Registration no: | | | | | | | | | | |

Total Number of Pages: 01 **M.TECH**

CMPC203

2nd Sem M.Tech Regular/ Back Examination – 2014-15

SUBJECT NAME: COMPUTER INTEGRATED MANUFACTURING

BRANCH(S): CAD / CAM

Time: 3 Hours **Max marks: 70**

Q.CODE:T281

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

Q1 Answer the following questions: (2 x 10)

a) Define Automation. Explains different types of Automation.
b) Give any two benefits of computer aided process planning.
c) What are the benefits of FMS? Explain.
d) What is a communication network? List its types.
e) Describe the features of CAD?
f) What are the main elements of a CIM system?
g) What is the difference between product layout and process layout?
h) What are the methods available for solving problems in GT?
i) What do you mean by DNC based factory management and control?
j) Explain about the Network architectures and techniques.

Q2 a) What is the need for production planning? What are the advantages? (5)
b) What are the different types of computer aided process planning techniques? Discuss their merits and demerits. What are their application areas? (5)

Q3 a) Discuss the need and importance of automated data collection systems. What are the advantages? (5)
b) Sketch a layout of a typical FMS and explain the importance of FMS. (5)

Q4 Using a detailed description of the product cycle, consider where computational aids might be of assistance to the designer. What features of computers are likely to contribute to their usefulness, and what features may limit their application. Compare the conventional product cycle and computer aided product cycle. (10)

Q5 a) What is Barcode system? Explain briefly. (5)
b) Explain management information system. How it is helpful in CIM? (5)

Q6 a) How parts are classified and coded in Group Technology? Illustrates the same for a product. Explain briefly. (5)
b) What is an Industrial Robot? How the Robot is integrated in CIM system? (5)

Q7 a) Draw the CIM wheel and explain its different segments in relation to CIM scope? (5)
b) How the CIM is differs from CAM? List some CIM hardware and CIM software? (5)

Q8 Answer any two. (5 x 2)

a) Concurrent Engineering.
b) SQC and SPC
c) Part family formation.
d) Network standards.