

22548

12425

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
  - (2) Illustrate your answers with neat sketches wherever necessary.
  - (3) Figures to the right indicate full marks.
  - (4) 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 any two equipments related to NICU.
- (b) Define Fibrillation.
- (c) List any four specifications of Nebulizer.
- (d) Draw the neat sketch of paddle electrodes.
- (e) List the types of dialyzers.
- (f) State the need of baby incubator.
- (g) Give the significance of ICCU.

**2. Attempt any THREE of the following :**

**12**

- (a) Explain asynchronous pacemaker with neat block diagram.
- (b) List any four technical specifications of defibrillator.
- (c) Define :
  - (1) Tidal volume
  - (2) Minute volume
- (d) Identify the device that helps boost patient's blood flow if patient's heart is weak and explain it in detail.



- 3. Attempt any THREE of the following : 12**
- (a) Describe the use of oxygenator in heart lung machine with neat sketch.
  - (b) List any four technical specifications of multiparamonitor.
  - (c) Give the significance of biphasic defibrillator.
  - (d) Describe the synchronous pacemaker with neat diagram.
- 4. Attempt any THREE of the following : 12**
- (a) Draw the block diagram of programmable microprocessor based infusion pump.
  - (b) Give the significance of endocardial and myocardial leads.
  - (c) List any four technical specifications of baby incubator.
  - (d) Explain the Cardiac monitor.
  - (e) Compare biphasic and monophasic defibrillator.
- 5. Attempt any TWO of the following : 12**
- (a) Give the significance of different types of pacing modes.
  - (b) Explain the ventilator with neat block diagram.
  - (c) Identify the machine to remove waste product and excess fluid from the blood when the kidneys stop working properly. Draw it's block diagram and explain it.
- 6. Attempt any TWO of the following : 12**
- (a) Identify the machine used to remove fluids from body and describe it with neat diagram.
  - (b) Describe the evolution levels in the control of drug delivery system with neat diagram.
  - (c) Suggest the machine that temporarily takes over the work of the heart and lungs providing blood and oxygen to the body. Draw and explain its block diagram.
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