

Printed Pages : 2



EEE062

(Following Paper ID and Roll No. to be filled in your Answer Book)

**PAPER ID : 120853**

Roll No.

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**B. Tech.**

(SEM. VIII) THEORY EXAMINATION, 2014-15

**SCADA & ENERGY MANAGEMENT SYSTEM**

Time : 3 Hours]

[Total Marks : 100

Note : Attempt all questions.

- 1 Attempt any two parts of the following :  $10 \times 2 = 20$ 
  - (a) Describe architecture of a typical distribution SCADA and state the automatic functions performed by distribution SCADA.
  - (b) Describe in detail, the principle and working of power-line carrier communication.
  - (c) What are various equipments used for various tasks in network automation and distribution automation.
  
- 2 Attempt any two parts of the following :  $10 \times 2 = 20$ 
  - (a) What is meant by 'Data acquisition system' ? Discuss the functions performed by the Data Loggers.
  - (b) Discuss in detail, the functions of 'Remote Terminals Units (RTUs) in a typical modern supervisory control system.

- (c) Discuss the concept of 'Partial Load Control' from Distribution Control centre.
- 3 Attempt any two parts of the following :  $10 \times 2 = 20$
- (a) Discuss the concept of 'Load Management' and clearly state its objectives.
  - (b) What is meant by 'Load Shedding' ? Discuss the process by which it is carried out.
  - (c) What are the functions performed at a centralized energy management centre ?
- 4 Attempt any two parts of the following :  $10 \times 2 = 20$
- (a) What are various components of the 'Man-machine communication system' of a sub-station ? Discuss in detail.
  - (b) Explain how Auto Reclosers and Sectionalizers are remote controlled from control room of Distribution Substation ?
  - (c) Explain peak load problem and its solutions.
- 5 Write short notes on any four of the following :  $5 \times 4 = 20$
- (i) Transducers
  - (ii) Disturbance data collection and analysis
  - (iii) Mimic diagram
  - (iv) Economic dispatch
  - (v) Power pool management
  - (vi) General power system Hierarchical structure.
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