BTS(C) – VI – 08 – 008 H

B.Tech. Degree VI Semester Examination, April 2008

ME 603 CAD/CAM I

(1999 Scheme)

Time: 3 Hours Maximum Marks: 100

I	a)	Explain the various processes involved in computer aided design.	(10)
	b)	What are the merits and demerits of CAD? Explain.	(10)
		OR	
II	a)	Differentiate between solid modeling and wire frame modeling with the help of suitable sketches.	(10)
	b)	Explain how data is exchanged between CAD and CAM.	(10)
III	a)	Explain the automation achievements for four types of production processes.	(10)
	b)	Explain different types of automation relative to production quantity and product variety.	(10)
		OR	
IV	a)	What do you understand by FMS? Where is it used?	(10)
	b)	What are assembly machines? What are its uses?	(10)
V	a)	Classify robots based on its configuration. What is meant by work volume of a robot?	(10)
	b)	How do expert systems evolve out of Artificially Intelligent systems?	(10)
		OR	
VI	a)	With block diagrams explain open loop and closed loop numerical control systems.	(10)
	b)	What are the advantages and disadvantages of numerical control systems?	(10)
VII	a)	Explain the process of work piece modeling giving a suitable example.	(10)
	b)	Give the difference between manual part programming and computer aided part Programming.	(10)
		OR	
VIII	a)	What are canned cycles? Explain its utility.	(10)
	b)	List the various G and M codes used in CNC programming with their functions.	(10)
IX		How can you convert production lathe into a numerically controlled one? What are the factors to be considered in the above process?	(20)
		OR	
X		Write ***short notes*** on :	
		i) Automatic tool changer	
		ii) Automatic pallet changer	
		iii) Static and dynamic errors	
		iv) Testing of NC machine tools	(4 x 5 = 20)