

**B.Sc. IN ANAESTHESIA AND CRITICAL CARE  
TECHNOLOGY (BACT)**

**Term-End Examination**

**June, 2013**

**BAHI-082 : BIOMEDICAL INSTRUMENTATION**

*Time : 3 hours*

*Maximum Marks : 70*

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**PART - A**

Answer *any five* questions. Each questions carries 8 marks.

**5x8=40**

1. What are the types of defibrillators available ? Describe the steps of using an automated external defibrillator (AED).
2. There is a 70 kg patient in the intensive care unit with frequent ventricular ectopics who needs lignocaine infusion. Preservative free xylocard 2% (30 ml vial) and syringe pump adapting 50 ml is available. Order is to give an initial bolus dose of 1.5 mg/kg following which an infusion of 2 mg /min has to be set up. How will you manage ?

3. Describe the procedure for anaesthesia machine check.
4. What are the factors which influence the output of a vaporiser ?
5. Describe high pressure system of anaesthesia work station.
6. Compare oxygen and nitrous oxide cylinders.
7. Describe the direct and indirect method of measuring blood pressure (BP)
8. What is the principle of pulse oxymetry ? Briefly describe advantages and limitations of pulse oxymetry ?

## PART - B

Write short notes on *any five* of the following.

Each question carries 6 marks.

5x6=30

1. Spirometry
  2. Diameter Index Safety System (DISS)
  3. What are the leads in 12 lead ECG ? Describe how they are placed.
  4. Scavenging system
  5. Bourdon pressure gauge
  6. Oxygen failure safety devices in anaesthesia machine.
  7. Mention hazards associated with vaporisers.
  8. Describe a normal capnogram with a help of a diagram.
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