Total No. of Questions : 8] [Total No. of Printed Pages : 2

Roll No. .....

ME–803

B. E. (Eighth Semester) EXAMINATION, June, 2010

(Mechanical Engg. Branch)

COMPUTER INTEGRATED MANUFACTURING

(ME–803)

Time : Three Hours

Maximum Marks : 100

Minimum Pass Marks : 35

Note : Attempt any *five* questions. All questions carry equal marks.

1. (a) Define CIM. Describe the basic elements of CIM system. 10
   (b) Discuss CIM hardware and software. State the advantages and limitations of CIM. 10
2. (a) Define Automation. Why is it useful in the economy of a production ? State various advantages and limitations of automation. 10
   (b) Compare fixed, programmable and flexible automation. 10
3. (a) Discuss linear and non-linear systems. State their properties. 10
   (b) State design consideration for CNC tooling. Classify the CNC system. 10

4. (a) Define Robot. Briefly explain the basic elements of a robot. Also explain various robot controls. 10
   (b) What is AGV ? Discuss its various types and applications. 10
5. (a) Discuss about cellular manufacturing. State its need, objectives, advantages and limitations. 10
   (b) Discuss various methods of grouping parts into part families. 10
6. (a) What do you understand by Expert Systems ? State its need. Also, briefly explain its basis of classification. 10
   (b) Define Neural Network System. State various applications and properties of it. 10
7. (a) Define production flow analysis. Write its steps, advantages and limitations. 10
   (b) State the need for CAD/CAM. State its objectives, modes of communication and advantages. 10
8. Write short notes on any *four* of the following : 20
   (i) CNC Applications
   (ii) Robot configurations
   (iii) Laplace Transformation
   (iv) Artificial Intelligence
   (v) ASRS