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School of Engineering
B.TECH Mechanical Engineering
Semester End Examination - Nov 2023

Duration : 180 Minutes
Max Marks : 100

Sem VII - BME021 - Energy Conservation and Management

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) Select the concepts of life cycle costing and their relevance in energy management. K1 (2)
- 2) Compare the control strategies used in cogeneration systems K2 (4)
- 3) Extend your understanding of flow control methods in pumps and fans K2 (6)
- 4) Apply motor efficiency testing techniques to determine the energy performance of a motor drive system K3 (9)
- 5) Construct an energy-efficient motor control system using the principles of motor speed control K3 (9)
- 6) Determine the energy savings achieved by implementing a specific cogeneration system K5 (10)
- 7) Classify different types of waste heat recovery systems based on their operating principles and applications K4 (12)
- 8) Assess the technical feasibility of integrating heat exchanger networking in an existing industrial process K5 (15)
- 9) Evaluate the performance of a cogeneration system using key performance indicators K5 (15)
- 10) Design an optimized heat exchanger network for a given industrial process K6 (18)