# B.Tech. MECHANICAL ENGINEERING (COMPUTER INTEGRATED MANUFACTURING)

## Term-End Examination

## December, 2015

## BME-005 : COMPUTER INTEGRATED MANUFACTURING

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

**Note :** *Attempt any five questions.*

1. (a)  Explain the concept of CIM. What are the benefits of CIM ?    7

   (b)  What are the different types of CAM applications ? Explain any one in brief.    7

2. (a)  Explain CMM in brief and enlist the advantages of using CMM.    7

   (b)  Explain the various elements of AGVS.    7

**3.** (a) Define the terms NC, CNC, DNC and Distributed Numerical Control. 7

(b) What are the different types of CNC machines ? What are the advantages and limitations of CNC system ? 7

**4.** (a) What do you understand by flexible manufacturing system ? Write the components of FMS. 7

(b) Define the following terms : 7
   (i) KK-3 code
   (ii) Hybrid code
   (iii) Mono code

**5.** (a) What is process planning ? What are the various steps in developing a process plan ? Explain with the help of a flow chart. 7

(b) What is the basic principle of production control for a CIM system ? 7

**6.** (a) Explain MRP in brief. 7

(b) What do you understand by extended enterprise and what role has internet played in it ? 7

**7.** (a) What is the difference between deterministic and stochastic simulation models ? *7*

(b) Describe Genetic techniques method in brief. *7*

**8.** (a) Discuss the following : *9*

    (i) MAP

    (ii) TOP

    (iii) TCP/IP

(b) What are the different components of a sensing system ? *5*

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