Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER - VI (NEW). EXAMINATION - WINTER 2016

	•	ect Code: 2161909 Date: 25/10/2016 ect Name: Production Technology	
		: 10:30 AM to 01:00 PM Total Marks: 70 ctions:	
		 Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. 	
Q.1	(a)	Explain basic principle of EDM with neat sketch. And also discuss desired characteristics required for EDM tool.	07
	(b)	Explain 3-2-1 location principle with neat sketch.	07
Q.2	(a)	Draw the Merchant's circle diagram and derive relation among various forces acting on cutting tool.	07
	(b)	Explain the various methods of reducing cutting force requirement in press work.	07
	(b)	OR List the various gear finishing processes and explain any three processes.	07
Q.3	(a)	List the various thread manufacturing processes. Explain about thread rolling process.	07
	(b)	Distinguish between jigs and fixtures. List the design steps for jigs and fixtures.	07
0.2	(2)	OR	0.
Q.3	(a)	Explain abrasive jet machining process and discuss various process parameters of AJM.	07
	(b)	List the desired properties required for good cutting tool material and explain any two cutting tool materials.	07
Q.4	(a)	Explain the essential characteristics and function of cutting fluid.	07
	(b)	What is the meaning of tool life? Briefly explain about various factors affecting on it.	07
Q.4	(a)	OR Describe gear hobbing process in detail.	07
۳.۷	(b)	Explain about channel jig and box jig with neat sketch.	07
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Q.5	(a)	Explain blanking and lancing operation with sketch.	07
	(b)	Briefly explain about regions of heat generation and also explain about various factors affecting cutting temperature.	07
		OR	
Q.5	(a)	Classify the die associated with press work and explain about compound die and progressive die.	07
	(b)	Classify the unconventional machining process and explain about electron beam machining process with neat sketch.	07
