

Code No: 135CZ**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech III Year I Semester Examinations, October - 2020****RENEWABLE ENERGY SOURCES****(Common to CE, EEE, ME, ECE)****Time: 2 hours****Max. Marks: 75****Answer any five questions
All questions carry equal marks**

- 1.a) Compare renewable energy sources with non-renewable energy sources.
b) Explain types of renewable energy systems. [7+8]
2. Discuss the renewable energy scenario in India and list its advantages over other Renewable Sources. [15]
- 3.a) Explain in detail the different types of solar radiation measuring instruments.
b) What are the different applications of solar PV system in rural India? [7+8]
- 4.a) What are the advantages and disadvantages of PV solar energy conversion system?
b) Explain Photo Voltage (PV) effect. [7+8]
- 5.a) Describe with a neat sketch the working of wind energy conversion system.
b) What are the advantages and disadvantages of wind energy conversion systems? [7+8]
- 6.a) Give a brief description on types of wind turbine.
b) Derive an expression for maximum power co-efficient for a horizontal axis wind turbine. [7+8]
- 7.a) How are Gasifiers classified? Explain pyrolysis.
b) What are the factors that affect bio digestion process? Explain briefly. [7+8]
- 8.a) Explain in brief about tidal and wave energy.
b) Explain the types of turbines for small hydro power plant. [7+8]

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