

# CBCS SCHEME

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15ME71

Seventh Semester B.E. Degree Examination, July/August 2021

## Energy Engineering

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions

- 1 a. With a neat diagram, explain the working of spreader stoker. (08 Marks)  
b. With a neat diagram, explain the working of Central system of pulverized type of fuel handling system. (08 Marks)
- 2 a. With a neat diagram, explain forced draught system. (08 Marks)  
b. With a neat diagram, explain air - preheater. (08 Marks)
- 3 a. Explain the applications of Diesel engines in the power field. (07 Marks)  
b. Explain the different methods of starting diesel engines. (06 Marks)  
c. List the function of fuel system. (03 Marks)
- 4 a. With a neat diagram, explain the layout of Hydel power plant. (12 Marks)  
b. With a neat diagram, explain pumped storage plant. (04 Marks)
- 5 a. With a neat diagram, explain Flat Plate collector. (08 Marks)  
b. With a neat diagram, explain Solar Photovoltaic cell. (08 Marks)
- 6 a. With a neat diagram, explain Parabolic trough reflector. (08 Marks)  
b. With a neat diagram, explain Solar Array System. (08 Marks)
- 7 a. With a neat diagram, explain Horizontal Axis Wind Machine. (10 Marks)  
b. Discuss the problems associated with wind power generation. (06 Marks)
- 8 a. With a neat diagram, explain Double Cycle tidal power plant. (08 Marks)  
b. Discuss the advantages and limitations of Tidal power generation. (08 Marks)
- 9 a. Define Anaerobic Digestion. Explain the three steps of Anaerobic digestion. (08 Marks)  
b. Define Gasification. Explain the chemical reactions involved in the gasification process. (08 Marks)
- 10 a. With a neat diagram, explain working of Open Cycle Magneto hydrodynamic System (MHD). (08 Marks)  
b. Explain "Zero Energy Concepts". (08 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.