Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

Su	biec	BE - SEMESTER-VII (NEW) - EXAMINATION – SUMMER 2017 t Code: 2170312 Date: 06/05/20	17
Su	bjec	t Name: Medical Optics (Department Elective - II)	
	tructi	. Attempt all questions.	70
		Figures to the right indicate full marks.	
Q.1	(a)	Define below terms in details: Fresnel Refraction, Absorption and Rayleigh scatter.	07
	(b)	Explain Electromagnetic waves-Spectrum in details.	07
Q.2	(a) (b)	Explain Propagation of light along the fiber cable with proper diagram. Define Medical Laser and explain laser safety in detail. OR	07 07
	(b)	Explain Bending losses, dispersion and Cleaving Process in fiber optics.	07
Q.3	(a)	List the applications of LASER for diagnostic techniques and explain any one in detail.	07
	(b)	Explain Laser interaction with tissue in detail. OR	07
Q.3	(a)	List the applications of LASER for Therapeutic techniques and explain any one in detail.	07
	(b)	Explain applications of Lasers in Imaging.	07
Q.4	(a) (b)	Explain possible Complications in the use of Laser fiber optic system Write a technical note on Endoscopy. OR	07 07
Q.4	(a)	Write a short note on Laser therapy.	07
.	(b)	Write a technical note on fiber optic biomedical sensor.	07
Q.5	(a) (b)	Explain Fiber optic Laser system in Ophthalmology. Explain Fiber optic Laser system in cardiovascular disease	07 07
Q.5	(a)	OR Explain Fiber optic Laser system in Neurosurgery	07
Ų.S	` '	Explain Fiber optic Laser system in Orthopedics	07
