

Roll No. 

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Total No. of Pages : 02

Total No. of Questions : 09

**B.Tech.(EIE) (2012 Onwards E-III) (Sem.-7,8)****DISTRIBUTED CONTROL SYSTEMS**

Subject Code : DE-3.3

M.Code : 58043

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTION TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

**SECTION-A****1. Answer briefly :**

- a. State full form DCS, MAP, MTBF and SCADA.
- b. Explain the concept of DDC.
- c. Draw a block diagram of Distributed Control System.
- d. Explain different Bus Access Methods.
- e. Define local control unit.
- f. List flow sheet symbols in tabular form
- g. What is bubble memory?
- h. What do you understand by velocity algorithm?
- i. What do you mean by "Field Station" in DCS?
- j. Explain Field Bus communication.

**SECTION-B**

2. Discuss role of Man Machine Interface (MMI) in system integration.
3. What do you mean by “Field Station” in DCS? Explain Field Bus communication.
4. Give one application based example of SCADA. Draw suitable diagram to explain in detail.
5. Draw block diagram of direct digital control system. State the advantages and disadvantages of centralized control system.
6. Explain in detail MODBUS bus access methods, transmission modes, application services and acceptance

**SECTION-C**

7. What is the role of memory organization in computer hierarchical control?
8. Discuss attributed of DCS. Also list flow sheet symbols in tabular form.
9. Write a short note on **any one** :
  - a. FIPBUS bus access methods
  - b. Memory organization

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**