

Total No. of Questions : 4]

SEAT No. :

PA-10184

[Total No. of Pages : 1

[6010]-54

B.E. (Electrical Engg.) (Insem)

SMART GRID

(2019 Pattern) (403150C) (Semester - VIII) (Elective - V)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) Each question carry 15 marks.
- 2) Solve Q1 or Q2 and Q3 or Q4.
- 3) Figures to the right side indicate full marks.
- 4) Assume the suitable data, if necessary.

Q1) a) What is the need of smart grid? What will be the components of smart grid? [7]

b) Write a note on present development in smart grid considering any one case study. [8]

OR

Q2) a) Write a note on opportunity and barriers in smart grid. [7]

b) Explain the concept of Resilient and Self-Healing grid. [8]

Q3) a) Write a note on phase measurement unit (PMU) with block diagram and give the functions of each block. [7]

b) Write a short note on : [8]

- i) Plug in Hybrid Electric Vehicles (PHEV)
- ii) Vehicle to grid (V2G)

OR

Q4) a) Explain the function of IED and their Application. [7]

b) Compare : [8]

- i) SMES and Super Capacitors.
- ii) Pumped Hydro Energy Storage (PHES) and Compressed Air Energy Storage (CAES).

