M. Tech.-IV (Electrical -Power System) (CBCS – 2015 Course) : SUMMER - 2019

Time: 11.00 AM TO 02.00 PM

SUBJECT: SELF-STUDY PAPER - II: DISTRIBUTED GENERATION

Day:

Thursday

Date: 13/06/2019 Max Marks. 60 S-2019-3559 $\overline{\text{N.B.}}$: 1) All questions are **COMPULSORY**. Neat diagrams must be drawn WHEREVER necessary. 2) Answer to both the sections should be written in **SAME** Answer book. 3) 4) Figures to the right indicate FULL marks. 5) Assume suitable data, if necessary. **SECTION - I Q.1** Describe the current technological trends in grid connected solar distributed (10) generation. OR Q.1 What are various distributed energy resources and also explain energy (10) efficiency of distributed wind generation? **Q.2** Elaborate how the integration of mini and micro generation is carried out in (10) distributed generation. OR What is the significance of vehicle to grid (V2G), elaborate in detail? **Q.2** (10)**Q.3** What is unintentional islanding? Explain in detail. (10)OR Q.3 Compare passive and active detection of unintentional islands in distributed (10) generation. SECTION - II **Q.4** Discuss the impacts of distributed generation on power system. (10)Q.4 Discuss in detail major power quality problems. (10)Q.5 State and explain features of smart grid. (10)0.5 Describe the role of distributed generation in smart grid. (10)Describe in detail future development in D.G. **Q.6** (10)Discuss in detail financial aspects of D.G. Q.6 (10)