

(Affiliated to the Tamil Nadu Dr M.G.R Medical University, Chennai)

B. Sc. CARDIOPULMONARY PERFUSION CARE TECHNOLOGY

1412 –PRINCIPLES OF PERFUSION II YEAR

UNIT II – COMPONENTS OF CPB

I. ELABORATE ON**10 MARKS****REFERENCE – THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY QUESTION PAPER**

S.no	Questions	Reference	Bloom's Taxonomy
1	Describe in detail about the ideals of Pump and explain principles of roller pump in detail.	AUGUST 2019	Analyze
2	Compare and Contrast the Membrane and Bubble Oxygenator.	APRIL 2024	Evaluate
3	Write the ideal characteristics of an ideal blood pump and explain about the roller pump in detail.	SEPTEMBER 2022	Analyze
4	Draw a CPB circuit diagram with incorporating all components.	SEPTEMBER 2022	Apply
5	Describe the evolution of oxygenator.	AUGUST 2014	Understand
6	Describe in detail about the ideals of oxygenator and explain membrane oxygenator in detail along with principles of gas transfer.	FEBRUARY 2019	Analyze
7	Draw the CPB circuit of an adult undergoing Mitral Valve Replacement.	APRIL 2023	Apply
8	Describe the components of extra corporeal circulation and the principles of extra-corporeal gas exchange.	AUGUST 2012	Understand
9	Draw circuit of CPB with hemofilter, name all the parts and also mention all important benefits of Hemofiltration in Detail.	AUGUST 2015	Apply

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S.no	Questions	Reference	Bloom's Taxonomy
10	Describe the Modes of Heat Transfer and uses of Heat Exchanger devices in CPB.	APRIL 2023	Analyze

II.WRITE NOTES ON

5 MARKS

REFERENCE – THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY QUESTION PAPER

S.no	Questions	Reference	Bloom's Taxonomy
1	Importance and Procedure of Occlusion checking.	APRIL 2023	Apply
2	What are the components of membrane oxygenator? Explain its functions.	AUGUST 2012	Understand
3	Write a note on Centrifugal Pump with diagram and mention its advantage over Roller pump.	AUGUST 2017	Analyze
4	Differences between Roller pump and centrifugal Pump.	MARCH 2021	Analyze
5	Objectives of an ideal oxygenator.	AUGUST 2012	Remember
6	What are the ideal properties of CPB pump and tubings?	FEBRUARY 2019	Understand
7	Occlusion checking procedure and its importance.	SEPTEMBER 2022	Apply
8	Bubble Oxygenator.	APRIL 2023	Understand
9	What are the effects of preload and after load on centrifugal pump flow?	AUGUST 2012	Analyze

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S.no	Questions	Reference	Bloom's Taxonomy
10	Explain the functions of heat exchangers.	AUGUST 2012	Understand

III.WRITE SHORT NOTES ON

3 MARKS

REFERENCE – THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY QUESTION PAPER

S.no	Questions	Reference	Bloom's Taxonomy
1	How do you check Occlusion in Roller pump?	FEBRUARY 2016	Apply
2	Roller pumps.	FEBRUARY 2013	Remember
3	Occlusion settings.	AUGUST 2013	Remember
4	How does centrifugal pump differ from roller pump?	AUGUST 2014	Understand
5	Working principle of Centrifugal pump.	APRIL 2024	Understand
6	Basic difference between bubbler & membrane oxygenator.	AUGUST 2014	Understand
7	What is bubble trap?	AUGUST 2012	Remember
8	Cardiotomy filter.	SEPTEMBER 2022	Remember
9	Gas line filters.	APRIL 2023	Remember
10	What is bellow pump?	AUGUST 2012	Remember
11	Rotatory pumps.	AUGUST 2013	Remember

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S.no	Questions	Reference	Bloom's Taxonomy
12	Different types of Tubing materials.	APRIL 2023	Remember
13	Heat exchangers.	NOVEMBER 2023	Remember
14	Arterial Line filters.	SEPTEMBER 2022	Remember
15	What is the desirable pore size of arterial filter, gas filter, cardiectomy filter?	AUGUST 2012	Remember