CAD/CAM
(ME-404, MAY 2007)

Time: 3 Hrs
Max Marks: 60

Note: Section A is compulsory. Attempt any four questions from Section B and any two from Section C.

Section-A

1. a) Define CAD/CAM.
   b) What do you understand by computer hardware?
   c) What is CPU?
   d) What is a digitizer?
   e) Name any two cursor control devices.
   f) Explain the concept of hidden-line removal in CAD.
   g) What is concatenation of transformation matrices?
   h) What is CNC?
   i) Define adaptive control.
   j) Name different types of CAPP system.

Section-B

2. Name various output devices used in CAD system. Explain any two of these output devices.
3. Differentiate between wire frame modeling and solid modeling technique.
4. What is FMS? Explain different components of a FMS system.
5. Briefly describe numerical control of machine tools.
6. Discuss the application of CAD technique to finite element-mesh generation.

Section-C

7. Describe application of computers in design process of any machine element. How CAD data base helps in manufacturing?
8. a) The vertices of a triangle are A(3, -1, 2), B(1, -2, 1) and C(2, 3, 0). Find the reflection of line DE through the plane ABC, where D = [4, 2, 1] and E is the midpoint of the line joining D and the centroid 'G' of the triangle.
   b) Explain 2-D scaling and rotation with examples.
9. a) Explain NC manual part programming.
   b) What is GT concept in manufacturing? Explain GT coding system with example.