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

Term-End Examination

December, 2012

**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) What do you understand about Computer Aided Manufacturing (CAM) ? What are the different applications of CAM ? Explain any one of them. 7+7
- (b) What is automated guided vehicle (AGV) ? What are the different types of AGV's ? Explain any one of them.

2. (a) Describe the following types of AGVs control methods : 7+7
 - (i) Computer controlled system.
 - (ii) Remote dispatch control system.

- (b) Describe the following CNC operations.
- (i) NC part programming
 - (ii) NC Machine operations
3. (a) Differentiate between CNC and DNC. What are the types of CNC machines ? Also explain the advantages and disadvantages of CNC machines. 7+7
- (b) What do you understand by flexibility in manufacturing systems ? Describe any two types of flexibilities in manufacturing system.
4. Write short notes on the following : 3½x4=14
- (a) Manual experience based process plan.
 - (b) Computer aided process plan.
 - (c) Master production schedule (MPS)
 - (d) Bill of materials (BOM)
5. (a) What is meant by the term enterprise integration ? What are the recent developments in the enterprise integration and its characteristics ? 7+7
- (b) Define simulation. What are the steps involved in construction of simulation model ?

6. (a) What is sensor ? What are the two types of sensors and how they differ from each other ? 7+7
- (b) What are vision systems ? Explain the main functions of a vision system. Also give some examples of vision system.
7. (a) Describe features of manufacturing database management system. 7+7
- (b) Describe the role of information system in automated factory.
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