University of Kota, Kota

ENVIRONMENTAL STUDIES ,DISASTER MANAGEMENT & PHILOSOPHY OF SPORTS- SESSION-2025-26

Scheme of Examination;
Time 1½ Hrs. **Max. Marks 100** **Min Pass Marks 36**

In pursuance of the directions of the Hon'ble Supreme Court of India and the University Grants Commission, New Delhi, the University of Kota has declared to introduce compulsory paper of "Environmental Studies" in Part- I of all streams (B.A./B.Sc./B.com.) etc. w.e.f. the session 2005-2006 and onwards. The marks secured in this paper will not be counted for working out the division. The candidate can clear this paper in three chances. Therefore all the candidates regular/Ex/Non-Collegiate appearing in Part-I of B.A./B. Sc and B.Com etc. examination of 2006 are required to appear and clear this paper and they must enter this paper in their examination forms. The code number of this paper is 5106.

The syllabus and scheme of examination is as under:
The question paper shall contain 50 objective type questions with multiple choice (four) answers. The student will be required to blacken the circle of correct choice of answer on the computer scan able OMR sheet with the help of H.B. pencil. Evaluation of the answer sheets be made with the help of computer. Four different types of question papers (A,B,C, and D) each containing 50 questions shall be printed. The student will be required to mark/write the type of question paper he is answering on the answer sheet, so that answers marked by him/her may be correctly assessed with the help of relevant key of answers, by the computer.
Each question shall carry one mark, with no negative marking. As such, one mark shall be awarded for the correct answer in each question.
Note:

1. The marks secured in this paper shall not be counted in awarding the division to a candidate.
2. The candidate has to clear compulsory paper in three chances.
3. Non appearing or absent in the examination of compulsory paper will be counted a chance.

Unit 1 : Introduction to environmental studies

• Multidisciplinary nature of environmental studies;

• Scope and importance; Concept of sustainability and sustainable development.

(2 lectures)

Unit 2 : Ecosystems

• What is an ecosystem? Structure and function of ecosystem; Energy flow in an ecosystem: food chains, food webs and ecological succession. Case studies of the following ecosystems :

a) Forest ecosystem

b) Grassland ecosystem

c) Desert ecosystem

d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

(6 lectures)

Unit 3 : Natural Resources : Renewable and Non-renewable Resources

• Land resources and landuse 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 non renewable energy sources, use of alternate energy sources, growing energy needs, case studies.

(8 lectures)

Unit 4 : 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

• Threats to biodiversity : Habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity : In-situ and Ex-situ conservation of

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

(8 lectures)

Unit 5 : Environmental Pollution

• Environmental pollution : types, 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.

(8 lectures)

Unit 6 : Environmental Policies & Practices

• Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture 2/2

• 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).

• Nature reserves, tribal populations and rights, and human wildlife conflicts in Indian context.

(7 lectures)

Unit 7 : Human Communities and the Environment

• Human population growth: Impacts on environment, human health and welfare.

• Resettlement and rehabilitation of project affected persons; case studies.

• Disaster management : floods, earthquake, cyclones and landslides.

• Environmental movements : Chipko, Silent valley, Bishnois of Rajasthan.

• 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).

(6 lectures)

Unit 8 : Field work

• Visit to an area to document environmental assets: river/ forest/ flora/fauna, etc.

• Visit to a local polluted site-Urban/Rural/Industrial/Agricultural.

• Study of common plants, insects, birds and basic principles of identification.

• Study of simple ecosystems-pond, river, Delhi Ridge, etc.

(Equal to 5 lectures)

Unit-9: Philosophy of Sports

- Define sports and Physical education, classification of Sports activities.
- Sports as a way of life.
- Team work and sports.
- Peace through sports in the world.
- Development of social and moral values through sports.
- Personality development and sports.
- Physiological changes in Human body through sports activity.

Suggested Readings:

1. Carson, R. 2002. Silent Spring. Houghton Mifflin Harcourt.

2. Gadgil, M., & Guha, R. 1993. This Fissured Land: An Ecological History of India. Univ. of California Press.

3. Gleeson, B. and Low, N. (eds.) 1999. Global Ethics and Environment, London, Routledge.

4. Gleick, P. H. 1993. Water in Crisis. Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute, Oxford Univ. Press.

5. Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll. Principles of Conservation Biology. Sunderland: Sinauer Associates, 2006.

6. Grumbine, R. Edward, and Pandit, M.K. 2013. Threats from India's Himalaya dams. Science, 339: 36-37.

7. McCully, P. 1996. Rivers no more: the environmental effects of dams (pp. 29-64). Zed Books.

8. McNeill, John R. 2000. Something New Under the Sun: An Environmental History of the Twentieth Century.

9. Odum, E.P., Odum, H.T. & Andrews, J. 1971. Fundamentals of Ecology. Philadelphia: Saunders.

10. Pepper, I.L., Gerba, C.P. & Brusseau, M.L. 2011. Environmental and Pollution Science. Academic Press.

11. Rao, M.N. & Datta, A.K. 1987. Waste Water Treatment. Oxford and IBH Publishing Co. Pvt. Ltd.

12. Raven, P.H., Hassenzahl, D.M. & Berg, L.R. 2012. Environment. 8th edition. John Wiley & Sons.

13. Rosencranz, A., Divan, S., & Noble, M. L. 2001. Environmental law and policy in India. Tripathi 1992. 14. Sengupta, R. 2003. Ecology and economics: An approach to sustainable development. OUP.

15. Singh, J.S., Singh, S.P. and Gupta, S.R. 2014. Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi.

16. Sodhi, N.S., Gibson, L. & Raven, P.H. (eds). 2013. Conservation Biology: Voices from the Tropics. John Wiley & Sons.

17. Thapar, V. 1998. Land of the Tiger: A Natural History of the Indian Subcontinent.

18. Warren, C. E. 1971. Biology and Water Pollution Control. WB Saunders.

19. Wilson, E. O. 2006. The Creation: An appeal to save life on earth. New York: Norton.

20. World Commission on Environment and Development. 1987. Our Common Future. Oxford University Press.