

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.

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|-------------|-----|---|-----------|
| 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 cautery machine | 07 |
| | | OR | |
| Q.5 | (a) | Write short note on “patient safety in cautery machine” | 07 |
| | (b) | Explain application of laser on human body. | 07 |
