Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER- III EXAMINATION - SUMMER 2015

Subject Code: 131903		Code: 131903 Date:27/05/201	Date:27/05/2015	
Tir	•	Name: Manufacturing Process-I 2.30pm-05.00pm Total Marks: 'ns:	70	
	1. 2. 3.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.		
Q.1	(a) (b)	Explain hydraulic quick return mechanism in a shaper with a neat sketch. Explain various work holding devices of lathe machine.	07 07	
Q.2	(a) (b)	What are the main difference between a turret lathe and a capstan lathe? Classify machine tools in detail. Explain types of motions in machine tools with examples.	07 07	
	(b)	OR Enumerate operations carried out on lathe. Explain 'setting of tailstock centre for taper turning' operation and 'thread cutting' operation both with neat sketch.	07	
Q.3	(a)	Write classification of milling machine. Explain principal parts of column & knee	07	
	(b)	type horizontal milling machine with neat sketch Enumerate various operations carried out on drilling machine. Explain any four with neat sketch.	07	
		OR	. –	
Q.3	(a)	List various types of drilling machine and explain with a neat sketch gang drilling machine.	07	
	(b)	Draw a neat sketch with label of following operation and indicate direction of cutting parameters on it. i) Plain or slab milling ii) Face milling iii) Angular milling iv) Form milling v)Straddle milling vi) Gang milling vii) End milling .	07	
Q.4	(a)	Can slotter be called as vertical shaper? Justify your answer. With neat sketch	07	
	(b)	explain operations performed on slotter. Classify boring machine. Explain horizontal boring machine & jig boring machine with neat sketch.	07	
0.4	()	OR	0.5	
Q.4	(a) (b)	List various types of planers. Compare in detail Shaper and planer. Define Sawing. Write advantages, limitation & applications.	07 07	
Q.5	(a) (b)	Describe the coding of grinding wheel as per IS. Explain briefly. Define broaching. Write advantages, limitation & applications. OR	07 07	
Q.5	(a)	(i)Name & draw neat sketch of various grinding wheel, with its application.(ii) Explain the terms a) Glazing b) Loading c) Dressing d) Truing.	03 04	
	(b)	Name the various alignment tests which are conducted on lathe. Explain with the help of neat sketch following alignment test on lathe i) levelling of the machine ii) parallelism of spindle axis and bed.	07	
