

**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

[AHS 0122]

**JANUARY 2022**

**Sub. Code: 1423**

**(FEBRUARY 2021 & AUGUST 2021 EXAM SESSION)**

**B.Sc. CARDIO PULMONARY PERFUSION CARE TECHNOLOGY  
THIRD YEAR – (Regulation from 2010-2011 & 2014-2015)  
PAPER III – CARDIO PULMONARY BYPASS AND ITS COMPLICATIONS  
STERILE TECHNIQUES AND SURGICAL ASEPSIS MAINTENANCE  
*Q.P. Code: 801423***

**Time: Three Hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Discuss in detail about various pumps used in Cardiopulmonary bypass.
2. Draw a neat labeled diagram of cardiopulmonary bypass circuit and describe in detail about the conduct of cardiopulmonary bypass.
3. Enlist the complications of cardiopulmonary bypass. Describe in detail about massive air embolism and its management.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Role of protamine in Cardiopulmonary bypass.
2. Heparin induced thrombocytopenia.
3. Discuss about retrograde cardioplegia in detail.
4. Cleaning and maintenance of Heart – lung machine.
5. Causes and management of low venous return during Cardiopulmonary bypass.
6. Pre-bypass checklist.
7. Write briefly about Extra-corporeal membrane oxygenator.
8. Precautions to be taken during rewarming.

**III. Short answers on:**

**(10 x 3 = 30)**

1. What is respiratory acidosis?
2. Enlist the complications of aortic cannulation.
3. Venting in cardiopulmonary bypass.
4. Two-stage single venous cannula.
5. Terminating bypass.
6. Adrenaline.
7. Arterial line filter.
8. What is Deep hypothermic circulatory arrest?
9. Priming solution.
10. Liver function tests.

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