SEAT No. :

[Total No. of Pages : 2

[6004]-518

B.E.(Electrical Engineering)
SMART GRID

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

Time : 2½ Hours]   *[Max. Marks : 70*

Instructions to the candidates:

1) *Each questions carry 18 or 17 marks.*
2) *Solve questions Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6 and Q.7 or Q.8.*
3) *Figures to the right side indictae full marks.*
4) *Assume the suitbale data, if necessary.*
5) *Neat diagram must be down wherever necessary.*

Q1) a)   Explain how automatic meter reading can make the system smarter. **[9]**

b)   List different smart appliances and describe an integration of smart Appliances into grid for Home and building automation. **[9]**

OR

Q2) a)   Write a note on, "Real time Pricing", Outage Management system (OMS) **[9]**

b)   What is geographic information system (GIS)? Explain the components of GIS. **[9]**

Q3) a)   Explain concept of micro grid, and its need and applications. **[9]**

b)   Write a note on 'protection & control of micro grid'. **[8]**

OR

Q4) a)   State and explain the issues of interconnecting the micro grid with the utility grid. **[9]**

b)   Compare micro grid and smart Grid. **[8]**

Q5) a) Describe the concept, power quality conditioners related to smart grid. **[9]**

b) Explain the power quality audit and its importance in smart grid. **[9]**

OR

Q6) a) Explain EMC and its importance in smart grid. **[9]**

b) Describe the power quality issues of grid connected renewable energy sources. **[9]**

Q7) a) Why cyber security is of prime importance in Smart grid & how it can be achieved. **[9]**

b) Explain the role HAN and NAN in Smart Grid. **[8]**

OR

Q8) a) Explain cloud computing and concept of Broadband over powerline. **[9]**

b) Write a note on 'Web based power quality monitoring'. **[8]**

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