Seat No.:	Enrolment No

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (OLD) - EXAMINATION - SUMMER 2017

Sı	ıbjec	et Code: 163403 Date: 27/04/20	Date: 27/04/2017	
Ti	ime: struct	t Name: Advanced Manufacturing Processes 10:30 AM to 01:00 PM ions: 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks.	70	
Q.1	(a) (b)	Explain the classification of advanced manufacturing processes. How the developments in the Mfg. area partly responsible for evolution of advanced Machining techniques?	07 07	
Q.2	(a)(b)	Explain in which areas, the unconventional manufacturing methods are superior than conventional Manufacturing methods. Also state the demerits. Compare EDM and ECM Process with respect to its tools, process, merits, demerits and applications.	07 07	
	(b)	OR What is the principle of laser beam machining? Explain the process in detail?	07	
Q.3	(a)	How is wire cut EDM different from EDM process? Explain the wire cut EDM process in detail along with a neat sketch?	07	
	(b)	Describe the WJM Process with neat sketch and its process parameters. Compare WJM with AJM and state the applications of WJM process. OR	07	
Q.3	(a) (b)	What is the role of a dielectric fluid in EDM? What are the different fluids used as dielectric? What fluid properties are desired in EDM process? What is the difference between chemical and electro chemical machining? What	07 07	
Q.4	(a) (b)	is the role of an etchant in chemical machining? What is a maskant? Explain the working principle of EBM process with neat sketch, process parameters, merits-demerits and its applications. Explain plasma arc machining? What are its advantages & disadvantages?	07 07	
Q.4	(a) (b)	Write and explain five important process parameters of USM, with neat sketch show the effects of two of these two variables on MRR. Explain PAM process with its parameters, features, merits-demerits and applications.	07 07	
Q.5	(a)	Write the steps involved in CNC programing? What is computer aided part programing? What do you mean by canned cycles?	07	
	(b)	Explain the machining center construction with neat sketch. OR	07	
Q.5	(a) (b)		07 07	
