



CBCS SCHEME

18ME81

Eighth Semester B.E. Degree Examination, Jan./Feb. 2023 Energy Engineering

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Explain the equipments used for transporting coals to power plant. (10 Marks)
b. With a neat sketch, explain the types of Ash handling systems. (10 Marks)

OR

- 2 a. List the types of High pressure boilers, explain La Mont Boiler. (10 Marks)
b. Explain the functions of
i) Cooling Towers ii) Super heaters iii) Air Preheater iv) Economizer. (10 Marks)

Module-2

- 3 a. With a neat sketch, explain Solar radiation at earth surface. (10 Marks)
b. Write a note on : i) Flat plate collector ii) Solar Pond. (10 Marks)

OR

- 4 a. List the difference between Biomass and Biogas. (06 Marks)
b. List and explain briefly the materials used in generation of Biogas. (06 Marks)
c. With a neat sketch, explain Biogas production in Indian type Biogas plant. (08 Marks)

Module-3

- 5 a. List the forms of Geothermal energy. Explain Hot dry rock energy system. (10 Marks)
b. Explain with a neat sketch, Single basin type Tidal plant. (10 Marks)

OR

- 6 a. Explain the working of Horizontal axis wind mill. (10 Marks)
b. With a neat sketch, list the type of blades used in verticle axis wind mill. (05 Marks)
c. List the advantages and disadvantages of wind energy. (05 Marks)

Module-4

- 7 a. With a neat sketch, explain the components used in Hydel Power Plant. (10 Marks)
b. List the advantages of hydro power plant. (05 Marks)
c. Write a note site selection for Hydel plants. (05 Marks)

OR

- 8 a. List the problems associated with OTEC. (06 Marks)
b. Explain the working of Rankine cycle in OTEC system. (10 Marks)
c. List the advantages of OTEC. (04 Marks)

Module-5

- 9 a. Explain the working of Nuclear Power Plant. (10 Marks)
b. Write a note on : i) Need for Nuclear Power ii) Nuclear Reaction. (10 Marks)

OR

- 10 a. With a neat sketch, explain Boiling water reactor. (10 Marks)
b. Write a note on : i) Disposal of Nuclear wastes ii) Structure of an Atom. (10 Marks)

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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.