

22546

11920

3 Hours / 70 Marks

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
 - (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any FIVE of the following: **10****
- a) List effects of IR on human body.
 - b) State applications of ultrasound.
 - c) Give uses of cold therapy.
 - d) State any two effects of electric current on human tissues with respect to ESU.
 - e) State technical specifications of nerve and muscle stimulator.
 - f) State function of ultrasound therapy transducer.
 - g) Define microshock.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) List any four uses of laser in biomedical field.
 - b) List technical specifications of SWD (any 4)
 - c) Explain capacitive application technique of short wave diathermy.
 - d) State maintenance steps of electrosurgical unit.
- 3. Attempt any THREE of the following:** **12**
- a) State physiological effects of electric shock on human body.
 - b) Sketch block diagram of traction unit and give its applications.
 - c) Differentiate between UV and IR lamp.
 - d) Sketch types of cutting and coagulation electrodes. State the specific conditions when each type of electrode is used.
- 4. Attempt any THREE of the following:** **12**
- a) Explain working of IR lamp with neat sketch.
 - b) Compare unipolar and bipolar modes of electro surgical unit.
 - c) List technical specifications of solid state cautery machine.
List steps for its maintenance.
 - d) Explain electric hazard in hospital environment.
 - e) Explain methods of accident prevention in hospital environment.

5. Attempt any TWO of the following:**12**

- a) Explain working of UV lamp with sketch. State the conditions where UV radiations are used.
- b) Explain block diagram of ultrasound therapy machine with sketch.
- c) Explain block diagram of nerve and muscle stimulator with sketch.

6. Attempt any TWO of the following:**12**

- a) Explain methods of cutting and coagulation with sketch.
 - b) Explain installation and maintenance steps of short wave diathermy machine.
 - c) Illustrate the use of different current waveforms used in nerve muscle stimulator with proper sketch.
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