

Roll No.

Total No. of Pages : 01

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M.Tech. (Power System) (Sem.-2)

DISTRIBUTED GENERATION

Subject Code : MTPS-204B-18

M.Code : 76139

Date of Examination : 11-07-22

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. a) Compare between centralized and decentralized distributed generation.
b) What are the challenges involved in building distributed system.
2. a) What is the need of distributed power generation? Explain.
b) What are the available sources of distributed generation system? Explain in brief.
3. a) What is optimal sizing of DGs in distribution systems? Discuss a suitable method for it.
b) When a grid is called Micro-grid? Give the advantages of Microgrid.
4. Explain the integration of distributed generation into the grid in terms of protection, challenges and solutions.
5. a) With a neat diagram, explain shunt type reactive power compensation.
b) Discuss a method to find optimal location of Distributed Generation (DG) and its capacity.
6. a) How static switches contribute to power continuity? Explain with a neat diagram.
b) Discuss the integration of DGs with rotating machines-based interface.
7. a) Explain the impact of distributed generation on distribution, protection and power quality.
b) Discuss autonomous and non-autonomous microgrid sizing.
8. Write short notes on the following :
 - a) Reliability of DG system.
 - b) Transient stability in distributed generation system.

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