02600

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

## Term-End Examination

## June, 2013

## BME-005 : COMPUTER INTEGRATED MANUFACTURING

*Time : 3 hours* *Maximum Marks : 70*

***Note :*** *Answer **any five** of the following questions. All questions carry equal marks.*

1. (a) Describe the steps through which electronic data transfer takes place from manufacturer to supplier. 7+7

   (b) Define inspection. Differentiate between on-line/in-process and on-line/post-process inspection methods.

2. (a) Discuss the following robot configurations. 7+7

   (i) Cartesian robot configuration

   (ii) Jointed arm configuration.

   (b) What are the various types of AS/RS? Briefly explain their features and applications.

3. (a) Differentiate between direct numerical control (DNC) and distributed numerical control systems. 7+7

(b) What is machine control unit in CNC systems? What are its functions ? Explain.

4. (a) What do you understand by FMS ? Describe the advantages of FMS over conventional manufacturing system. 7+7

(b) What is process planning ? What are the various steps in developing a process plan ? Explain with example.

5. (a) What is simulation ? State its advantages over mathematical model. 7+7

(b) Explain about all the elements of descrete event simulation.

6. (a) What do you understand about LAN in communication process ? Describe the different types of LAN systems. 7+7

(b) What is a protocol in the network system ? Briefly describe about MAP and TOP protocols.

7. (a) Describe the features of distributed data base management system. 7+7

(b) What are the different social and economic factors which promotes the development of automated factory ?