Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII • EXAMINATION - SUMMER 2014

Subject Code: 182101 Subject Name: Metal Working Processes Time: 10:30 am TO 01:00 pm Instructions:			Date: 05-06-2014 Total Marks: 70	
		0:30 am TO 01:00 pm Total Marks:		
	2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.		
Q.1	(a)	In terms of rolling define angle of bite, neutral point and discuss different types of rolling mill with neat sketch.	07	
	(b)	With reference to temperature classify metal working process and differentiate between them.	07	
Q.2	(a)	What do you mean by forging? Explain different types of forging processes with neat sketch.	07	
	(b)	Write detailed note on rolling variables. OR	07	
	(b)	Discuss the process of annealing of cold worked metal.	07	
Q.3	(a)	List the defects occurring in rolled products and discuss their causes and remedies.	07	
	(b)	For rolling derive equation to determine length of arc of contact and relation between angle of bite and frictional coefficient.	07	
0.2	()	OR	05	
Q.3	(a) (b)	Write short note on residual stresses. Discuss workability in detail.	07 07	
Q.4	(a) (b)	With neat sketch explain different forging operations. Discuss causes and remedies of forging defects. OR	07 07	
Q.4	(a) (b)	Discuss the importance of flash in forging and lubrication in extrusion. With neat sketch compare different types of extrusion processes and discuss extrusion defects.	07 07	
Q.5	(a) (b)	Discuss variables and defects in wire drawing. Write in short on different sheet metal working processes. OR	07 07	
Q.5	(a) (b)	Discuss plain strain forging analysis. Draw stress strain curve for brittle and ductile materials and classify metal working processes.	07 07	
