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Total Number of Pages : 01

B.Tech
PEL8J001

8th Semester Regular Examination 2018-19

SMART GRID

BRANCH : EEE

Max Marks : 100

Time : 3 Hours

Q.CODE : F036

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.

The figures in the right hand margin indicate marks.

Part- I

Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)

- What is WAN and LAN?
- What are the key components of AMI?
- What are the advantages of smart grid technology?
- What are the components of smart grid?
- Write short note on Indian electric grid system?
- What is V₂G?
- What are the features of SMES?
- What is PDC?
- What do you mean by outage?
- Define demand response?

Part- II

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)

- Distinguish between conventional grid and smart grid?
- Explain power quality issues of grid connected renewable energy resources?
- Write short note on wind energy conversion system with suitable block diagram?
- Write a note on protection and control of micro-grid?
- Explain details about feeder automation in smart grid?
- Explain the WAMS component used in smart grid communication?
- Write the various opportunities and changes of smart grid?
- What are the functions of intelligent electronic devices as smart grid components?
- Explain web based power quality monitoring system?
- What is GIS and explain its components?
- Explain the different storage system used in smart grid in details?
- Write a short note on smart home management system?

Part-III

Q3 Only Long Answer Type Questions (Answer Any Two out of Four) (16)

- Write the various components of smart grid and its function details with block diagram? (16)
- Explain concept of Micro-grid and issues related with utility grid? What is DG and write the advantages and disadvantage of distribution generation? (16)
- Explain the importance of power quality in smart grid and issues related to integration of renewable energy to main grid? (16)
- Describe the driving elements of substation automation and functions of substation automation system? Explain about features of smart meters? (16)