

22548

22232

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) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (5) 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 four types of Pacemakers.
- (b) Suggest the instrument which is used to administer a controlled electric shock to allow restoration of Normal rhythm of heart.
- (c) Name the instruments used for following patient conditions
 - (1) To Assist breathing
 - (2) Treatment of Asthma
- (d) Enlist different kinds of defibrillators in use today (any two).
- (e) Draw sketch of Hollow fiber dialyser.
- (f) Enlist the Body parameters which are controlled in Baby Incubator (any two).
- (g) A Newborn premature baby is ill. Suggest the care unit for the baby to be admitted.



- 2. Attempt any THREE of the following : 12**
- (a) Compare Synchronous and Asynchronous pacemaker (any 4 points).
 - (b) Enlist any four important technical specifications of DC defibrillator.
 - (c) Draw sketch and explain need of Suction Apparatus.
 - (d) Name the mechanical device that increases myocardial oxygen perfusion and indirectly increases cardiac output.
- 3. Attempt any THREE of the following : 12**
- (a) Draw the block diagram of Hemodialysis machine and explain it.
 - (b) Enlist 4 technical specifications of Central Monitoring System.
 - (c) Calculate Energy stored in a 16 μF capacitor that is charged to a potential of 4000 Vdc.
 - (d) Give importance of ICCU and ICU.
- 4. Attempt any THREE of the following : 12**
- (a) Explain operating principle of DC-Defibrillator.
 - (b) Give the significance of pacemaker leads.
 - (c) List any four technical specifications of Hemodialysis machine.
 - (d) State the need of infusion pump in operation theatre.
 - (e) The defibrillator machine has following problems displayed on its monitor screen, identify the cause and solution for it :
 - (i) Leads OFF
 - (ii) No paddles
- 5. Attempt any TWO of the following : 12**
- (a) Describe the layout of NICU with sketch.
 - (b) Explain Nebulizer with neat sketch.
 - (c) State four important steps for maintenance of Baby Incubator and draw the sketch of Baby Incubator.

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

- (a) State four important steps for daily maintenance of Anesthesia machine and list any two important technical specifications.
 - (b) Identify the instrument which is used to monitor following parameters :
 - (i) Heart Rate
 - (ii) Blood pressure
 - (iii) Body temperature
 - (iv) Respiration
 - (v) Electrocardiogramand explain it with neat block diagram.
 - (c) Enlist four technical specifications for baby incubator and name the sensors used for monitoring Baby temperature and Air temperature of Incubator.
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