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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR
(AUTONOMOUS)**

M.Tech I year II Semester Regular Examinations June 2019

SMART GRIDS

(Power Electronics)

Time: 3 hours

Max. Marks:60

(Answer all Five Units 5×12=60 Marks)

UNIT I

- 1 a Define smart grid concept and explain its necessity. **6M**
b Explain functions of smart grid components. **6M**

OR

- 2 a Explain outage management system. **6M**
b Describe substation and feeder automation. **6M**

UNIT II

- 3 Explain how the reliability of smart grid can be enhanced by integrating intelligent electronic devices (IED) into it. **12M**

OR

- 4 a Explain smart metering and advantages of it. **6M**
b Explain phase measuring unit. **6M**

UNIT III

- 5 State and explain the issues of interconnecting the micro grid with the utility grid. **12M**

OR

- 6 a Compare micro grid and smart grid. **6M**
b Describe the power quality issues of grid connected renewable energy sources. **6M**

UNIT IV

- 7 Draw the flow chart of procedure for monitoring power quality and issues of power quality monitoring. **12M**

OR

- 8 a Explain the role of EMC in smart grid. **6M**
b Explain about power quality Audit and its applications. **6M**

UNIT V

- 9 Explain types and applications of ZigBee. **12M**

OR

- 10 a Explain about broadband over power line. **6M**
b Explain Bluetooth, Wi-Fi and GPS. **6M**

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