

No. 6-38/2016(UGC/CBCS/FLS)-HPU (Acad.)
Himachal Pradesh University
(NACC Accredited 'A' Grade University)
Academic Branch, Summer Hill Shimla-5

Dated: 18-03-2017

To

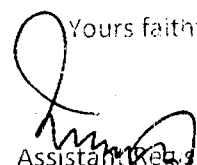
1. All the Principals of the Govt. /Non-Govt. affiliated/ Maintained Colleges and Regional Centre Dharamshala, Distt. Kangra running UG classes in Himachal Pradesh.
2. All the Chairmen/Chairpersons, Deptt. of teaching, HPU, Shimla-5.
3. The Director, ICDEOL, HPU, Shimla-5.
4. The Controller of Examinations, HPU, Shimla-5.
5. The A.R Exam. (UG) HPU, Shimla-5.
6. The A.R Eval./Re.Eval/Conduct/Exams, HPU, Shimla-5.
7. All the S.O., Examination wings, HPU, Shimla-5.
8. The Incharge/Programmer (RUSA/CBCS), Computer Centre, Examination Wing, HPU, Shimla-5.

Subject: Complimentary copy of Revised split of marks and pattern of examination of Environment Science (Theory Course ENV52AECC02)

Sir/Madam,

In Continuation to this office Notification dated 24-09-2016 and 17-02-2017, I am sending herewith complimentary copy of Revised split of marks and pattern of examination of Environment Science '(Theory Course ENV52AECC02)' under UGC (CBCS) which have already been uploaded on the University's Website: www.hpuniv.nic.in duly approved by the Standing Committee of Academic Council in its Emergent meeting held 06.03.2017 vide spot item No. 2, on the recommendations of the concerned Board of Studies/Faculties (UG) for its implementation from the Academic Session 2016-17.

Yours faithfully,

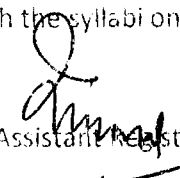

Assistant Registrar (Acad)
HP University Shimla-5

Endst. No. Even

Dated: 18.03.2017

Copy to:

1. The D.R Secy, HPU, Shimla-5.w.r.t. his letter No. UGC (CBCS)/Misc. /Secy. Dated 23-02-2017 for information and further necessary action alongwith 3 spare copies.
2. The Supdt. Meeting (Acad), HPU, Shimla-5, w.r.t decision taken by Standing Committee of Academic council vide on spot item no. 2 for information and further N/A
3. The Web Admin, HPU, Shimla-5, with the request to upload this letter with the syllabi on the website


Assistant Registrar (Acad)

Course: ENVS2AECC02
ENVIRONMENT SCIENCE
(Theory)

Semester End-examination: 100 marks

Note: The Examiner will set a total of nine (9) questions covering all topics/ units of the prescribed course by setting at least two questions from each unit. Out of the nine questions, one question containing ~~ten (10)~~ short-answer type questions of 2 marks each that will cover entire course will be compulsory. The candidate will attempt a total of five questions (one from each unit) including the compulsory question. All questions will carry equal marks.

UNIT I**(20 Periods)**

Introduction to environmental studies & ecosystems: Multidisciplinary nature of environmental studies: Scope and importance; What is an ecosystem? The structure and function of ecosystem, Energy flow in an ecosystem, food chains, food webs and ecological succession, forest ecosystem, grassland ecosystem, desert ecosystem, aquatic ecosystems; Levels of biological diversity such as genetic, species and ecosystem diversity; biogeography 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, concept of sustainability and sustainable development.

UNIT II**(15 Periods)**

Natural resources & its management and conservation: 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 and growing energy needs.

UNIT III**(15 Periods)**

Environmental pollution & management: Environmental pollution: types, causes, effects and controls; Air, water, soil and noise pollution, Solid waste management: Control measures of urban and industrial waste. Climate change, global warming, ozone layer depletion, acid rain and their impact on human communities and agriculture. 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.

UNIT IV**(10 Periods)**

Environment & social issues: 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.

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. Pepper, I.L., Gerba, C.P. & Brusseau, M.L. 2011. *Environmental and Pollution Science*. Academic Press.
9. Rao, M.N. & Datta, A.K. 1987. *Waste Water Treatment*. Oxford and IBH Publishing Co. Pvt. Ltd.
10. Raven, P.H., Hassenzahl, D.M. & Berg, L.R. 2012. *Environment*. 8th edition. John Wiley & Sons.
11. Rosencranz, A., Divan, S., & Noble, M. L. 2001. *Environmental law and policy in India*. Tripathi 1992.
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. Sodhi, N.S., Gibson, L. & Raven, P.H. (eds). 2013. *Conservation Biology: Voices from the Tropics*. John Wiley & Sons.
15. Wilson, E. O. 2006. *The Creation: An appeal to save life on earth*. New York: Norton.
16. World Commission on Environment and Development. 1987. *Our Common Future*. Oxford University Press.