

Total No. of Questions : 8]

SEAT No. :

P3795

[5561]-197

[Total No. of Pages : 2

B.E. (Electrical Engineering)

SMART GRID

(2012 Pattern) (Semester - II) (End Sem.) (Elective - IV (a))

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Solve Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.*
- 2) *Figures to the right indicate full marks.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Assume suitable additional data, if necessary.*

- Q1)** a) Explain the various functions to be performed by smart grid, and how it becomes self healing. [6]
- b) Give functions and benefits of Smart Meter. [6]
- c) What is OMS system in smart grid, and Explain its components. [8]

OR

- Q2)** a) Give present development and pilot projects of India in smart grid. [6]
- b) Write a note on, "SMES". [6]
- c) Explain Feeder automation. [8]

- Q3)** a) Explain concept of DC microgrid, and its need and application. [8]
- b) Discuss different issues of micro grid when interconnected with renewable sources [8]

OR

- Q4)** a) Explain about protection and control of microgrid. [8]
- b) Describe the smart Micro Grid and compare it with smart grid. [8]

P.T.O.

Q5) a) Explain types of power quality problems and its effect. **[8]**

b) Describe the concept, power quality conditioners related to smart grid. **[8]**

OR

Q6) a) Describe the power quality issues of grid connected renewable energy sources. **[8]**

b) Explain the power quality audit and its importance in smart grid. **[8]**

Q7) a) Explain the concept HAN related to smart grid. **[9]**

b) Write a note on IP based protocols in smart grid. **[9]**

OR

Q8) a) Explain the importance of Bluetooth in smart grid. **[9]**

b) Write a note on, Broadband over power line. **[9]**

