

<b>BBA I Year</b>		<b>BBA-A101</b>		<b>Semester-I</b>		
		<b>Environmental Science</b>				
Time Allotted for End Semester Examination	Marks Allotted for Internal Assessment	Marks Allotted for End Semester Examination (ESE)	Maximum Marks (MM)	Total Credits	Maximum Hours	
<b>3 Hrs.</b>	<b>30 (20+10)</b>	<b>70</b>	<b>100</b>	<b>04</b>	<b>50</b>	

**OBJECTIVE:** To acquaint the students with the fundamentals of Environmental Studies. The course will use and focus on Indian experiences, approaches and cases.

- Environmental studies: Concept, nature and scope; Ecosystem: Concept, structure and functions; Energy flow in ecosystem, food chain, food web, ecological pyramids; Introduction, types, characteristic features, structure, function and study of forest, grassland, desert and aquatic ecosystems; Need for public awareness; Major environmental issues: Global warming, ozone depletion and acid rain; Human rights; Value education **(08 Hours)**
- Natural resources: Renewable and non-renewable resources; Natural resources and associated problems: a) Forest resources: Deforestation, case studies, mining, dams and their effects on forest and tribal people; b) Water resources: Use and over-utilization of water, dams- benefits and problems; c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies; d) Food resources: Effect of modern agriculture, fertilizer-pesticide problems, case studies; e) Energy resources: Renewable and non-renewable energy sources, use of alternate energy sources, case studies; f) Land resources: Soil erosion and desertification; Role of an individual in conservation of natural resources. **(12 Hours)**
- Environmental pollution: Definition, causes, effects and control measures of: Air pollution, Water pollution, Soil pollution, Noise pollution, Nuclear hazards; Pollution case studies; Solid waste management; Role of an individual in prevention of pollution; Disaster management: floods, earthquakes and landslides; Salient features of following acts: Environment protection act, Air (prevention and control of pollution) act, Water (prevention and control of pollution) act, Wildlife (protection) act, Forest (conservation) act. **(15 Hours)**
- Biodiversity: Definition, types and values; Bio-geographical classification of India; India as a mega diversity nation; Hotspots of biodiversity and threats to biodiversity; Endangered and endemic species of India; Common plants and birds of India; Conservation of biodiversity: *In-situ* and *Ex-situ* conservation approaches; Sustainable development; Rain water harvesting; Resettlement and rehabilitation of people; Environmental ethics: Issues and possible solutions; Wasteland reclamation; Environment and human health; HIV/AIDS; Role of information technology in environment and human health. Human population growth: Impacts on environment, human health and welfare. Environmental movements: Chipko, silent valley, Bishnois of Rajasthan. Environmental ethics: Role of Indian and other religions and cultures in environmental conservation. **(15 Hours)**

#### **SUGGESTED READINGS:**

1. Gupta, D.N. (2014).*Environmental Accounting*. New Delhi: Wheeler Publishing.
2. Madan, Sangeeta and Pankaj (2009).*Global encyclopaedia of Environmental science technology and management*. Delhi: Global Vision Publishing House.
3. Harley, Nick (2016). *Environmental Economics*. Delhi: MacMillan India Ltd.
4. Kolstad, Charles, D. (2000).*Environmental Economic*. USA: Oxford University Press.
5. Mohanty, M. (1996.). *Environment & Pollution Law*. New Delhi: S.K. Universal Law Publishing.
6. Pandey, G.N. (1997).*Environmental Management*. New Delhi:Vikas Publishing House.
7. Uberoi N.K. (2000).*Environmental Management*. New Delhi: Excel Books.
8. Kormondy E. J. (2012). *Concepts of ecology*. New Delhi: Printice Hall of India Pvt. Ltd.
9. Cunningham, W. P. and Cunningham, M. A. (2010). *Principles of environmental science: Inquiry and applications*. New Delhi: Tata McGraw-Hill Publishing Company Limited.

**NOTE:** The list of cases, specific references and books including recent articles will be announced in the class by concerned teachers from time to time.