

M.Sc. Examination, 2019
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) Working principle of electromagnetic generator
 - b) Energy conservation in transportation sector
 - c) Spent fuel in a nuclear reactor
 - d) Solar photovoltaic (SPV) Power Plant
 - e) Gasohol
 - f) Landfill gas
 2.
 - a) What are the major compositions of biomass?
 - b) Discuss the non-biological routes of biomass conversion. 3+5=8
 3. Write notes on : 2+3+3=8
 - a) Hydrolysis
 - b) Advantages of biogas technology
 - c) Energy Plantation
 4.
 - a) Describe the components of a fossil fueled power plant.
 - b) What are the different emission control measures adopted by the thermal power plants. 4+4=8
 5.
 - a) Briefly explain the adverse impacts of mega hydropower projects with an Indian example.
 - b) Discuss the advantages and limitations of small-scale hydropower (SSH) plants. 4+4=8
 6.
 - a) Write the basic principles of electricity generation through wind turbines.
 - b) Describe the different types of wind turbines. 4+4=8
 7.
 - a) What is the method of electricity generation from tides.
 - b) Write the different methods adopted to exploit geothermal energy. 4+4=8
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