SEMESTER-II

MDC/IDC2: Contemporary Environmental Issues (Theory) [For all students]

Total Credit	03 Credits
Credit Hours	03 hours per week (Lectures/ Tutorials)
Total Marks	50 Marks

Course Objectives

- To introduce students towards contemporary environmental issues at local, national, and global levels.
- To raise awareness about climate change and its associated issues as well as to highlight the importance of biodiversity and various threats it faces.
- To gain insight into various natural hazards and disasters and to pertain knowledge and information about environmental pollution issues.

Course Outcomes

- Learners will be able to recognize the interdisciplinary nature of environmental issues and foster an integrated approach towards addressing environmental challenges.
- Learners will acquire knowledge about climate change, its impact on global and local levels and will be able to identify and analyse natural hazards and disasters- regionally and globally.
- Learners will be competent enough in understanding biodiversity conservation, threats, and management strategies.
- Learners will gain the critical thinking and analytical abilities to evaluate environmental issues and propose informed solutions and policies.

• Semester End Examination	40 Marks Mode: Written Examination Exam duration: 2 Hours Question Pattern: Students shall answer ***Two*** questions carrying 10 marks out of ***Four*** given questions; ***Four*** questions carrying 5 marks each out of given ***Eight*** questions. Questions carrying 10 marks will have at least three parts and questions carrying 5 marks will have at least two parts.
• Internal Assessment	10 Marks Mode: Preparation of assignment.

Contemporary Environmental Issues

1. Introduction to contemporary environmental issues: Defining environmental issues, historical context, and evolution of environmental concerns.
2. Climate change and associated issues: Global warming, sea-level rise, glacial retreat, cloudburst and flash flood, heat, and cold waves.
3. Natural hazards and disasters: Flood and droughts, tropical cyclone (Sundarbans- India); Riverbank erosion (Lower Ganga); Soil erosion (Rarh Bengal); Landslide (Darjeeling Himalaya).
4. Biodiversity and conservation issues: Threats to biodiversity (habitat loss, poaching of wildlife, man-wildlife conflicts with special reference to West Bengal): Wetland biodiversity (importance, threats, and management with special reference to West Bengal).
5. Pollution issues: Air pollution (industrial regions and mega cities of India), water pollution (River Ganga), groundwater (arsenic and fluoride contamination in West Bengal), urban solid waste (Indian mega cities).

Suggested Readings:

1. Carson, R. (2002): Silent Spring. Houghton Mifflin Harcourt.
2. Cunningham, W.P., Cooper, T.H., Gorhani, E & Hepworth, M.T. (2001): Environmental Encyclopaedia, Jaico Publ. House, Mumbai, 1196p
3. Cunningham, W.P., Cunningham, M.A. (2004): Principles of Environmental Science: Inquiry and Applications, Tata McGraw Hill.

4. Erach B. (2002): The Biodiversity of India, Mapin Publishing Pvt. Ltd., Ahmedabad – 380 013, India.
5. Gleeson, B. and Low, N. (ed.) (1999): Global Ethics and Environment, London, Routledge.
6. Goudie, A. (2001): The Human Impact on the Natural Environment: Past, Present, and Future,7th ed, Wiley-Blackwell.
7. Groom, M J., Meffe G.K., and Carroll C.R. (2006): Principles of Conservation Biology. Sunderland: Sinauer Associates.
8. McCully, P. (1996): Rivers no more: the environmental effects of dams (pp. 29-64). Zed Books.
9. McNeill, John R. (2000): Something New Under the Sun: An Environmental History of the Twentieth Century.
10. Pepper, I.L., Gerba, C.P. & Brusseau, M.L. (2011): Environmental and Pollution Science. Academic Press.
11. Raven, P.H., Hassenzahl, D.M. & Berg, L.R. (2012): Environment. 8th edition. John Wiley & Sons.
12. Sengupta, R. (2003): Ecology and economics: An approach to sustainable development. OUP.
13. Singh, J.S., Singh, S.P. and Gupta, S.R. (2014): Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi.
14. Thapar, V. (1998): Land of the Tiger: A Natural History of the Indian Subcontinent.
15. Warren, C. E. (1971): Biology and Water Pollution Control. WB Saunders.
16. Wilson, E. O. (2006): The Creation: An appeal to save life on earth. New York: Norton.
17. Holdgate, M. W. (1987): Our Common Future: The Report of the World Commission on Environment and Development. Oxford University Press, Oxford & New York.
18. Ministry of Environment, Forest, and Climate Change: www.envfor.nic.in
19. United Nations Environment Programme: www.unenvironment.org
20. United Nations Environment Programme- The Global Environment Outlook https://www.unep.org/geo/