GUJARAT TECHNOLOGICAL UNIVERSITY

		ME – SEMESTER II (NEW) – • EXAMINATION – SUMMER 2016	
Subject Code: 2720802 Date: 24/05/201			16
Su	bject	Name: COMPUTER AIDED MANUFACTURING	
Time:10:30 am to 01:00 pm Total Marks: 7			70
Inst	tructio	ons:	
	1.	Attempt all questions. Make suitable assumptions wherever necessary	
	2. 3.	Figures to the right indicate full marks.	
Q.1	(a)	What is the meaning of canned cycle? Explain counter boring and peck drilling canned cycle with neat sketch.	07
	(b)	Discuss feature based process planning and assembly planning.	07
Q.2	(a)	Explain axes designation in CNC machine tool. Draw the neat sketch of four axes horizontal boring machine and specify all axes on it.	07
	(b)	What is the meaning of APT? Explain geometry and motion statements with suitable example.	07
		OR	
	(b)	Explain the composite features.	07
03	(a)	Explain recirculating ball screw used in CNC machine	07
~	(u) (h)		07
	(0)	part program to machine the part using G73 cycle.	07
		OR	
Q.3	(a)	Explain the difference between NC and CNC machines.	07
	(b)	Describe the principle of working of an automatic pallet changer (APC).	07
Q.4	(a)	Discuss incremental and absolute optical encoders.	07
	(b)	Discuss rectangular turning cycle (G90) and thread cutting cycle (G92) with	07
		OR	
Q.4	(a)	Explain various programming formats used in part programming.	07
	(b)	Explain mirroring and subroutine with suitable example.	07
Q.5	(a)	Discuss automatic feature recognition.	07
	(b)	Explain about the evolution of NC/CNC controllers.	07
		OR	
Q.5	(a)	Explain tolerance specification.	07
	(b)	Write APT program to machine the bracket shown in fig. 2. Assume the component to be 10 mm thick. The post processor statement is MACHIN/MMPOST, 3. Use appropriate values for cutting parameters and cutter size.	07



Fig. 1


