Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER- II(New course) • EXAMINATION (Remedial) - WINTER- 2015

Subject Code: 2720802 Subject Name: COMPUTER AIDED MANUFACTURING Time: 2:30 pm to 5:00 pm Instructions: Date: 08/12/ Total Marks		2015	
		70	
	1. 2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a)	What is the meaning of numerical control? Explain the advantages of CNC over NC machine.	07
	(b)	How are the axes designated in CNC machine tools? Explain the axes designation of vertical machining center.	07
Q.2	(a)	Explain composite features and feature texonomies.	07
	(b)	Explain about automatic tool changer with neat sketch.	07
		OR	
	(b)	Write the manual part program for the component only shown in Figure 1. Assume that the raw material is cylinder blank of 60 mm X 110 mm.	07
Q.3	(a)	Explain the working of incremental optical encoders with neat sketch.	07
	(b)	The Figure 2 shows the dimension of finished component to be machined from steel bar of 130 mm X 75 mm. Write the part program to machine the part using G72 cycle.	07
		OR	
Q.3	(a)	Explain about laser interferometer.	07
	(b)	Explain the cutter radius compensation to the left and right with suitable illustration.	07
Q.4	(a)	Explain DO loop and MACRO with suitable illustration.	07
	(b)	Write the program for drilling operation using subprogram for the component with tool path as shown in Figure 3 having plate thickness as 10 mm. Assume suitable speed and feed rate.	07
0.4	()	OR	0.5
Q.4	(a)	Explain the different statements used to write part program using APT.	07
	(b)	Write the APT program for the component shown in Figure 4.	07
Q.5	(a)	Explain the code G83 (deep hole peck drilling cycle) with suitable example.	07
	(b)	Write a short note on automatic feature recognition. OR	07
0.5	(a)	Evoluin about the design by feature	07

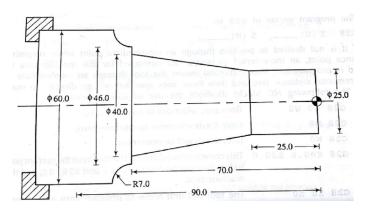


Figure 1

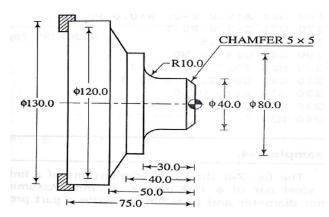
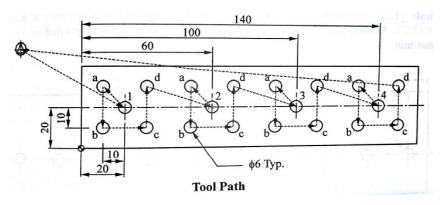


Figure 2



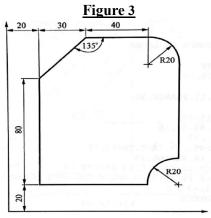


Figure 4