

ABILITY ENHANCEMENT COURSE (AECC)

SEMESTER I

BEN-A101

Time allowed: 3Hrs

Max. Marks =100

Theory = 70 Marks + Internal Assessment = 30 Marks

ABILITY ENHANCEMENT COURSE (Common with that in B.A. Programme)

ENVIRONMENTAL STUDIES

Unit-1 Introduction to environmental studies and Ecosystem

Multidisciplinary nature of environmental studies; Scope and importance; Concept of sustainability and sustainable development. What is an ecosystem? Structure and function of ecosystem. Energy flow in an ecosystem; food chain, food webs and ecological succession. Case studies of the following ecosystems : a) Forest ecosystem b) Grassland ecosystems c) Desert ecosystems d) Aquatic ecosystems (pond, streams, lakes, rivers, oceans, estuaries)

Unit-2 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, conflicts over water(International & Interstate). Energy resources: Renewable and non renewable Energy sources, use of alternate Energy sources growing energy needs, case studies

Unit-3 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 of biodiversity: Habitat loss, poaching of wild life, man-wildlife conflicts, biological invasions; Conservation of biodiversity : In-situ and Ex-situ conservation of biodiversity. Ecosystem and biodiversity services: Ecological, economy, social, ethical, aesthetic and informational value.

Unit-4 Environmental Pollution, Environmental Policies & Practices

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. 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 & control of pollution) Act; Wild life 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-5 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 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).

SUGGESTED BOOKS: