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School of Engineering
B.TECH Mechanical Engineering
Mid Term Examination - May 2024

Duration : 90 Minutes
Max Marks : 50

Sem VI - G3UB607T - Renewable Energy Systems

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) Explain Solar Thermal Energy Systems and their applications. K2 (2)
- 2) What are Solar Energy Systems? K1 (3)
- 3) Explain the solar pond, and how is it used in energy production? K2 (4)
- 4) Compare the solar drying and solar distillation processes. K2 (6)
- 5) Compare monocrystalline and polycrystalline PV modules. K3 (6)
- 6) A single solar cell on illumination by insolation of about 800 W/m² produces a voltage of 0.5 V and a current up to 2.0 A. The efficiency of the solar cell is 12.5%. The area of the cell is? K3 (9)
- 7) Compare the effectiveness of passive and active solar distillation methods. K4 (8)
- 8) Analyze the energy efficiency of a solar dryer versus conventional drying methods. K4 (12)

OR

- Discuss the advantages of using a solar still for water purification. K4 (12)