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8E8103

Roll No. _____

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B.Tech. VIII semester (Main & Back) Examination, May 2016

Electronic Instrumentation & Control Engineering

8EI3A Distributed Control Systems

Time : 3 Hours

Maximum Marks : 80

Min. Passing Marks : 24

Instructions to Candidates:

*Attempt any five questions, selecting **One** question from **each unit**. All questions carry **equal** marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.*

Unit - I

1. Explain the Hierarchical Organization for a process computer control and computer system structure for a manufacturing complex with the help of Block diagram. (16)

OR

1. a) Explain the concept of distributed control (6)
b) What are the functional requirements of DPCS. Explain. (5)
c) Write short note on DPCS system Configurations. (5)

Unit - II

2. a) Explain the System Architectures of DPCS in detail. (8)
b) Give configuration of Control unit along with the state of the art in DPCS (8)

OR

2. a) Explain different card system Implementation concepts. (10)
b) Write a short note on DPCS elements. (6)

Unit - III

3. a) Explain the concepts of standard and users defined displays in detail. (10)
b) Write a technical note on ground display. (6)

OR

3. Write short notes on (6)
- a) Graphic Display (5)
 - b) Annunciator display (5)
 - c) Tuning Point

Unit - IV

4. Write and explain MAP and TOP protocols in detail. (16)

OR

4. a) Give Comparison of MODBUS, PROFIBUS and FIPBUS (10)
- b) Write short note on error handling. (6)

Unit - V

5. Explain the following : (8)
- a) Control Unit (8)
 - b) Batch System Builder

OR

5. a) Describe Feedback Control builder in detail. (8)
- b) Explain sequential control in detail. (8)