

MEEM-204

M.E./M.Tech., II Semester Examination, June 2020 Energy Conservation, Management and Audit

Time : Three Hours

Maximum Marks : 70

- Note:** i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) Explain Commercial and Non-commercial energy sources.
b) Discuss the power generation potential of renewable energy sources in India.
2. a) Differentiate between energy conservation and energy efficiency.
b) Discuss Energy Conservation Act-2001 and its features.
3. a) What is the physical significance of power factor? How does it affect electrical billing system?
b) Explain various methods of Energy Conservation in Cooling Towers.
4. a) Explain the procedure to save the energy of a lighting system.
b) Where can one implement the variable speed drive? What is the format for data record and analysis for the same?
5. a) What are the needs of energy planning and audit? Explain in brief.
b) List the various equipments required for energy audit and explain the working principle of any one from them.
6. a) What are the observations during the utility time for the energy saving of an electric motor?
b) What is the scope of energy management? Explain the general principles of energy management.
7. a) What do you mean by energy performance contracts? Discuss the EPC mechanism in context the India.
b) How do you do a sensitivity analysis of energy consumption? Explain in brief.
8. Write short notes on followings. (any four)
 - i) Energy demand and supply curve
 - ii) Energy star rating
 - iii) Primary and secondary energy
 - iv) ESCOs
 - v) Load management
 - vi) Payback period
