi | Member, Zoology BoS Chairman |
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| 6. Dr. Mahantesh Nagayya Aradhyamath | Member, VNC Hospete |
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