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18ME751

Seventh Semester B.E. Degree Examination, Dec.2023/Jan.2024

Energy and Environment

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. With relevant statistics enumerate the primary energy production trend in India. (10 Marks)
- b. List and explain various forms of energy in a brief manner. (05 Marks)
- c. Define energy management and explain energy demand estimation. (05 Marks)

OR

- 2 a. Elaborate the effect of various social and environmental aspects of India's energy development. (10 Marks)
- b. Define energy and power. Differentiate the same. (05 Marks)
- c. Interpret world energy scenario with respect to production and consumption using relevant statistics. (05 Marks)

Module-2

- 3 a. Define and explain sensible heat storage methods. (10 Marks)
- b. Explain in detail various phases of energy audit methodology. (10 Marks)

OR

- 4 a. Define and explain Latent heat storage methods. (10 Marks)
- b. Define energy audit and explain the need for energy audit. (05 Marks)
- c. Elaborate the benefits of thermal energy storage. (05 Marks)

Module-3

- 5 a. Define ecosystem and explain the following term :
 - i) Food chain
 - ii) Food web
 - iii) Ecological pyramid.(10 Marks)
- b. Enumerate how carbon cycle is utilized in the ecosystem. (05 Marks)
- c. Discuss how oxygen cycle is utilized in the ecosystems. (05 Marks)

OR

- 6 a. Define environment. Mention its scope. Discuss need for public awareness. (10 Marks)
- b. Elaborate how the nitrogen cycle ecosystem operates. (05 Marks)
- c. Discuss how water cycle is utilized in the ecosystem. (05 Marks)

Module-4

- 7 a. Discuss solid waste management techniques. (10 Marks)
b. Discuss briefly the causes effects and control measure of air pollution. (10 Marks)

OR

- 8 a. Enumerate the role of an individual in prevention of pollution. (10 Marks)
b. Enumerate the water pollution cases and its effects. Mention the control measures that can be initiated for mitigating the same. (10 Marks)

Module-5

- 9 a. Write a note on ozone layer depletion. (10 Marks)
b. Explain the role of Environment Impact Assessment (EIA) in reinforcing environmental legislation. (10 Marks)

OR

- 10 a. Discuss : (10 Marks)
i) Wildlife Projection Act
ii) Forest Conservation Act.
b. Enumerate the impact of global warming and acid rain on our mother nature. (10 Marks)

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