B.A

ABILTY ENHANCING COMPULSORY COURSE (AE-2)

SEMESTER-II

(AE2B31207T) ENVIRONMENT STUDIES

MAX.MARKS:100
EXTERNAL:70
INTERNAL:30
PASS:40%

OBJECTIVE: **CREDITS: 4**

The objective of this paper is to create awareness about environmental problems among learners. The paper imparts basic knowledge about environment and its problems, and attempts to motivate learners to participate improvement.

COURSE OUTCOMES:

CO 1:	Understand the concepts of ecosystems, biodiversity, and conservation.
CO 2:	Understand the concept of natural resources; identify types of natural resources, their distribution, conservation, and management.
CO 3:	Develop an understanding of pollution and its types, learn about sources of different kindsof pollution, and sensitize learners to adverse health impacts of pollution.
CO 4:	Appreciate the historical context of human interactions with the environment; gain insights into the efforts to safeguard the Earth's environment andresources; have an overview ofroad safety measures.

INSTRUCTIONS FOR THE PAPER SETTER/EXAMINER:

1. The syllabus prescribed should be strictly adhered to.
2. The question paper will consist of three sections: A, B, and C. Sections A and B willhave four questions each from the respective sections of the syllabus and will carry 10 marks each.The candidates will attempt two questions from each section.
3. Section C will have fifteen short answer questions covering the entire syllabus. Each question will carry 3 marks. Candidates will attempt any 10 questions from this section.
4. The examiner shall give a clear instruction to the candidates to attempt questions only at one place and only once. Second or subsequent attempts, unless the earlier ones have been crossedout, shall not be evaluated.
5. The duration of each paper will be three hours.

INSTRUCTIONS FOR THE CANDIDATES:

Candidates are required to attempt any two questions each from the sections A, and B of the question paper, and any ten short answer questions from Section C. They have to attempt questions only at one place and only once. Second or subsequent attempts, unless the earlier ones have been crossed out, shall not be evaluated.

SECTION-A

UNIT 1 The multidisciplinary nature of environmental studies. Definition, scope andimportance Concept of Biosphere – Lithosphere, Hydrosphere, Atmosphere.

UNIT 2 ECOSYSTEM & BIODIVERSITY CONSERVATION:Ecosystem and its

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components, Types of Ecosystems,Biodiversity - Definition and Value, Threats to biodiversity and its conservation,Level of biological diversity: genetic, species and ecosystem diversity; bio-geographic zones of India; biodiversity patterns and global biodiversity hot spots.

UNIT 3 India as Mega-biodiversity nation; Endangered and endemic species of India.

Ecosystem and biodiversity services: Ecological, economic, social, ethical,aesthetic andinformational value.

UNIT 4 NATURAL RESOURCES–RENEWABLE AND NON RENEWABLE

RESOURCES: Land resources and land use change; land degradation, soil erosion and desertification. Deforestation: causes and impacts due to mining, dam building on environment, Forests, Biodiversity and tribal populations.

Water: Use and over-exploitation of surface and ground water, Floods, droughts, conflicts over water (international & inter-state)

Energy resources: renewable and nonrenewable energy sources, use of alternate energy sources, growing energy needs, case studies.

UNIT 5 Environmental Pollution**:** Environmental Pollution : types, causes, effects andcontrols; Air, Water, Soil and noise pollution. Nuclear hazards and human health risks Solid waste management, Source Segregations : Control measures of urban and Industrial waste. Pollution case studies.

SECTION-B

UNIT 6 Environmental Protection Laws India**:** Environmental protection act for; Air(Prevention and control of pollution), Water (Prevention and Control of pollution), Wild life, Forest Conservation, Issues involved in the enforcement of environmental legislation.Role of an individual in prevention of pollution.

Environmental policies & Practices; Climate change, global warming, ozone layer depletion, acid rain and imapcts on human communities and agriculture.

UNIT 7 Human Communities and the Environment Human population growth: Impacts on environment, human health and welfare, Sanitation & Hygiene. Resettlement and rehabilitation of project affected persons; case studies. Disaster management: floods, earthquake, cyclones and landslides. Environment movements: Chipko, Silent valley, Bishnois of Rajasthan. Environmental ethics: Role of Indian and other religions and cultures in environmental conservation for a Clean-green pollution free state. Environmental communication and public awareness, case studies (e.g., CNG vehicles in Delhi)

UNIT 8 Road Safety Awareness**:** Concept and significance of Road safety, Traffic signs, Traffic rules, Traffic Offences and penalties, How to obtain license, Role of first aid in Road Safety.

UNIT 9 Stubble Burning: Meaning of Stubble burning. Impacton health and environment**.**

UNIT 10 Management and alternative uses of crop stubble. Environmental Legislations and Policie for Restrictiono AgricultureResidue Burningin Punjab.

Suggested Readings:

- Carson, R.2002. Silent Spring, Houghton Mifflin Harcourt.
- Gadgil. M., & Guha,R.1993. This Fissured Land : An Ecological

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History of India.Univ. of California Press.

- Gleeson, B. and Low, N.(eds.)1999. Global Ethics and Environment,London,Routledge.
- Gleick,P.H.1993. Water in Crisis.Pacific Institute for Studies in Dev. Environment &Security. Stockholam Env. Institute, Oxford Univ. Press.
- Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll. PrinciplesofConservation Biology. Sunderland : Sinauer Associates, 2006.
- Grumbine, R. Edward, and Pandit, M.K. 2013. Threats from India's Himalaysdams.Science,339:36-37.
- McCully,P.1996. Rivers no more: the environmental effects of dams (pp.29-64).ZedBooks.
- McNeill, John R. 2000. Something New Under the Sun : An EnvironmentalHistoryof the Twentieth Century.
- Odum, E.P., H.T & Andrews, J.1971. Fundamentals of Ecology. Philadelphia :Saunders.
- Pepper, I.L., Gerba ,C.P & Brusseau, M.L. 2011. Environmental andPollutionSciences. Academic Press.
- Rao, M.N. & Datta, A.K.1987. Waste Water Treatment. Oxford and IBHPublishingCo. Pvt.Ltd.
- Raven, P.H., Hassenzahl, D.M. & Berg, L.R.2012,Environment. 8Th edition.JohnWiles & Sons.
- Rosencranz, A., Divan, S., & Nobie, M.L. 2001. Environmental law andpolicyinIndia. Tripathi 1992
- Sengupta, R. 2003. Ecology and economics: Anapproach to sustainabledevelopment.OUP.
- Singh, J.S., Singh, S.P. and Gupta, S.R. 2014. Ecology, Environmental ScienceandConservation. S. Chand Publishing, New Delhi.
- Sodhi, N.S. Gibson, L. & Raven, P.H. (eds). 2013. Conservation Biology:Voicesfrom the Tropics. John Wiley & Sons.
- Thapar, V. 1998. Land of the Tiger: A Natural History of the Indian Subcontinent.
- Warren, C.E. 1971. Biology and Water Pollution Control. WB Saunders.
- Wilson, E.O. 2006. The Creation: An appeal to save life on earth. NewYork:Norton.
- World commission on Environment and Development. 1987. Our CommonFuture.OxfordUniversityPress.

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