

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

Term-End Examination

June, 2012

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

Time : 3 hours

Maximum Marks : 70

Note : Attempt any seven question of the following. Use of calculator is allowed. Assume any missing data.

1. What are the different types of databases used for manufacturing control system ? Explain in details. 10

2. Explain the following. 10
 - (a) Shop Floor Control
 - (b) JIT Production System

3. Explain the following : 10
 - (a) Control Architecture
 - (b) Hierarchical Control

4. Explain CIM database and multi objective decision support system. Also explain the role of Sensor's in CIM strategy. 10
5. What do you understand by the term "Agile Manufacturing System" ? Briefly explain various advantages of agile manufacturing. 10
6. What do you understand by "Rapid Response Manufacturing" ? Describe the role of computer and IT for Rapid Response Manufacturing. 10
7. What is meant by "Bionic Manufacturing System"? How a Bionic Manufacturing System is used to make the system intelligent ? 10
8. (a) Describe the role of IT in improving performance of supply chain. 5+5
(b) Describe the role of e-collaboration in improving performance of supply chain.
9. What is knowledge management ? Briefly describe general issues of knowledge representations. 10
10. Why is AGV Scheduling considered as a critical decision making problem ? Give some features of AGV Scheduling. 10