

**BACHELOR OF TECHNOLOGY IN
MECHANICAL ENGINEERING
(COMPUTER INTEGRATED
MANUFACTURING)**

Term-End Examination

June, 2011

**BME-012 : MANUFACTURING SYSTEMS,
INTEGRATION AND CONTROL**

Time : 3 hours

Maximum Marks : 70

Note : Answer *any FIVE* of the following questions.

1. (a) What is JIT production system ? Why the need of MRP-II is felt over existing MRP ? 7
- (b) Define control architecture. What do you understand by hierarchical control system ? 7
2. (a) What do you understand by manufacturing data base ? How are they classified ? Explain any one of them in detail. 7
- (b) Explain the various methods to achieve mass customisation. 7
3. (a) Explain the following : 7
 - (i) e - commerce
 - (ii) Concurrent Engineering

- (b) Define supply chain management. Explain the various components of supply chain management. 7
4. (a) What is e-collaboration ? Explain its applications in the manufacturing system. 7
- (b) What do you understand by process design ? How it can be implemented in the shop floor environment ? 7
5. (a) What is the need of inspection and quality control in manufacturing plant ? Explain with examples. 7
- (b) What do you understand by six sigma method of quality control ? Describe five basic steps of six sigma. 7
6. (a) What are the different types of agents in system architecture ? Discuss about the function of part agents. 7
- (b) Explain the main objectives of short term scheduling and control. 7
7. (a) What do you mean by Bionic Manufacturing System ? How is it used to make the system intelligent ? 7
- (b) Define dead lock. Identify different types of dead locks occurring in manufacturing shop floor. List down different approaches to model these dead locks. 7
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