Semester	II
Course [*1]	Value-Added
Paper Title	ENVIRONMENTAL EDUCATION II (V1EE230211T)
No. of Credits *[2]	2
Theory / Practical / Composite	Theory
Minimum No. of preparatory hours per week a student has to devote	2 h
Number of Modules	4
Syllabus	**1.Energy Resources** Renewable and non-renewable resources- solar, wind, geothermal, tidal, OTEC, hydro- and SHP, fossil fuels, and nuclear energy. **2. Environmental Management** **Policies-** • Concept and objectives, the evolution of Indian environmental policy. • UN Conferences and commissions- UNCHE, WCED & sustainable development, UNCED, WSSD, Rio+20. • International agreements: CLRTAP, Basel Convention, Convention on Biological Diversity (CBD), CITES, Cartagena Protocol, TRIPS, Vienna Convention, concept of carbon trading. • International Organizations- FAO, UNEP, UNDP, IUCN. • National organization- MoEFCC, PCBs. **Environment Laws-** • Wildlife Protection Act, 1972 • Water (Prevention and Control of Pollution) Act, 1974 &Water Cess Act 1977 • Forest Conservation Act,1980. • Air (Prevention & Control of Pollution) Act,1981. • Environment Protection Act,1986 (with subordinate Acts and Rules). • Biodiversity Act, 2002. • Role of National Green Tribunal. • Environmental movements: Chipko, Silent Valley, Bishnoi, Narmada Bachao Andolan, Nava Danya. **Practices-** • Developing Environmental standards- MINAS, NAAQS, BIS, WHO, AQI, and Emission standards.

	• Practices- Environmental audit & ISO 14000 certification audit. • Earth Hour; carbon sequestration, Green Buildings • EIA (concept, objectives, principles, generic process, the concept of EIA in India). • Environmental and health application of IT and AI. **3. Sustainable Development** • Sustainability: Definition and emergence of the concept of sustainable development • Need and relevance in the contemporary society, principles of sustainable development, SDGs pertaining to environmental issues • **Policy Initiatives for Sustainable Development in India (**Swachh Bharat mission, Beti Bacho Beti Padhao) **4. Sanitation and Health** • Water, Sanitation and Hygiene (WASH): Concept, Meaning, Principles, and Practices • Sanitation: Meaning, Concept, and Applications. Institutional Sanitation. • Health: Concept and Meaning. Determinants of Health and Well-being. Public Health and Community Health. • Human population growth: impacts on environment, human health and welfare, Family Welfare Programme (FWP) • Hygiene: Concept, Meaning, Principles, and Importance. Types of Hygiene: Personal, Food, and Community. Standard Hygiene Practices
Learning Outcomes *[3]	1. Recognize the environmental problem and their impacts on human and environment 2. Apply the gained knowledge for environmental protection 3. Demonstrate a multidisciplinary approach to deal with environmental issues 4. Develop critical thinking skill and ability to integrate the disciplines related to environmental concerns. 5. Formulate sustainable solutions towards local and global problems
Reading/Reference Lists *[4]	**SUGGESTED TEXT BOOKS/ READING MATERIALS:** **1.** Mitra, A. K and Chakraborty, R., Introduction to Environmental Studies, Book Syndicate, 2016. **2.** Basu, M. and Xavier, S., Fundamentals of Environmental Studies, Cambridge University Press, 2016.

<table>
<tr><td></td><td colspan="2">3. Enger, E. and Smith, B., Environmental Science: A Study of Interrelationships, Publisher: McGraw-Hill Higher Education; 12th edition, 2010.

Suggested readings:
1. Harris, P. G. (Ed.). (2014). Routledge Handbook of global environmental politics. New York: Routledge.
2. Rosencranz, A., Divan, S., & Noble, M. L. (2001). Environmental law and policy in India.
3. Sengupta, R. 2003. Ecology and Economics: An approach to sustainable development.
4. Glasson, J., & Therivel, R. (2013). Introduction to environmental impact assessment. Routledge.
5. Twidell, J. (2021). Renewable energy resources. Routledge.
6. Kruger, P. (2006). Alternative energy resources: the quest for sustainable energy. Hoboken: Wiley.</td></tr>
<tr><td>Evaluation</td><td>Theory
CIA: 15
20 (scaled down to 10)
3 (Assignment)
2 (Attendance)
Semester Exam: 35</td><td>Practical (if applicable)
CA: NA
Semester Exam: NA</td></tr>
<tr><td>Paper Structure for Theory Semester Exam</td><td colspan="2">Full marks:35 Time: 1 h 30 mins

Paper: ENVIRONMENTAL EDUCATION II

SECTION-A
20 MULTIPLE CHOICE QUESTIONS (20 X 0.5=10)

SECTION-B
SHORT ANSWER TYPE QUESTIONS:
10 OUT OF 12 QUESTIONS (10 X1 =10)

SECTION-C
LONG ANSWER TYPE QUESTIONS
3 OUT OF 6 QUESTIONS (3 X5= 15)</td></tr>
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