

[LG 0215]

FEBRUARY 2015

Sub. Code:1412

**B.Sc. CARDIO PULMONARY PERFUSION CARE TECHNOLOGY
SECOND YEAR**

PAPER – II- PRINCIPLES OF PERFUSION TECHNOLOGY – I

Q.P. Code: 801412

Time : Three Hours

Maximum : 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Write in detail about IABP and its principle including indications and contra indications.
2. Describe the evolution of oxygenator.
3. What is cardiopulmonary bypass? How do you initiate, manage and terminate? Explain.

II. Write Notes on:

(8 x 5 = 40)

1. What is filter? Where do you need to incorporate exactly in your bypass circuit? Why?
2. Prepare a treatment chart for metabolic/respiratory and acidosis/alkalosis.
3. Essential parameters monitored by perfusionist on CPB.
4. Write the importance of perfusion flow rates and pressures.
5. Draw extracorporeal circuit diagram and label it.
6. What is arterial blood gas report and how will you react after looking at it?
7. How does a roller pump play role in cardiopulmonary bypass?
8. Hypothermia and its uses in cardiac surgery?

III. Short Answers on:

(10 x 3 = 30)

1. Basic difference between bubbler and membrane oxygenator.
2. What is "Ischemic period"?
3. What is cardioplegia solution? How does it preserve myocardium?
4. How do you assess your priming volume?
5. What is free radical scavengers and give example?
6. Draw membrane oxygenator and specify all the components.
7. Why hemofilter is mandatory for children especially?
8. Common complication due to improper aortic and venous cannulation.
9. How does centrifugal pump differ from roller pump?
10. Write the formula for calculating the patient body surface area, blood volume and circulating hematocrit.
