

IV B.Tech I Semester Supplementary Examinations, November 2005
CAD-CAM
(Common to Mechanical Engineering, Mechatronics and Production Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) What are the reasons for implementing a computer aided design system.
(b) With the help of a block diagram, explain the computer aided design process. [8+8]
2. What is meant by a geometric entity? Explain the common entities used in geometric modeling. [16]
3. Discuss the modeling guidelines to be followed by the user while constructing a surface model as a CAD/CAM system. [16]
4. Why the sweep representation are useful in creating solid models of $2\frac{1}{2}$ D objects? Explain. [16]
5. (a) Distinguish between Numerical Control and Computer Numerical Control.
(b) The figure shown below represents a part outline and is to be milled in two passes using the same milling tool. The tool is a 25mm diameter end mill. Write the part program using APT language. Assume the necessary data. {As shown in the Figure 1} [6+10]

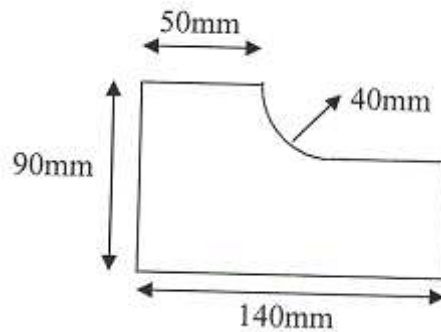


Figure 1:

6. What are the objectives of cell formation decisions? Describe how cell formation problems are analyzed? What is a composite part? What is done with composite parts? [16]
7. (a) Discuss briefly the steps needed to analyze a material handling problem.

- (b) How the following factors effect the choice of material handling equipment. [8+8]
- i. Required path of travel
 - ii. Nature of materials.
8. (a) What are the three fundamental concepts in MRP? Explain them.
- (b) Outline the objectives of computer-aided quality control. [9+7]

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