Code No: 138EQ **R16**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech IV Year II Semester Examinations, September - 2020
SMART ELECTRIC GRID
(Electrical and Electronics Engineering)

Time: 2 Hours **Max. Marks: 75**

Answer any Five Questions
All Questions Carry Equal Marks
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1.a) List the advantages of building integrated Power systems.
b) Explain the importance and need of Smart grid in present scenario. [8+7]

2.a) What are plug in hybrid electrical vehicles and explain its significance.
b) Why a smart grid is called as a "Green Grid"? Explain. [8+7]

3.a) Explain the functionalities or capabilities of Energy port in Intelligrid architecture.
b) List the benefits of equipment drivers in DC power delivery systems. [7+8]

4.a) Explain the objectives of SCADA.
b) Explain how the intelligrid will achieve the goals of Smart grid. [7+8]

5.a) Explain in detail about Advanced Whole building control systems used in Dynamic energy management.
b) List and explain the enabling technologies for demand response. [8+7]

6.a) Explain in detail about Smart distributed Energy resources.
b) Explain how the dynamic energy management infrastructure is applied to a Generic building. [7+8]

7.a) Explain how consumers will interact with the Energy Port.
b) List and explain the factors influencing the market planning frame work for customer acceptance and response. [7+8]

8.a) What is a Thermal Energy storage and give its significance.
b) Explain how innovative lighting technologies help us to achieve Energy efficiency. [7+8]

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