

**VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM**  
**B.SC (PERFUSION TECHNOLOGY) DEGREE EXAMINATION -**  
**September 2021**  
**Third Year**  
**PERFUSION TECNOLOGY - APPLIED**

Three Hours

Maximum: 75 marks

**I. Write an essay on any ONE of the following: (1 x 20 = 20)**

1. Write about the possible complications of blood transfusion on CPB.
2. Write a note on Reperfusion Injury, oxygen Free Radicals, and also inflammatory Mediators in CPB. How will you manage such complications?

**II. Write short notes on any TWO of the following: (2 x 10 = 20)**

3. Complication of protamine sulphate administration
4. Role of Hemofiltration in CPB and list out the inflammatory Mediators
5. What are all the safety devices can be used to prevent the CPB Complications?
6. Effects of Cardiopulmonary bypass on kidney.

**III. Write short answers on any SEVEN of the following: (7 x 5 = 35)**

7. Significance of Liver function & Renal function tests
8. Heparin management during cardiopulmonary bypass.
9. Hemolysis
10. Write short notes on Endocrine assays for Cardiopulmonary Bypass. State the importance of Arterial Filter in the CPB circuit and also mention its pore size.
11. Coagulopathies due to cardiopulmonary bypass and its management
12. Electrolytes management during bypass
13. Acquired coagulation disorders
14. Methemoglobinemia
15. Cold agglutinins and its importance.
16. Neurological response during CPB.

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