

Detailed Syllabus

Semester-I

Course No: U E S T S 1 04
Time of Examination :2.30 hrs

Title :Environmental studies-1

Credit:2

(a) Semester Examination : 40
(b) Sessional Assessment: 10

Syllabus for the examinations to be held in Dec.2016, 2017 and 2018.

Unit I: The Environment and Ecosystem

- 1.1 Environment and Environmental studies: Definition, concept, components and importance.
- 1.2 Ecosystem and Ecology: Structure and Function of ecosystem, Brief concept of Autecology and Synecology.
- 1.3 Food chain, food web and ecological pyramids .
- 1.4 Biogeochemical cycles in an ecosystems: (Carbon, Nitrogen and Phosphorous cycle)
- 1.5 Ecological succession: Definition, types, concept and process (Hydrosere, Xerosere and Lithosere).

Unit 2 Environmental Pollution and Disaster Management

- 2.1 Definition , causes, effects and control measures of :
 - a. Air pollution
 - b. Water pollution(thermal and marine pollution)
 - c. Land pollution
 - d. Radiation pollution and Nuclear hazard.
 - e. Noise pollution
- 2.2 Solid waste management: Causes , effects and control measures.
- 2.3 Global warming and climate change Ozone depletion
- 2.4 Acid rain: Causes , effects and control measures
- 2.5 Types and management of Natural disasters (Earthquakes; Droughts; Floods; Landslides).

Unit 3: Environmental treaties, laws and Ethics

- 3.1 . Environmental Treaties : National and International(Brief account)
- 3.2. Salient features of following Acts:

- a. Wildlife (Protection) Act, 1972.
 - b. Water (Prevention and control of pollution) Act, 1974.
 - c. Forest (Conservation) Act, 1980.
 - d. Air (Prevention and control of pollution) Act, 1981.
 - e. Environmental Protection Act, 1986.
- 3.3. National Green Tribunal: Structure, composition and functions.
 - 3.4. Environmental Ethics
 - 3.5. Need for Sustainable Development.

Field /Practical Work

All the students are required to undertake the following field/practical work

- i) Visit to a local area to document environmental assets/ecosystems-
River/forest/grassland/mountain
- ii) Construction of Food chain/food web of the visited area
- iii) To identify the sources of air/water/soil/noise pollution of your area.

Note for Paper setter

Note for Paper setter

- a. Question paper will consist of TWO sections 'A' and 'B'. Section 'A' will consist of 6 short answer type questions, two from each unit; out of which candidate has to answer any five questions and each question would be of 2 marks. Section 'B' would consist of THREE long answer type questions of 10 marks each, one from each unit, with internal choice.
- b. Internal assessment test of 10 marks will be based on questions from syllabus/ field trip visit(s).

Detailed Syllabus

Semester-II

Course No:U ES TS 2 04
Time of Examination :2.30 hrs

Title :Environmental studies-2

Credit:2

(a) Semester Examination : 40
(b) Sessional Assessment: 10

Syllabus for the examinations to be held in May 2017, 2018 and 2019.

Unit - 1: Biodiversity and its conservation:

- 1.1 Definition, concept , levels and values of biodiversity.
- 1.2 Biodiversity of India, India as a mega diversity nation, Hotspots of biodiversity.
- 1.3 Threats to Biodiversity (Habitat loss, poaching of wildlife and man wildlife conflict)
- 1.4 Conservation of Biodiversity: *in-situ* Conservation; *ex-situ* conservation
- 1.5 Ecotourism, Concept of Protected Area Network with special reference to Kishtwar, Dachigam and Hemis National Parks.

Unit - 2:Natural Resources and their Conservation

- 2.1 Forest Resources: Uses and overexploitation of forests and consequences of deforestation.
- 2.2 Water Resources: Use and consequences of over-utilization, concept of rain water harvesting and watershed management, water conflicts.
- 2.3 Food Resources: Sources of food, food problems- Indian scenario, Impacts of modern agriculture on environment (Fertilizer - pesticide problem, water logging and salinity), Organic farming.
- 2.4 Energy Resources: Renewable and Non-Renewable energy sources, Growing energy needs and alternate energy sources.
- 2.5 Land Resources: Global land use patterns, Soil erosion, Desertification, Wasteland Reclamation.

Unit- 3: Environment and Human health

- 3.1 Human population growth and Family Welfare Programs.
- 3.2 Common diseases: Air borne diseases (Chicken Pox, Tuberculosis,

- Influenza, Meningitis), Water and food borne diseases (Cholera, Diarrhoea, Hepatitis, Malaria, Salmonellosis).
- 3.3 HIV/AIDS: Symptoms, causes, effect and control measures.
 - 3.4 Drug addiction: Causes, symptoms and prevention; Drug abuse in India.
 - 3.5 Role of IT in environment and human health.

Field /Practical Work

All the students are required to undertake the following field/practical work

- i) To record the biodiversity of the any visited area
- ii) Identify the Natural resources of your area
- iii) Identify the sources of energy used in your area
- iv) Visit to a health Centre for recording of common water/air/food borne diseases of your area.

Note for Paper setter

- a. Question paper will consist of TWO sections 'A' and 'B'. Section 'A' will consist of 6 short answer type questions, two from each unit; out of which candidate has to answer any five questions and each question would be of 2 marks. Section 'B' would consist of THREE long answer type questions of 10 marks each, one from each unit, with internal choice.
- b. Internal assessment test of 10 marks will be based on questions from syllabus/ field trip visit(s).