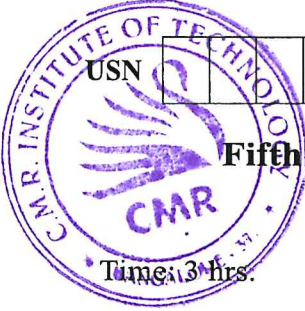


Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.



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10ME53

**Fifth Semester B.E. Degree Examination, July/August 2022**  
**Energy Engineering**

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.**

**PART – A**

- 1 a. List the advantages and disadvantages of using fuel in pulverized form. (04 Marks)  
b. Explain with neat sketches the unit and bin system of pulverized fuel handling. (08 Marks)  
c. With neat sketches explain any two methods of ash handling. (08 Marks)
- 2 a. Draw and label Benson Steam generator. (08 Marks)  
b. Write short note on Spray Ponds. (04 Marks)  
c. Explain with neat sketches the Forces and Induced draught systems. (08 Marks)
- 3 a. Explain the methods of starting diesel engine. (04 Marks)  
b. Draw the layout of diesel engine power plant and explain. (10 Marks)  
c. Explain the Lubrication System in diesel engine. (06 Marks)
- 4 a. Explain the construction of Unit hydrograph. (06 Marks)  
b. With sketch brief the overview of hydrological cycle. (08 Marks)  
c. Explain with neat sketch any one type of rain gauge. (06 Marks)

**PART – B**

- 5 a. Explain fusion and fission reactions. (04 Marks)  
b. With neat sketch explain the elements of Nuclear reactor. (08 Marks)  
c. Explain the working of fast breeder reactor with neat sketch. (08 Marks)
- 6 a. Explain the concept of photovoltaic conversion. (04 Marks)  
b. Explain with sketch the radiation measuring instruments. (08 Marks)  
c. Explain with neat block diagram the basic components of wind energy conversion system. (08 Marks)
- 7 a. Describe the single pool tidal system with sketch. (06 Marks)  
b. List the problems associated with geothermal conversion. (04 Marks)  
c. With neat sketch explain the closed cycle OTEC. (10 Marks)
- 8 a. Write short note on energy from biomass. (04 Marks)  
b. With sketch explain any two types of gassifiers. (08 Marks)  
c. Draw and explain the working of KVIC model biogas plant. (08 Marks)

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