Seat No.:	Enrolment No.
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## **GUJARAT TECHNOLOGICAL UNIVERSITY**

BE - SEMESTER-VI • EXAMINATION – SUMMER • 2014

Subject Name: Metal Forming Processes			
		0:30 am - 01:00 pm Total Marks: 70	
Inst	1. 2.	Attempt all questions.  Make suitable assumptions wherever necessary.  Figures to the right indicate full marks.	
Q.1	(a) (b)	Explain plastic deformation of metal by slip and twinning.  Explain the effects of temperature, strain rate, micro-structure and friction in metal forming.	07 07
Q.2	<ul><li>(a)</li><li>(b)</li></ul>	Explain Hot working and Cold working of metal with its advantages and limitations.  Explain stress – strain relations in elastic and plastic deformation.	07 07
	<b>(b)</b>	OR Explain creep. How the creep resistance can be improved?	07
Q.3	(a) (b)	Explain types of fractures. List the types of rolling mills. Explain any two with figure.  OR	07 07
Q.3	(a) (b)	Explain defects in Rolled Products. Explain Open and Close Die forging processes.	07 07
Q.4	(a) (b)	Explain Cold Heading and Rotary Swaging. Explain production of seamless pipe by extrusion process.  OR	07 07
Q.4	(a) (b)	Explain backward extrusion with simple sketch.  Explain hydrostatic extrusion with simple sketch.	07 07
Q.5	(a) (b)	Explain Wire drawing and Deep drawing processes.  Explain V-bending and Edge bending with simple sketch.  OR	07 07
Q.5	(a) (b)	Explain Stretch forming and Roll bending process with simple sketch.  List different High Energy Rate Forming processes and explain any one in detail	07 07

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