Seat No.:	Enrolment No.

Subject Code: 2131903

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-III • EXAMINATION - WINTER • 2014

Date: 18-12-2014

Ti	-	Name: Manufacturing Processes - I 2.30 pm - 05.00 pm Total Marks: 70	
		Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a)	Give the Classification of Machining Processes and Also discuss the major	07
	(b)	factors influence the selection of a suitable machining process. Explain size of Lathe. Also describe various types of Lathes along with their applications and general specifications.	07
Q.2	(a)	Describe Turning operation in Lathe Machine. Also discuss Shoulder Turning and Eccentric Turning with neat sketch.	07
	(b)	What is Tool Signature and Tool Geometry? Explain importance of tool angles for single point cutting tool in brief.	07
		OR	
	(b)	Write a short note on "Turret Lathe".	07
Q.3	(a)	Enlist various operations carried out on drilling machine. Also explain Tapping, Trepanning and Countersinking.	07
	(b)	Discuss briefly, with a neat sketch, horizontal boring machine. OR	07
Q.3	(a)	Explain Radial drilling machine with neat sketch.	07
	(b)	Give the comparison between boring and reaming. Also describe Precision boring machine with neat sketch.	07
Q.4	(a)	What is Indexing? Enlist and Discuss various types of Indexing.	07
	(b)	Explain Hydraulic shaper mechanism in details and also discuss the quick return motion of Hydraulic shaper.	07
		OR	
Q.4	(a)	 Enlist various Milling Operations. Discuss the following operations. Straddle Milling Gear Milling 	07
	(b)	3. Face Milling Give the differences among shaper, planner and slotter. Discuss Briefly the planner driving mechanism.	07
Q.5	(a)	What are the advantages, limitations and applications of broaching? Explain "Pull broaching" and "Push Broaching".	07
	(b)	What is an Abrasive? How are abrasive Classified? Enlist and explain various abrasives used in grinding wheels.	07
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Q.5	(a)	Write a short note on: "Band Sawing Machine"	07
	(b)	With neat sketch explain Center less Grinding Machine.	07

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