Roll No. | | | | | | | | | | | | | **Total No. of Pages : 01**

Total No. of Questions : 08

M.Tech. (Electrical Engineering / Power Systems and Renewable Energy) (Sem.–1)

DISTRIBUTED GENERATION

Subject Code : PSRE-102/21

M.Code : 91510

Date of Examination : 21-01-23

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1.Attempt any FIVE questions out of EIGHT questions.

2.Each question carries TWELVE marks.

1. What do you mean by distribution generation? Write brief summaries on distributed generation's present state of affairs and renewable energy sources.

2. What is an active distribution network? Describe the distribution generation planning and optimal placement.

3. Discuss in potential benefits of grid interconnections. Describe the technical grid interconnection challenges involved in the grid connected functioning of various DG system types.

4. Describe the significance of the DG system in the deregulated power industry. Also, discuss the relay protection system in distribution generation with suitable diagram.

5. Explain the problems with the distribution system's harmonic power quality. Also, discuss the economic and control aspects of DGs market facts in present time.

6. Describe the reliability analysis for DG system. Also, explain the issues, challenges, and limitations for distributed generation.

7. Explain the Microgrid. Talk about the many forms of microgrids. Describe the operation of the energy router-based interconnecting architecture for the microgrid system using a diagram.

8. Which kind of micro-grid protection? "*The role of power electronics in microgrid systems is also important.*" Explain.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.