

Total No. of Questions : 8]

SEAT No. :

P3601

[Total No. of Pages : 2

[4959]-1078

B.E. (Electrical Engineering)

SMART GRID

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

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) Define smart grid and give its functions. [6]
b) Explain the concept vehicle to Grid. [6]
c) Highlight on role of geographic information system in smart grid, and also give its function. [8]

OR

- Q2)** a) Give present development and international policies in smart grid. [6]
b) Write a note on, "IED". [6]
c) Explain how Smart Appliances can be the part of Smart Grid. [8]

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

OR

- Q4)** a) Explain about protection and control of microgrid. [8]
b) Describe the concept and formation of Micro Grid. [8]

- Q5)** a) Explain EMC and its importance in smart grid. [8]
b) Describe the concept, power quality conditioners related to smart grid. [8]

OR

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- 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 WAN related to smart grid. [9]
b) Write a note on Wi-Max based communication 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]

