Seat No.:	Enrolment No.
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GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V • EXAMINATION - WINTER • 2014

Sul	bject	Code: 150301 Date: 01-12-2014	
Subject Name: Biomaterials and Implants Time: 10.30 am - 01.00 pm Instructions: Total Marks: 70			
HIS		Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)	Explain various tissue adhesives with their material composition. Write a short note on Bioresorbable & Biologically Derived Materials.	07 07
Q.2	(a) (b)	Define polymerization. Explain process of polymerization. Explain role of polymer in dental applications. OR	07 07
	(b)	Explain role of polymers in Drug delivery system.	07
Q.3	(a) (b)	Write a short note on Ti and Ti-based alloy as a biomaterial. Explain bioactive glass with their temperature time cycle. OR	07 07
Q.3	(a) (b)	Give brief idea about Biocompatibility testing of Biomaterials. Explain Various Materials used in component of total hip replacement.	07 07
Q.4	(a) (b)	Explain Interaction of Metallic Biomaterials with the Human Body Environment. Give compositions and mechanical properties of 316L Stainless Steel. OR	07
Q.4	(a) (b)	Write a short note on biodegradable polymeric biomaterials. Write a short note on Biomaterial Surface Properties.	
Q.5	(a) (b)	Explain chemical process Corrosion of Metallic Implants. Explain structure and functioning of any two mechanical heart valve with necessary schematic.	07 07
Q.5	(a)	OR Write a short note on Relatively Bioinert Bioceramics.	07
Q.	(a) (b)	Role of Biomaterials in Ophthalmic field of biomedical.	07
