

# **Environmental Studies**

## **III – Semester**

Examination to be held in the year Dec. 2015, Dec. 2016 and Dec. 2017  
(B.A./B.SC./B.COM./BBA/BCA)

**Course No. : ES 301 (Theory)**  
**Duration : 45 minutes**

**Title : Environmental Studies**

**Max. Marks : 50**  
**Theory examination : 35**  
**Sessional assessment : 15**

### **Detailed Syllabus**

#### **UNIT-I. Introduction of environment studies and ecosystem.**

- 1.1. Definition, Scope and importance of ecology and environment, need for public awareness.
- 1.2. Concept of structure and function of ecosystem: Producers, Consumers and decomposers. Energy flow in ecosystem.
- 1.3. Concept of ecological succession.
- 1.4. Food Chain, food web and ecological pyramids.
- 1.5. Introduction, types and characteristic features of the following ecosystems of India:
  - i) Forest ecosystem
  - ii) Grassland ecosystem
  - iii) Desert ecosystem.
  - iv) Aquatic ecosystem.

#### **UNIT-II. Environmental pollution**

- 2.1. Definition, causes, effects and control measures of:
  - i) Air pollution
  - ii) Water pollution ( marine and thermal pollution)
  - iii) Soil pollution
  - iv) Noise pollution
  - v) Radiation pollution
- 2.2. Solid waste management; causes, effects, and control measures of urban and industrial waste.

- 2.3. Acid rain
- 2.4. Ozone depletion
- 2.5. Global warming

**UNIT-III. Environmental laws and disasters**

- 3.1. Salient features of following Acts
  - i) Environmental Protection Act, 1986.
  - ii) Air (Prevention and control of pollution) Act, 1981.
  - iii) Water (Prevention and control of pollution) Act, 1974.
  - iv) Wildlife protection Act, 1972.
  - v) Forest conservation Act, 1980.
- 3.2. Disaster management: Floods, Earthquakes, cyclones, landslides, droughts.
- 3.3. Wasteland reclamation.
- 3.4. Resettlement and rehabilitation of people, its problems and concerns
- 3.5. Environmental ethics, issues and possible solutions.

**Field /Practical Work**

All the students are required to undertake the following field/practical work based on which they will be assessed for their Internal Assessment Test

- 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 :**

**The sessional assessment of 15 marks will be distributed as follows :**

- **Attendance in Theory and Practical** - **05**
- **Test based on field work** - **10**

**For Theory Paper Setter**

**The question paper of 35 marks will consists of 35 multiple choice questions based on above topics. Questions should be equally distributed from all the units. Each question would be of ONE mark.**

# Environmental Studies

## IV – Semester

Examination to be held in the year May 2016, May 2017 and May 2018  
(B.A./B.SC./B.COM./BBA/BCA)

**Course No. : ES 401 (Theory)**  
**Duration : 45 minutes**

**Title : Environmental Studies**

**Max. Marks : 50**  
**Theory examination : 35**  
**Sessional assessment : 15**

### Detailed Syllabus

#### **UNIT I. Biodiversity and its conservation**

- 1.1 Biodiversity:  
a) Definition; genetic, species and ecosystem diversity.  
b) Values of biodiversity (consumptive, productive, social, ethical and aesthetic values)
- 1.2 Biodiversity of India; India as a mega diversity nation, hotspots of biodiversity, concept of Bio-geographic regions of India.
- 1.3 Threats to Biodiversity (habitat loss, poaching of wildlife, man wildlife conflicts)
- 1.4 Conservation of Biodiversity; *In situ* and *Ex situ* conservation of biodiversity, endemic and endangered species of India.
- 1.5 Ecotourism, Eco-marketing

#### **UNIT-II. Natural Resources and their management:**

- 2.1. Forest Resources: Uses of forests, causes of over-exploitation (deforestation, timber extraction), mining and its effects on forests and tribal people.
- 2.2. Water Resources: Uses & over-utilization of surface and groundwater & effects; conflicts over water, dams- benefits & problems; water conservation, rainwater harvesting.
- 2.3. Food Resources: World food problems, changes caused by agriculture and over- grazing, effects of modern agriculture (fertilizer-pesticide problem, water logging and salinity).
- 2.4. Energy Resources: Growing energy needs, renewable & non-renewable energy sources, use of alternate energy resources; urban problems related to energy.
- 2.5. Land Resources: Land as a resource, land degradation, man- induced landslides, soil erosion and desertification.

**UNIT –III. Population and Human Health.**

- 3.1. Population growth, variation among nations. Family Welfare Programs.
- 3.2. Common diseases: communicable and non communicable
  - i) Water borne diseases,
  - ii) Air borne diseases
  - iii) Food borne diseases
- 3.3. HIV/AIDS, Drug addiction
- 3.4. Nuclear Hazards
- 3.5. Role of Information Technology in Environment & human health.

**Field /Practical Work**

All the students are required to undertake the following field/practical work based on which they will be assessed for their Internal Assessment Test

- 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 Center for recording of common water/air/food borne diseases of your area.

**Note :**

**The sessional assessment of 15 marks will be distributed as follows :**

- |                                      |   |           |
|--------------------------------------|---|-----------|
| ➤ Attendance in Theory and Practical | - | <b>05</b> |
| ➤ Test based on field work           | - | <b>10</b> |

**For Theory Paper Setter**

**The question paper of 35 marks will consists of 35 multiple choice questions based on above topics. Questions should be equally distributed from all the units. Each question would be of ONE mark.**