

S.S. Jain Subodh P.G. College
Autonomous Scheme
B.A / B.SC. /B.Com./Hons. IV- Semester
Environmental Studies and Sustainable Development
Nodal Department: Environmental Science

Scheme of Examination

Paper Code	Paper Title	Credits	Max. Marks	Min. Marks
	Environmental Studies	02	50	20

Internal Assessment: 15 Marks

End Semester Examination: 35 Marks

Time Duration: 2 hours

Total: 50 Marks

Paper Pattern:

Paper will have 35 multiple choice questions and remaining 15 marks based on Assignment will be evaluated.

Objective:

In spite of the deteriorating status of the environment, study of environment has so far not received adequate attention in our academic programmes. This programme aims at giving students a clear understanding of environmental concerns and to follow sustainable development practices. This will definitely help students develop an interdisciplinary global understanding of ecological and environmental problems

Unit I

- Definition, Scope and Importance of Environment
- Scope of Environmental studies and its Applications
- Importance with respect to the society
- Relationship of Environmental Studies with other subjects(Multidisciplinary nature of Environment)
- Ecosystem: structure and function
- Concept of Ecosystem and Biotic and abiotic components of Ecosystem
- Food chain and Food web, Ecological Pyramids and productivity
- Energy Flow and Biogeochemical cycle

Unit II

- Environmental pollution
- Water pollution: Definition, Sources and Effects
- Air Pollution- Definition, Sources and Effects
- Soil and Noise Pollution-Definition, Sources and Effects
- Solar Energy, Wind, Tidal, Hydro Bio energy and its use
- Biodiversity : Definition, genetics, species and ecosystem diversity and its Conservation
- Values of Biodiversity: Consumptive use, productive use, social esthetic and option values.
- Threats to Biodiversity –Habitat loss, poaching of wild life.

Unit III

- Natural Resources
- Renewable and non renewable

- Natural resources and associated problems.
- Forest Resources- Use and over-exploitation, deforestation and its effects
- Water Resources-Land degradation; Soil erosion and desertification.
- Mineral resources: Use and exploitation, environmental effects of extracting mineral resources

Unit IV

- Global Environmental Issues: Acid Rain, Ozone Depletion, Global Warming and Marine Issues
- Environmental Movements Chipko Movement and Appikko Movement ,Narmada bachao aandolan,
- Human Population and Environment
- From unsustainable to Sustainable development
- Concept of Sustainable development and world environmental Summits
- Goals of Sustainable development and its applications
- Water Conservation, Rainwater harvesting and Watershed management
- Social Environment
- HIV and other disease

ESSENTIAL READINGS:

- Concepts of Ecology; Kormondy Edward J; Pearson Education;4th Edition 2017
- Environmental Chemistry, De, A.K. New Age International, New Delhi: 2000.
- Concepts of Environmental Management for Sustainable Development; M.C. Dash; Dreamtech Press; 2019
- Fundamentals of Ecology; Eugene Odum; Cengage: 5 edn. 2017
- Environmental Chemistry. Sharma B.K., Geol Publ. House, Meerut, 2001.

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- Concepts of Ecology; Kormondy Edward J; Pearson Education;4th Edition 2017
- Ecology and Environment; PD Sharma; Rastogi Publications: 13 edn. 2017
- Cunningham, W.P. Cooper, T.H. Gorhani, E & Hepworth, M.T. Environmental Encyclopedia, Jaico Publ.House, Mumbai, 2001
- Environmental Chemistry, De, A.K. New Age International, New Delhi: 2000.
- Fundamentals of Ecology; Eugene Odum; Cengage: 5 edn. 2017
- An Advanced Textbook on Biodiversity: Principles and Practice: KV Krishnamurthy; Oxford and IBH Publishing Co Pvt Ltd.: 2018
- Biodiversity: MN William; CBS 2019
- Noise Pollution and Its control: KJ Polak; CBS Publishers: 2020
- Matter Hazardous, Mhaskar A.K., Techno-Science Publication Environment and Human Health; Claudio Bini, Jaume Bech; Springer: 2014
- Environmental Chemistry. Sharma B.K., Geol Publ. House, Meerut, 2001.
- Biomedical waste Management: R. Radhakrishan; Sumit Enterprises: 2007