

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

[AHS 0423]

APRIL 2023

Sub. Code: 1422

**B.Sc. CARDIO PULMONARY PERFUSION CARE TECHNOLOGY
THIRD YEAR – (Regulations 2010-2011, 2014-2015 & 2018-2019 onwards)
PAPER II – CARDIOPULMONARY BYPASS & PERFUSION TECHNOLOGY
Q.P. Code: 801422**

Time: Three Hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Explain in detail about Anticoagulation management during CPB and ECMO.
2. Draw and label CPB circuit diagram for a 15 kg cyanotic child undergoing total repair for TOF.
3. Explain bubble oxygenator in detail.

II. Write notes on:

(8 x 5 = 40)

1. Importance and procedure of occlusion checking.
2. Write a note on del – nido cardioplegia.
3. Importance of Hematocrit.
4. Protamine reactions and its management.
5. Uses of recirculation line and priming volume of membrane oxygenator.
6. Write a note on cardiotomy filter.
7. Bio line coated tubings.
8. Uses of CPB on liver transplant.

III. Short answers on:

(10 x 3 = 30)

1. Left ventricular assist device indications.
2. Perfusion record.
3. Sites of venting of the heart.
4. Fick's law.
5. Sources of Heparin.
6. EOPA cannulas.
7. Hemostasis.
8. Effective communication in conduct of CPB.
9. Oxygen free radicals.
10. Q 10 factor.
