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## Fifth Semester B.E. Degree Examination, July/August 2021 Energy and Environment

Time: 3 hrs.

Max. Marks: 80

*Note: Answer any FIVE full questions.*

- 1 a. Write a short note on energy and power. Also list out various forms of primary energy sources. (08 Marks)  
 b. Explain how energy flow from one form to another by illustrating an example of typical energy chain. (08 Marks)
- 2 a. Write a short note on key energy trends in India in terms of, (i) Demand (ii) Electricity (iii) Access to modern energy (iv) Energy production and trade. (08 Marks)  
 b. What are the key factors affecting India's energy development? (08 Marks)
- 3 a. Write a short note on thermal energy storage methods. Also illustrate an example of thermal energy storage system. (08 Marks)  
 b. Write a short note on principles of energy management. (08 Marks)
- 4 a. Briefly explain methodology of energy audit with respect to process industries. (08 Marks)  
 b. Explain characterization of an investment project. (08 Marks)
- 5 a. Define environment. Briefly explain multidisciplinary nature of environment studies. (08 Marks)  
 b. Explain the importance of environmental education in the present day context. (08 Marks)
- 6 a. Explain the flow of energy through the various components of ecosystem. (08 Marks)  
 b. Explain the following (08 Marks)
  - (i) Structure and functioning of grass land ecosystem.
  - (ii) Structure and functioning of aquatic ecosystem.
- 7 Write a short note on: (16 Marks)
  - a. Air pollution.
  - b. Soil pollution.
  - c. Noise pollution.
  - d. Thermal pollution.
- 8 Write a short note on: (16 Marks)
  - a. Solid waste management.
  - b. Hazardous waste management.
  - c. Pollution prevention.
  - d. Disaster management.
- 9 a. Explain phenomenon of global warming and factors contributing to it. (08 Marks)  
 b. What are the major causes of nuclear hazards and accidents? (08 Marks)
- 10 Write a short note on: (16 Marks)
  - a. Environment Protection act.
  - b. Air prevention and control of pollution act.
  - c. Water prevention and control of pollution act.
  - d. Forest conservation act.

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and/or equations written eg, 42+8 = 50, will be treated as malpractice.