

22548

24225

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) Define cardiac arrhythmias & heart block.
- (b) Draw the neat sketch of spoon shape electrode.
- (c) List any two technical specification of Nebulizer.
- (d) Draw charging and discharging circuit of DC-defibrillator.
- (e) List any two types of dialyzer.
- (f) State the use of conductivity cell in hemodialysis machine.
- (g) Identify the specialised hospital wards related to treatment of heart issues/critical issue and list any two equipment related to this.

2. Attempt any THREE of the following :

12

- (a) Explain the asynchronous pacemaker with neat block diagram.
- (b) List any four technical specifications of defibrillator.
- (c) List the modes of ventilator and give the significance of any one mode.
- (d) Give the significance of balloon pump.



- 3. Attempt any THREE of the following : 12**
- (a) Mention the type of defibrillator used for railway stations, airports etc. and explain it.
 - (b) List any four technical specifications of Infusion pump.
 - (c) Explain temperature control circuit in baby incubator with neat sketch.
 - (d) Explain programmable pacemakers with neat block diagram.
- 4. Attempt any THREE of the following : 12**
- (a) Explain biphasic and monophasic defibrillator.
 - (b) List any four technical specifications of pacemaker.
 - (c) List any four technical specifications of baby incubator.
 - (d) State the concept of central monitoring system.
 - (e) Define Fibrillation. State the need of defibrillator.
- 5. Attempt any TWO of the following : 12**
- (a) Identify type of artificial pacemaker that only delivers electrical impulse to the heart when needed and explain it with diagram.
 - (b) Explain different measurable parameters related to respiratory system.
 - (c) Identify the device that temporarily takes over the functions of the heart and lung and explain its working with neat diagram.
- 6. Attempt any TWO of the following : 12**
- (a) Mention the name of machine which is used to assist or replace a person's natural breathing. Explain it with suitable diagram.
 - (b) Draw and explain microprocessor based infusion pump.
 - (c) Explain construction & working of parallel plate dialyzer in detail with neat sketch.
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