Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA ENGINEERING - SEMESTER–V • EXAMINATION – SUMMER 2013

Subject Code: 350304 **Date: 21-05-2013**

Subject Name: THERAPEUTIC MEDICAL INSTRUMENTATION

Time: 10:30 am - 13:00 pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **English version is considered to be Authentic.**

Q.1	(a)	Explain construction and working of IR lamp	**07**
	(b)	Explain the effect of ultrasound on human body.	**07**
Q.2	(a)	Explain construction and working of UV lamp	**07**
	(b)	Describe He-Ne diode laser using diagram	**07**
		OR	
	(b)	Explain the working principle of ultrasound therapy transducer.	**07**
Q.3	(a)	Write short note on “short wave diathermy”	**07**
	(b)	Explain the muscle stimulator with applications.	**07**
		OR	
Q.3	(a)	Write short note on “traction unit”	**07**
	(b)	Explain the electrosurgical unit with applications.	**07**
Q.4	(a)	Draw and explain block diagram of infusion pump.	**07**
	(b)	Explain incubator with application.	**07**
		OR	
Q. 4	(a)	Explain the effect of shortwave on human body.	**07**
	(b)	Describe hemodialysis machine in detail.	**07**
Q.5	(a)	Explain the importance of heat balance in the human body and methods of balance for neonatal.	**07**
	(b)	Explain cutting and coagulation electrodes of cautry machine	**07**
		OR	
Q.5	(a)	Write short note on “patient safety in cautry machnine”	**07**
	(b)	Explain application of lasser on human body.	**07**

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