

B.Sc. CARDIO PULMONARY PERFUSION CARE TECHNOLOGY

THIRD YEAR

PAPER II – CARDIOPULMONARY BYPASS & PERFUSION TECHNOLOGY

Q.P. Code: 801422

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. List out the essential monitoring device used during bypass and write short note on any two.
2. Explain principle of Extracorporeal membrane oxygenation with their types, cannulation sites, circuit.
3. Note on Adequacy of perfusion.

II. Write notes on:

(8 x 5 = 40)

1. Principle of centrifugal pump.
2. Note of Activated clotting time and factors affecting the same.
3. Effects of Cardiopulmonary bypass on brain.
4. Formula to calculate the cardiopulmonary blood flow.
5. Oxygen dissociation curve.
6. On pump coronary artery bypass grafting - perfusionist role.
7. Write a note on Custodiol cardioplegia solution.
8. Note on Left ventricular assist device.

III. Short answers on:

(10 x 3 = 30)

1. Write the uses of Mannitol during Cardiac Bypass.
2. Write about the disadvantages of Blood Prime.
3. Explain Respiratory Acidosis with an example.
4. Write about Bellow Pump.
5. Write the Formula to Calculate Bicarbonate correction.
6. Add a note on the priming solution to be used in Renal Failure patients.
7. Write about the role of Magnesium in Cardioplegic solution.
8. Write on the rationale behind using Hypothermia in cardiac surgery.
9. Write about the management of Anaemia on bypass.
10. Write about the various tubing's and their characteristics used in Bypass.
