

TED (15) – 5241
(REVISION – 2015)

Reg. No.
Signature

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2018

THERAPEUTIC EQUIPMENTS

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I Answer *all* questions in one or two sentences. Each question carries 2 marks.

1. Define cardio version.
2. Define fulguration.
3. Define PEEP.
4. List any two applications of syringe pump.
5. State population inversion in laser.

(5×2 = 10)

PART — B

(Maximum marks : 30)

II Answer any *five* of the following questions. Each question carries 6 marks.

1. Explain the types of external and implantable pacing modes.
2. Describe the principle of lithotripter with diagram.
3. Explain parallel flow and hollow fiber type oxygenator.
4. Illustrate the working principle of peristaltic infusion pump.
5. List the design requirements of implantable pacemaker.
6. Summarize the constructional details of He-Ne laser.
7. Describe the principle and need of cardio pulmonary bypass.

(5×6 = 30)

PART — C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks.)

UNIT — I

- III (a) Explain the working of DC Defibrillator with diagram. 8
 (b) List and explain the different power sources of implantable pacemakers. 7

OR

- IV (a) Describe programmable pacemaker with diagram. 8
 (b) Summarize the working of automatic implantable Defibrillator with block diagram. 7

UNIT — II

- V (a) Explain microwave diathermy machine with diagram. 8
 (b) Explain CO₂ laser with diagram. 7

OR

- VI (a) Elaborate the basic types of shock wave sources used in lithotripters with diagram. 8
 (b) Explain ultrasonic diathermy machine with block diagram. 7

UNIT — III

- VII (a) Explain anaesthesia machine with diagram. 10
 (b) Explain the different modes of operation of ventilators. 5

OR

- VIII (a) Elaborate the working of bed side monitors with block diagram. 8
 (b) Explain the working of centralized patient monitoring. 7

UNIT — IV

- IX (a) Explain the operation of Co-60 therapy unit. 8
 (b) Describe the parts of endoscope. 7

OR

- X (a) Explain the principle and operation of LINACC. 10
 (b) List the biological effect of radio therapy. 5