

Q.P.Code:301016

REG. No:.....

**Third Year B.Sc Perfusion Technology Degree Examinations,
September 2015**

Time: 3 hrs

Max. Marks:- 100

Perfusion Technology - Clinical

- ***Answer all the questions***
- ***Draw diagrams wherever necessary***

Essays: **(2x15=30)**

1. What are the components of a CPB circuit. Differentiate between positive displacement and centrifugal pumps. What are the advantages of centrifugal pumps over roller pumps and what are the safeguards incorporated in a CPB circuit. Add a note on cavitation effect.
2. Why anticoagulation is required in CPB. Mention the drugs used for anticoagulation in CPB. What are the congeners of heparin and its advantages. What is protamine and describe the various types of protamine reactions.

Short notes: **(5x7=35)**

3. Blood gas analysis during CPB and corrective measures
4. Membrane oxygenators
5. Compare and contrast crystalloid and blood cardioplegia
6. Effect of CPB on blood cells
7. Deep hypothermic circulatory arrest

Answer briefly: **(7x5=35)**

8. Amiodarone
9. Activated clotting Time
10. Controlled cross circulation
11. St. Thomas 2 solution
12. Haemodilution
13. Mixed venous saturation monitoring
14. Pulsatile CPB
