

## **BT-3001 ENERGY, ENVIRONMENT, ECOLOGY & SOCIETY**

### **Unit –I**

**Energy-** Sources of Energy : Renewable & Non Renewable, Fossil fuel, Biomass Geothermal, Hydrogen, Solar, Wind, hydal, nuclear sources.

### **Unit –II**

**Ecosystem** – Segments of Environment: Atmosphere, hydrosphere, Lithosphere, biosphere. Cycles in Ecosystem – Water, Carbon, Nitrogen. Biodiversity: Threats and conservation,

### **Unit –III**

#### **Air Pollution & Sound Pollution -**

Air Pollution: Air pollutants, classification, (Primary & secondary Pollutants) Adverse effects of pollutants. Causes of Air pollution chemical, photochemical, Green house effect, ozone layer depletion, acid Rain.

Sound Pollution: Causes, controlling measures, measurement of sound pollution (deciblage), Industrial and non – industrial.

### **Unit –IV**

**Water Pollution**– Water Pollution: Pollutants in water, adverse effects. Treatment of Domestic & Industrial water effluent.

**Soil Pollution** – Soil Profile, Pollutants in soil, their adverse effects, controlling measures.

### **Unit –V**

**Society, Ethics & Human values**– Impact of waste on society. Solid waste management (Nuclear, Thermal, Plastic, medical, Agriculture, domestic and e-waste). Ethics and moral values, ethical situations, objectives of ethics and its study . Preliminary studies regarding Environmental Protection Acts , introduction to value education, self exploration, sanyam & swasthya.

### **References:**

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3. Raynold, GW "Ethics in information Technology"; Cengage.
4. Svakumar; Energy Environment & Ethics in society; TMH
5. AK De "Environmental Chemistry"; New Age Int. Publ.
6. BK Sharma, "Environmental Chemistry" ; Goel Publ. House.
7. Bala Krishnamoorthy; "Environmental management";PHI
8. Gerard Kiely, "Environmental Engineering" ;TMH
9. Miller GT JR; living in the Environment Thomson/cengage
10. Cunningham WP and MA; principles of Environment Sc; TMH
11. Pandey, S.N. & Mishra, S.P. Environment & Ecology, 2011, Ane Books , Pvt. Ltd, New Delhi
12. Joseph, B. Environmental Studies, 2009 Tata Mcgraw Hill, Edu India Ltd. New Delhi.
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