

M.Sc. Examination 2018
Semester-II
Environmental Science
Course : MEC-24
(Energy and Environment)

Time : 3 Hours

Full Marks : 40

Questions are of value as indicated in the margin.

Answer Question **No.1** and **any four** from the rest.

1. Write short notes on **any four** of the following : 2×4=8
 - (a) Transmission loss of electrical energy
 - (b) Refining of crude oil
 - (c) Fuel storage facility at a thermal power plant
 - (d) Passive solar energy building design
 - (e) Factors affecting biogas yield
 - (f) Precautions during anaerobic digester loading

 2. (a) Discuss various stages of biogas production through anaerobic digestion process. 4+4=8
(b) Discuss the advantages of biogas technology.

 3. Write short notes on : 2.5+2.5+3=8
 - (a) Gasohol (b) Petrocrops (c) Biomass as a source of energy

 4. (a) Give an account of demand and supply of energy resources in human society. 4+4=8
(b) Write a note on renewable energy missions of India.

 5. (a) Write the basic method of electricity generation in a nuclear reactor. 3+3+2=8
(b) Describe the basic ingredients of a nuclear reactor.
(c) Describe the Nuclear Fuel Cycle.

 6. (a) Distinguish between solar collectors and solar concentrators. 4+(2+2)=8
(b) Describe the methods for harnessing the tidal energy. What are its environmental impacts?

 7. Describe the types of air pollutants generated in a fossil fueled power plant and the methods for their control. 3+5=8
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