

ICS SCHEME

USN

15ME562**Fifth VM1****B.E. Degree Examination, June/July 2019**
Energy and Environment

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.**Module-1**

- 1 a. Interpret World Energy Scenario with respect to production and consumption using relevant statistics. (10 Marks)
b. Define Energy and Power. Differentiate same. (06 Marks)

OR

- 2 a. Explain the various key energy trends in India. (08 Marks)
b. Outline the factors that effecting India's energy development. (08 Marks)

Module-2

- 3 a. Explain in the detail the various phase of energy audit methodology. (08 Marks)
b. Calculate the cost of generation per kwh for a power station having following data :
Installed capacity of the plant = 200 MW Capital cost = Rs 400 crores ,
Rate of interest and depreciation = 12%.
Annual cost of fuel and salaries and tax = Rs 500 crore -, Load factor = 50%.
Also estimate the saving in cost per kwh if the annual load factor is raised to 60%. (08 Marks)

OR

- 4 a. Discuss the principles of Energy management. (08 Marks)
b. Elaborate the benefits of Thermal energy storage. (08 Marks)

Module-3

- 5 a. Enumerate the utilization of carbon in ecosystem. (08 Marks)
b. Elaborate how the Nitrogen cycle ecosystem operates. (08 Marks)

OR

- 6 a. Discuss how oxygen cycle is utilized in the ecosystem. (08 Marks)
b. Write a note on : i) Ecological succession ii) Food chain, Food web and Ecological pyramid. (08 Marks)

Module-4

- 7 a. Elaborate the causes , effects and control measures of i) Soil pollution ii) Noise pollution. (08 Marks)
b. Enumerate the role of an Individual in prevention of Pollution. (08 Marks)

OR

- 8 a. Discuss any two case study related to pollution environment in detail. (08 Marks)
b. Discuss the solid waste management technique. (08 Marks)

Module-5

- 9 a. What is Acid rain? What are its effects? (08 Marks)
b. Discuss Environmental Protection Act and its features. (08 Marks)

OR

- 10 a. Explain about Environmental Impact Assessment (HA). (08 Marks)
b. Write a note on Ozone layer depletion. (08 Marks)