

Total No. of Questions : 8]

P3325

SEAT No. :

[Total No. of Pages : 2

[5670] 594

B.E. (Electrical)

SMART GRID

(2015 Pattern) (Semester - II) (403150A) (Elective-IV) (End Sem.)

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 and 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) Define smart grid and give its functions. [6]
b) Explain the function of IED & their application. [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) Explain the concept of Resilient and Self Healing Grid. [6]
c) Explain how Smart Appliances can be the part of Smart Grid. [8]

- Q3)** a) Explain concept of micro grid and its need and application. [8]
b) Explain about protection and control of micro grid. [8]

OR

- Q4)** a) What is Geographic Information System (GIS)? Explain the components of GIS. [8]
b) Explain how automatic meter reading can make the system smarter. [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 'Web based Power Quality Monitoring'. [9]

OR

- Q8)** a) Why cyber security is of prime importance in Smart grid & how it can be achieved? [9]
b) Write a note on, Broadband over power line. [9]

