

Total No. of Questions : 8]

SEAT No. :

P2304

[Total No. of Pages : 2

[5254]-638

B.E. (Electrical Engineering)

SMART GRID

(2012 Pattern) (Elective - IV) (Semester - II)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Solve Q.1 Or Q.2, Q.3 Or Q.4, Q.5 Or Q.6, Q.7 Or Q.8.*
- 2) *Figures to the right indicate full marks.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Assume suitable data, if necessary.*

- Q1)** a) State and explain the challenges for Smart Grid. [6]
- b) Explain the function of Intelligent Electronic Devices & their application for monitoring & protection. [6]
- c) List different smart appliances and describe an integration of smart appliances into grid for Home and Building Automation. [8]

OR

- Q2)** a) Compare Conventional Grid and Smart Grid. [8]
- b) How smart grid can be benefited by implementing PHEV technology? [6]
- c) What is the role of Advanced Metering Infrastructure (AMI) in Smart Grid? [6]
- Q3)** a) Write a note on 'protection & control of Microgrid'. [8]
- b) Explain concept of micro grid, and its need and applications. [8]

P.T.O.

OR

- Q4)** a) Compare Microgrid and Smart Grid. [8]
b) Describe Power Quality Issues of grid connected Renewable Energy Sources. [8]

- Q5)** a) Write a note on 'Web based Power Quality Monitoring'. [8]
b) Explain the concept of Power Quality and EMC in Smart Grid. [8]

OR

- Q6)** a) Describe 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 role HAN in smart grid. [9]
b) Why cyber security is of prime importance in Smart grid & how it can be achieved? [9]

OR

- Q8)** a) Explain cloud computing and its need. [9]
b) Write a note on, Broadband over power line. [9]

