

MASTER OF TECHNOLOGY (ELECTRICAL - POWER SYSTEM) (CBCS - 2015 COURSE)

**M. Tech. (Electrical-Power System) Sem-IV :SUMMER- 2022
SUBJECT : SELF-STUDY PAPER-II:DISTRIBUTED GENERATION**

Day : Wednesday
Date : 15-06-2022

S-14546-2022

Time : 10:00 AM-01:00 PM
Max. Marks : 60

N.B. :

- 1) All questions are **COMPULSORY**.
 - 2) Neat diagrams must be drawn **WHEREVER** necessary.
 - 3) Section – I and Section – II written in **SEPARATE** answer book.
 - 4) Figures to the right indicate **FULL** marks.
 - 5) Assume suitable data, if necessary.
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SECTION - I

Q.1 What are various distributed energy resources and also explain energy efficiency of distributed solar PV generation. **(10)**

OR

Q.1 Compare distributed generation with conventional generation system. **(10)**

Q.2 With a neat diagram explain construction working and ratings of micro turbines used in wind generation. **(10)**

OR

Q.2 State advantages and disadvantages for the grid and the micro grid. **(10)**

Q.3 Explain in brief intentional and unintentional islanding. **(10)**

OR

Q.3 Compare in detail with help of phasor diagram protection CT with measuring CT. **(10)**

SECTION - II

Q.4 Discuss the fast voltage fluctuations in solar power plant. **(10)**

OR

Q.4 Describe the terms: **(10)**
i) High Distortions
ii) Rapid Voltage Changes
iii) Low Frequency Harmonies

Q.5 What are the future challenges and trends of smart grid application in D.G.? **(10)**

OR

Q.5 Discuss the smart grid power control in D.G. environment? **(10)**

Q.6 Describe in detail future modifications in distributed generation. **(10)**

OR

Q.6 Discuss the case study of D.G. in California Electric Power System. **(10)**

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