GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER_VIII EXAMINATION – SUMMER 2016

BE - SEMESTER-VIII EXAMINATION – SUMMER 2016 Subject Code:180302 Date:18/05/2016				
Subject Code: 180502 Date: 18/05/2010 Subject Name: Advance Medical Techniques				
Time:10:30 AM to 01:00 PM Total Marl			ks: 70	
 Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. 				
Q.1	(a) (b)	Write a brief note on Biochemical fiber optic sensor. Explain the different experimental methods of measuring tissue optical properties.	07 07	
Q.2	(a) (b)	What are the various thermal effect of laser on tissues? What are their clinical Significances? What are the different thermal and non-thermal applications of lasers in	07 07	
	(0)	ophthalmology? OR	07	
	(b)	Explain how laser is used in urology and otolaryngology and dermatology	07	
Q.3	(a) (b)	Explain the mechanism of photodynamic therapy and its applications Describe with an application EEG bio feedback instrumentation. OR	07 07	
Q.3	(a) (b)	What is endoscopy? Explain the construction of endoscope with its schematic. Write a brief note on Aneurysm Treatment	07 07	
Q.4	(a) (b)	Explain the difference between direct and indirect fibre optic biomedical sensors. Explain the process of fabrication of optical fibres.	07 07	
	(U)	OR	07	
Q.4	(a) (b)	Describe the common problem encountered in use of laser fibre optics systems. Explain back projection method and filtered back projection method of CT scanning in detail.	07 07	
Q.5	(a)	What is angiography? Brief discuss about the digital Subtraction Angiography technique.	07	
	(b)	Enlist various compression techniques and explain any one in detail OR	07	
Q.5	(a) (b)	Write a brief note on DICOM. Explain techniques for arrhythmia detection. And give its detail classification.	07 07	
