

Roll Number: _____

Thapar University, Patiala
Department Of Mechanical Engineering

MBA (Bridge) (1st year, 2nd sem)

ME018: Computer Aided Manufacturing

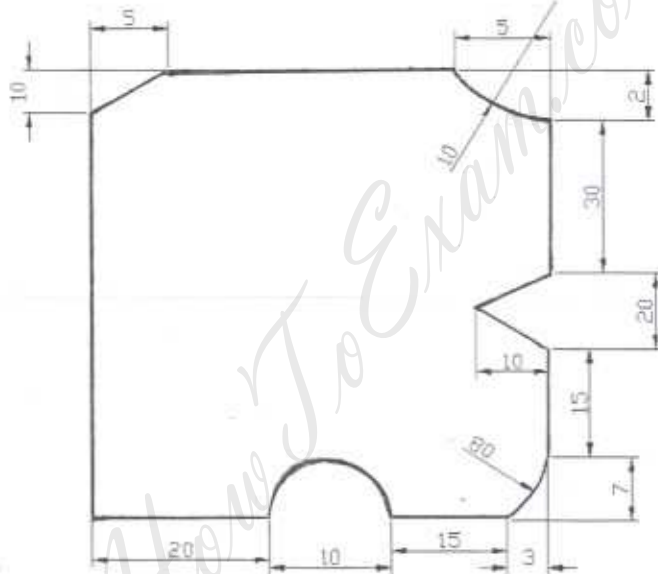
MST, March 2009

Time: 02 Hours; MM: 60

Name of Faculty: J. S. Saini

Note: Attempt all Questions.
Assume any missing data.

1. Write a program on the milling machine in word address format for the profile given below. The work piece is of material with hardness 200 which is cut with carbide tool with permissible speed as 120 m/min and feed of 0.15 mm/rev. Calculate the proper feed and speed for the profile. The profile is made with 5 mm diameter tool with 4 numbers of teeth. Thickness of the part is 10 mm. (Profile is shown in dark lines) (Assume any missing data for the program) (15)



- 2 (a) Define a CNC machine. What are the different types of CNC controllers? (5)
(b) What are the different components of a DNC machine? What are the advantages of a combined CNC/DNC machine? (7)
- 3 (a) Define a robot. What are the different physical configurations of a robot? (6)
(b) What do end effectors mean? What are its different categories? (5)
- 4 (a) What are the different factors on which the selection of the coding scheme depends in Group Technology? (3)
(b) Explain the different schemes used for part coding in Group Technology? (8)
- 5 (a) What are the different sources of variations for which Adaptive control system is used. (3)
(b) Explain the working of adaptive control on any one of the machining process. (5)
(c) Compare (only compare) the hydraulic, DC motor and stepper motor type of drives. (3)