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Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-III • EXAMINATION - WINTER • 2014

•	ubject Code: 132101 Date: 01-0		
-	e: 02	Name: Elements of Metallurgy and Material Science 3.30 pm - 05.00 pm Total Ma	arks: 70
ilisti u	1. 2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)		07 07
Q.2	(a)		07
	(b)	applications Discuss structure, properties relationship in metals, ceramics, and polymers also indicate the type of bonding in these materials. OR	07
	(b)	<u> </u>	07
Q.3	(a)	Explain the effects of grain size, heat treatment and alloying elements on properties of single phase material	07
	(b)	· ·	07
		OR	
Q.3	(a)	What do you mean by deformation? Differentiate in Elastic and Plastic Deformation	07
	(b)	What do you mean by Non-destructive testing? Explain any one NDT test method	07
Q.4	(a)	What are the different types of metallic materials? What is the difference between an alloy and a composite material?	07
	(b)	•	07
Q.4	(a)		07
~··	(b)	* * *	07
Q.5	(a)	Explain any one casting method with sketch	07
	(b)	ceramic and Modern ceramic materials	07
Q.5	(a)	OR What are polymers? Discuss the Polymerization mechanisms	07
V.	(a) (b)	* *	07
