

B.Sc. CRITICAL CARE TECHNOLOGY
(New Syllabus 2014-2015 & 2015-2016)

THIRD YEAR

PAPER I – ICU MONITORING – II + MAINTENANCE OF EQUIPMENT

Q.P. Code: 801236

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. What is compliance? Draw a pressure volume curve depicting normal and abnormal compliance. What is dynamic and Static compliance?
2. What is Resistance? What are factors determining resistance? Draw a Pressure Time trace (in Volume control mode) showing increased airway resistance. Draw a Flow time trace showing increased airway resistance.
3. Fluid status and Fluid responsiveness in ICU patients.

II. Write notes on:

(8 x 5 = 40)

1. How to approach to low pressure alarm in ventilator?
2. Auto-PEEP.
3. Work of breathing.
4. What are the measurements possible with Pulmonary artery catheter?
5. How many triggering (sensitivity) types are available in mechanical ventilators? Write briefly about each of them.
6. Short notes on zeroing for IBP monitoring.
7. Write short notes on Biphasic Defibrillator.
8. PICCO.

III. Short answers on:

(10 x 3 = 30)

1. Uses of Echocardiography in ICU.
2. Ventilator alarm limits settings for an adult patient with ARDS.
3. Types of temporary pacing.
4. Write a note on damping and its causes.
5. What is Synchronization in Defibrillator?
6. How will you assess brain stem function in the ICU?
7. Write a note on sedation scoring and its importance in patient outcomes.
8. What are some physical signs malnutrition? What is the daily calorie requirement (in Cal/Kg) recommended in nutritional guidelines?
9. What is indirect calorimetry? Write a few lines on metabolic cart.
10. Advantages and Disadvantages of PEEP.
