

Q.P. CODE: 213016

Reg. No:

**Second Year B.Sc Perfusion Technology Degree Regular/Supplementary
Examinations February 2022**

Introduction to Perfusion Technology

(2016 Scheme)

Time: 3 Hrs

Max. Marks:100

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw diagrams wherever necessary*

Essays:

(2x15=30)

1. Explain the components of a CPB circuit. Differentiate between crystalloid and blood cardioplegia. What are the advantages of centrifugal pumps over roller pumps. What are the safeguards incorporated in a CPB circuit. What is runaway pump.
2. Explain the physiology of CPB. What is the effect of CPB on blood cells. Advantages of hypothermia in CPB. 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 centrifugal and roller pumps
6. Azygous flow principle
7. Deep hypothermic circulatory arrest

Answer briefly:

(7x5=35)

8. Heparin
9. Activated clotting time
10. Controlled cross circulation
11. Left heart venting
12. Haemodilution
13. Mixed venous saturation monitoring
14. Pulsatile CPB
