

**B.Sc. CARDIO PULMONARY PERFUSION CARE TECHNOLOGY
THIRD YEAR
PAPER III – CARDIO PULMONARY BYPASS AND ITS COMPLICATIONS
STERILE TECHNIQUES AND SURGICAL ASEPSIS MAINTENANCE**

Q.P. Code: 801423

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on: **(3 x 10 = 30)**

1. Jehovah witness cases and its perfusion technique and write a note on Sickel Cell Anaemia management on CPB.
2. Write an essay on Heparin.
3. Write a note on Reperfusion Injury, oxygen Free Radicals, and also inflammatory Mediators in CPB. How will you manage such complications?

II. Write notes on: **(8 x 5 = 40)**

1. What is ECMO and state its benefits and discuss ECMO related complications?
2. Temperature related complication on CPB – Explain in detail.
3. List out all the blood conservations techniques and discuss it.
4. What are all the safety devices can be used to prevent the CPB Complications?
5. Effects and complications of CPB on various organs.
6. Indication, contraindication and complications of IABP.
7. TCA protocol – and how safe you can give low flows at different temperature – prepare a chart.
8. State the pediatric perfusion protocol and highlight its importance.

III. Short answers on: **(10 x 3 = 30)**

1. What will cause Hyperkalemia in Pump? How will you overcome it?
2. What can cause Hemolysis/Hematuria on CPB and how will you manage it.
3. How will you rectify and manage the heparin Resistance Cases?
4. What are the causes of Poor Venous Return and what will be your management?
5. What is Alpha stat and Ph stat?
6. How will you manage when Venous return is low and Venous return Overflow?
7. What is hand Crank? What is its importance?
8. Role of a Perfusionist in avoiding infections related to HLM and Hemotherm Maintenance.
9. How will you perform MUF safely without any complications? Specify the anticipated complications and also explain to overcome it?
10. Why Monitoring Lactate level on CPB is important? How does it help the Perfusionist?
