

**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. Describe about Heparin and its pathway with diagram. Discuss in detail about Heparin Induced Thrombocytopenia.
2. Write a note on Reperfusion Injury and problems faced in Long Pump run/cross clamp.
3. Define SIRS (Systemic Inflammatory Response Syndrome) and also explain it and also describe the common CPB complications.

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

1. Role of Hemofiltration in CPB and list out the inflammatory Mediators.
2. Temperature related complication on CPB – Explain in detail.
3. List out all the blood conservations techniques and discuss it.
4. What is Sickle Cell Anaemia? Write down the perfusion technique of it.
5. Effects and complications of CPB on various organs.
6. Complications of IABP and draw a picture of positioning of IABP.
7. TCA protocol – and how safe you can give low flows at different temperature – prepare a chart?
8. Jehovah witness cases and perfusion technique for it.

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

1. How will you perform MUF safely without any complications? Specify the anticipated complications and also explain to overcome it?
2. Why Monitoring Lactate level on CPB is important? How does it help the Perfusionist.
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 ECMO and state its benefits and discuss ECMO related complications?
8. Role of a Perfusionist in avoiding infections related to HLM and Hemotherm Maintenance.
9. What can cause Hemolysis/Hematuria on CPB and how will you manage it?
10. What is Pulsatile Perfusion?
