

00932

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

**Term-End Examination**

**December, 2011**

**BME-005 : COMPUTER INTEGRATED  
MANUFACTURING**

*Time : 3 hours*

*Maximum Marks : 70*

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

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1. (a) Define CIM. What are the potential benefits of CIM ? **7+7**  
(b) What are the different types of CAM application ? Discuss each type in detail.
  
2. (a) What do you mean by automated Inspection ? Differentiate between on-line/ In process and on-line/ post-process inspection methods. **7+7**  
(b) Describe the advantages of using CMMs over Conventional Inspection Methods.

3. (a) What is an automated guided vehicle system ? Discuss the pallet trucks and towing vehicle with their applications. 7+7
- (b) Describe the various physical components of a typical industrial robot.
4. (a) What is the purpose of feedback system in a CNC system ? Discuss the types of feedback systems used in CNC machine. 7+7
- (b) What are the types of CNC machines ? Enlist the various advantages and limitations of CNC machines. Also list any three applications of CNC machine.
5. (a) What are the main objectives for machine loading ? Define system imbalance and throughput. 7+7
- (b) discuss the need for flexibility in manufacturing in present manufacturing scenario.
6. (a) Define Group Technology. What are the advantages and disadvantages of monocode and polycode ? 7+7
- (b) What is process planning ? What are the various steps in developing a process plan ?

7. (a) Define MRP. How will you implement MRP 7+7  
in an Industry ?
- (b) What is meant by the term enterprise  
integration ? What are the advantages of  
enterprise integration ?
8. (a) Define data base management system. 7+7  
Describe the features of CIM database  
management system.
- (b) What are the recent trends in  
manufacturing ? Describe them in detail.
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