SHRI RAMSWAROOP MEMORIAL UNIVERSITY

End Semester Examination (2021-22)-Odd Semester

M. Tech. (Renewable Energy) – I Year (I Sem)								
Course Name: Rural Electrification: Technologies and Economics Code: MEE101								
Time: 02 Hours		Max	Marks: 6	60				
University Roll No.								

Note: Please read instructions carefully:

- a) The question paper has 03 sections and it is compulsory to attempt all sections.
- b) All questions of Section A are compulsory; questions in Section B and C contain choice.

	tion A: Very Short Answer type Questions empt all the questions.	BL	CLO	Marks (10)
1.	What is the role of decentralized generation in smart grid?	BL1	CLO1	02
2.	What is meant by terms 'Demand' and 'Demand periods'?	BL1	CLO2	02
3.	What are the major components of a Turbine?	BL1	CLO3	02
4.	Explain the working principle of Photovoltaic (PV) generation.	BL2	CLO4	02
5.	What is power grid?	BL1	CLO1	02
Section B: Short Answer Type Questions Attempt any 03 out of 06 questions.		BL	CLO	Marks (30)
1.	What is the importance of load forecasting in power system?	BL1	CLO1	10
2.	Illustrate 'Load factor' with formula and example.	BL2	CLO2	10
3.	Illustrate the types of gas turbine generator on the basis of power output.	BL2	CLO3	10
4.	Explain the difference between Constant-speed and Variable-speed wind turbines.	BL5	CLO4	10
5.	Illustrate the types of DG-grid interconnections.	BL2	CLO2	10
6.	What are the reasons to shift towards improved smaller generator design more than larger generators?	BL1	CLO2	10
Section C: Long Answer Type Questions/Case Study Attempt any 01 out of 03 questions.		BL	CLO	Marks (20)
1.	Explain distributed generation of electricity and its environmental impacts.	BL5	CLO1	20
2.	What are the types of wind rotor (turbine)? Explain in detail.	BL5	CLO4	20
3.	Analyze the following term related to Solar concentration: (a) Through Mirror Systems. (b) Heliostats. (c) Parabolic Mirrors.	BL4	CLO3	20