

**Q.P. CODE: 203016**

**Reg. No: .....**

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

**Introduction to Perfusion Technology**

**Time: 3 Hrs**

**Max. Marks:100**

- Answer all questions
- Draw diagram wherever necessary

**Essays:**

**(2×15=30)**

1. Describe the history and development of CPB. What are the principles of extracorporeal circulation. Describe the principles of gas exchange in an oxygenator.
2. What is deep hypothermic circulatory arrest (DHCA). What are the safeguards to be taken for neuroprotection during DHCA. What is pH stat and alpha stat principles.

**Short notes:**

**(5×7=35)**

3. Differentiate between pulsatile and nonpulsatile CPB.
4. Differentiate between warm and cold cardioplegia
5. Protamine reactions
6. Membrane oxygenator
7. Assisted venous drainage

**Answer briefly:**

**(7×5=35)**

8. Retrograde cardioplegia
9. Modified ultra filtration
10. Priming of CPB circuit
11. Pump lung
12. Management of hyperkalemia
13. Fresh frozen plasma
14. Walton C Lillehei

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