No. of Printed Pages : 2

BME-012

00401

BACHELOR OF TECHNOLOGY IN MECHANICAL ENGINEERING (COMPUTER INTEGRATED MANUFACTURING)

Term-End Examination

December, 2013

BME-012 : MANUFACTURING SYSTEMS, INTEGRATION AND CONTROL

Time : 3 hours *Maximum Marks : 70*

Note : *Attempt **any five** of the following questions.*

1. (a) What are the different types of data bases used for manufacturing control system? Explain. 7+7
   (b) What is JIT production system? Why the need of MRP II is felt over existing MRP ? Explain.

2. (a) Explain the need of computer simulation and modeling techniques in context of enterprise integration 7+7
   (b) How systems engineering approach can be formulated and implemented as an integrated manufacturing system? Explain.

3. (a) Discuss about CIM database and multi objective decision support system. 7+7
   (b) What is meant by mass customization? Explain the various types of methods to achieve mass customization in brief.

4. (a) What are the various types of enablers used for achieving agile manufacturing paradigms ? Explain. 7+7

(b) What are the key issues in developing intelligent agent based manufacturing system ? Explain.

5. (a) Define supply chain management. Discuss business process in SCM framework. 7+7

(b) Discuss the role of information technology in decision making process of supply chain management.

6. (a) What do you understand by six sigma method of quality control ? Describe the five basic steps of six sigma. 7+7

(b) What is flexible routing adoptive control system (FRACS) ? Describe about functions of control system in FRACS.

7. (a) What are the main purposes of manufacturing process and control system (MPCS) ? Describe the basic tasks of the cell control module (CCM). 7+7

(b) Describe the types of the deadlocks occuring in the manufacturing shop floor and illustrate through suitable example.