

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

PAPER ID :**Roll No.**

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B.TECH.**Theory Examination (Semester-VIII) 2015-16****SCADA & ENERGY MANAGEMENT SYSTEM****Time : 3 Hours****Max. Marks : 100****SECTION A****1. All questions are mandatory.****(2x10=20)**

- Explain the electrical sensors & transducers and its significance.
- State & explain SCADA system with a suitable neat block diagram.
- What are the applications of SCADA system?
- Explain the application of RTUs systems and its limitations.
- Write a brief application of telephonic lines.
- Explain the application of power line carriers.
- What are the applications of microwaves?
- What are the application & limitations real time operation system requirements in SCADA systems?
- Explain energy management centres also mention its merits and drawbacks.
- State & explain data acquisition systems and its significances.

SECTION B**2. Attempt any five questions.****(10x5=50)**

- State & explain the critical review of methods of data acquisition systems. What are the advantage and disadvantage of this system?
- Discuss the operator consoles and VDUs functions in man machine communication system.
- Explain the function perform at centralised management centre.
- What do you understand by the redundant dual processor and single processor and also explain.
- What are the different control variable of SCADA system and explain them in details.
- Discuss the load management system and its limitations.
- Explain the set points and feedback loops in regulatory systems.
- What are the remedies of the real time operation system requirement in SCADA system?

SECTION C**Attempt any two questions.****(15x2=30)**

- State & explain the types of SCADA system structure with the help of suitable examples and also mention its limitations.
- Draw & explain the block diagram of data acquisition system and explain each component of the system and also define monitoring alarm and event application process in this system.
- State the economic dispatch and power pool management and their significance in SCADA system.