

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

[LR 1220]

**DECEMBER 2020
(AUGUST 2020 EXAM SESSION)**

Sub. Code: 1423

**BACHELOR IN 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. Components of Cardiopulmonary bypass circuit.
2. Write in detail on rate of Rewarming and cooling in Cardiopulmonary Bypass and explain grades of Hypothermia and safety margin of how flows can vary with temperature. Prepare a flow chart according to the temperature.
3. Checklist before going on Cardiopulmonary Bypass.

II. Write notes on:

(8 x 5 = 40)

1. Pump Priming.
2. Heparin Induced Thrombocytopenia (HIT).
3. Coagulation pathway.
4. Effects and complications of CPB on various organs.
5. ECHO and Cardiopulmonary Bypass.
6. List out all the Blood conservations techniques and discuss it.
7. Systemic Air Embolism.
8. Mention all parameters while wean off from Cardiopulmonary Bypass.

III. Short answers on:

(10 x 3 = 30)

1. Define ECMO and state its benefits and discuss ECMO related complications?
2. Preoperative investigations for CPB.
3. Angiography.
4. Potassium measurement and its importance.
5. Heparin management during Cardiopulmonary Bypass.
6. ECG – Interpretation.
7. Importance of chest X-ray for CPB.
8. Pulsatile perfusion.
9. Steps for asepsis during Assembling Circuit.
10. Oxygenator Malfunction.
