Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

B. E. - SEMESTER - VII • EXAMINATION - WINTER 2012

_		de: 172501 Date: 26/12/2012	
•	: 10.3	ame: Computer Aided Manufacturing 80 am - 01.00 pm Total Marks: 70	
111501	1. A 2. M	ttempt any five questions. Iake suitable assumptions wherever necessary. igures to the right indicate full marks.	
Q.1	(a) (b)	What is NC machine? Differentiate between NC and CNC machine. Describe NC paper tape and explain various tape formats. What is parity check?	07 07
Q.2	(a)	Give classification of NC machines and explain with neat sketch close loop control system.	07
	(b)		07
		OR	
	(b)		07
Q.3	(a)	Write a CNC part program on two axis turning center for the geometry as shown in figure 1.	07
	(b)	What do you understand by canned cycle? Explain at least three canned cycles.	07
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Q.3	(a)	What is adaptive control? Explain the important constrains taken for ACC system.	07
	(b)	Enlist the various methods of Rapid-prototyping and explain about Stereo Lithography technique.	07
Q.4	(a)	Write a CNC part program for milling contour as shown in figure 2. Clearly state the type of cutting tool. Also specify the reference point, programming mode and show the calculations for cutting parameters.	07
	(b)		07
Q.4	(a)	Explain the computer integrated manufacturing (CIM) in detail. Explain the different elements of CIM.	07
	(b)		07
Q.5	(a)	Explain different types of automated guided vehicles. How traffic is controlled in AGV? Explain the safety features in AGV systems.	07
	(b)	•	07
Q.5	(a)		07
	(b)	Give advantages, limitations and application of FMS.	07

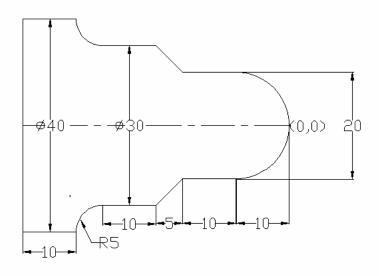
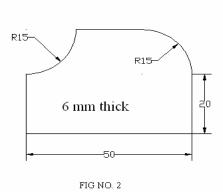


FIG NO.1

(All dimensions are in mm)

Work piece material: Low carbon steel, Round bar of 40 mm diameter and lenth 70 mm.



(All dimensions are in mm)

(Assume suitable data)