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GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V • EXAMINATION – SUMMER 2013

Subject Code: 152502 Date: 16-05			01.
Гітє		Vame: Tool Design .30 am - 01.00 pm Total Marks	: 70
nsti u	1. 2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)	Describe merchant circle diagram in detail with a sketch. Differentiate Orthogonal and Oblique cutting with sketch.	07 07
Q.2	(a)	Explain Taylor Tool Life equation. Which factors affect it? How it can be improved?	07
	(b)	Describe types of tool wear with suitable example. OR	07
	(b)	Describe sources of heat generation, its causes, its effect and its remedies.	07
Q.3	(a)	Describe importance of cutting fluids. Suggest various types of cutting fluids with its specific application.	07
	(b)	Describe tool geometry of a single point cutting tool. OR	07
Q.3	(a) (b)	Design and draw a broach tool. Design and draw a drill.	07 07
Q.4	(a) (b)	Describe various cutting tool materials. Describe various types of fits with applications. OR	07 07
Q.4	(a) (b)	Describe limit systems of hole base and shaft base. Classify various types of jigs.	07 07
Q.5	(a) (b)	Classify various types of clamping devices and locating devices. Compare simple, compound and progressive dies.	07 07
Q.5	(a) (b)	How gauges are designed? Explain any one gauge design. How a forging die is designed? Explain with example.	07 07
