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Total No. of Printed Pages: 1

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M.Tech.EE (Power System) (Semester: 2nd)
RENEWABLE ENERGY SYSTEM AND DISTRIBUTED GENERATION
Subject Code: MELED2221
Paper ID: 22191316

Time: 03 Hours

Maximum Marks: 60

Instruction for candidates:

1. Section A is compulsory. It carries 16 marks. It consists of 4 questions of 4 marks each.
2. Section B consist of 4 questions of 8 marks each. The student has to attempt any 3 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A

(4 marks each)

- Q1. Discuss Advantages, Limitations & scope of renewable energy resources.
- Q2. Explain Site selection factors as well as types of hydro power stations.
- Q3. Explain briefly about tidal power generation system.
- Q4. Explain micro-turbine as source of energy for distributed generation.

Section – B

(8 marks each)

- Q5. Attempt the following:
 - a) Explain solar cell principle. (4)
 - b) Discuss site selection considerations for wind energy. (4)
- Q6. Explain Hydro energy power plant major components and their working.
- Q7. Attempt the following:
 - a) Explain Advantages and disadvantages of wave energy. (4)
 - b) Discuss classification of geothermal resources. (4)
- Q8. Explain Impact of distributed generation on power grid reliability.

Section – C

(10 marks each)

- Q9. Explain schemes for electric generation using synchronous generator and induction generator.
- Q10. Attempt the following:
 - a) Explain the types of bio-gas plants. (5)
 - b) Explain the working of any two types of fuel cells. (5)
- Q11. Attempt the following:
 - a) Explain self-excited induction generator as distributed generator. (5)
 - b) Discuss economic issues of distributed generation. (5)