Seat No.:	Enrolment No.

Subject Code:131903

## GUJARAT TECHNOLOGICAL UNIVERSITY

BE – SEMESTER III– • EXAMINATION – SUMMER • 2014

Date: 23-05-2014

Su	bject	t Name: Manufacturing Process - I	
Tiı	me: (	02:30 to 05:00 Total Marks:	<b>70</b>
Inst	2.	ons: Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)	Explain the construction and operation of Upright drilling machine. Explain the differences between the following:  (i) Up milling and Down milling (ii) Steady rest and follower rest.	07 07
Q.2	(a) (b)	Explain tumbler gear mechanism used in a lathe with neat sketch.  Explain with neat sketch the quick return mechanism of a shaper.  OR	07 07
	<b>(b)</b>	Explain the different milling operations.	07
Q.3	(a) (b)	List the various lathe operations and explain any four lathe operations.  What are the lathe accessories and attachments? List the various lathe accessories and attachments and explain the use of Mandrels on lathe.  OR	07 07
Q.3	(a) (b)	Distinguish simple indexing and compound indexing of a milling machine. Explain various drilling operations with neat sketch.	07 07
Q.4	(a) (b)	Describe the coding of grinding wheel as per ISI.  List the various types of grinding machines and explain any one grinding machine.	07 07
Q.4	(a) (b)	OR Differentiate between Capstan and Turret lathe. Explain Broaching. Write advantages, limitations and applications of broaching.	07 07
Q.5	(a) (b)	Explain Jig-Boring machine. List the types of metal cutting saws. Describe the working of reciprocating and circular sawing machines.	07 07
Q.5	(a)	OR  Describe the alignment tests to check geometric accuracy of a lathe. Name instruments and equipments needed for these tests.	07
	<b>(b)</b>	With the help of neat sketch explain Column & Knee type milling machine.	07

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