

Truncated Syllabus for Environmental Studies (AECC-1) under CBCS B.Sc., BA, B.Com
BBA/BCA Honours Program and Program
Course- 1 (Credit – 2)

Theory Full Marks: 80

Credit: 1.6

Unit 1: Introduction to environmental studies

4 Lectures

Scope and importance; Concept of sustainability and sustainable development.

Unit 2: Ecosystems

What is an ecosystem?

Structure and function of ecosystem;

Energy flow in an ecosystem, food chains, food webs and ecological pyramid

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

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, Dams – benefits and problems.

Food resources: effects of modern agriculture, fertilizer-pesticide problems

Energy resources: Renewable and non-renewable energy sources, use of alternate energy sources

4 Lectures

Unit 4: Biodiversity and Conservation

Levels of biological diversity : genetic, species and ecosystem diversity; biodiversity hotspots

India as a mega---biodiversity nation; Endangered and endemic species of India, threats to biodiversity: Habitat loss, poaching of wildlife, man---wildlife conflicts.

Conservation of biodiversity: In – situ and Ex – situ conservation of biodiversity.

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

4 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

3 Lectures

Unit 6: Environmental Policies & Practices

Climate change, global warming, ozone layer depletion, acid rain and impacts 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).

3 Lectures

Field Work (Full Marks – 15)

1. Study of flora and fauna (any one) (5)
 - a) Prepare a list of the economic plants available in the nearby locality.
 - b) List the birds sighted and found nesting in the nearby locality and its surroundings with the season of their occurrence.
 - c) Record insects associated with any common crop/grassland/tree of local area with an idea of their habitat.
2. Visit to local area to document environmental assets (any one): (5)
 - a) Trip to any riverine system of Terai or the Dooars: comment on the direction, volume and quality of water, flowing as observed.
 - b) Record the nature of vegetation/forest type/land use pattern at the site of visit.
 - c) Analyze the cause of deforestation and landslide on hill slope, if sighted.
3. Submission of a field work (covering the above practical works undertaken) (5)

Equals to 6 Lectures