Code No: D3310

**R09**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**
**M.Tech II - Semester Examinations, March/April 2011**
**INTELLIGENT MANUFACTURING SYSTEMS**
**(ADVANCED MANUFACTRING SYSTEMS)**

Time: 3hours                                                                 Max. Marks: 60

**Answer any five questions**
**All questions carry equal marks**

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1. a)   What are the various components of CIM& mention its advantages & limitations?
   b)   Describe the importance of CAD, CAPP & CAM and their effects on quality and quantity
        of production.                                                                    [12]

2. a)   What is the need of manufacturing automation protocol and technical office protocol in
        implementing the networks.
   b)   Differentiate between conventional and intelligent manufacturing systems.          [12]

3. a)   What are the advantages of knowledge based systems and mention its applications in
        CIM.?
   b)   What are the various knowledge acquisition systems are used in practice and mention its
        draw backs?                                                                        [12]

4. a)   How the artificial neural networks are used in the automated manufacturing?

   b)   What are the various methods of CAPP and explain the retrieval type computer aided
        process planning systems?                                                         [12]

5. a)   Differentiate between retrieval type and generative type computer aided process planning
        systems and mention their advantages.
   b)   Describe the knowledge based system an equipment selection (KBSEB) and mention the
        structure and problem solving.                                                    [12]

6. a)   How the features of the component be recognized and sequence of operations  for process
        planning be done?
   b)   What is the importance of group technology and mention the algorithms for cluster
        analysis method.                                                                  [12]

7. a)   Differentiate between cluster identification method and knowledge based group
        technology.
   b)   Describe the structure of knowledge base system for group technology.             [12]

8.      Answer the following:
        a) Computer aided quality control.
        b) System architecture & data flow.
        c) Artificial intelligence in CIM.                                                [12]

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