

SNS COLLEGE OF ALLIED HEALTH SCIENCE, COIMBATORE -35
(Affiliated to the Tamil Nadu Dr M.G.R Medical University, Chennai)
B.Sc. CARDIOPULMONARY PERFUSION CARE TECHNOLOGY



SUBJECT: 1422 - CARDIO PULMONARY BYPASS AND PERFUSION TECHNOLOGY

UNIT I – CONDUCT OF BYPASS – QUESTION BANK

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

I. ELABORATE ON

10 MARKS

S.No	Question	Reference (Month/Year)	Bloom's Taxonomy
1	Steps in Initiating and going on Cardiopulmonary Bypass	Feb 2019, Sept 2022	Apply, Evaluate
2	Starting the pump and going on Bypass	Aug 2015	Apply
3	Conduct of CPB for an adult male weighting 73 kgs undergoing MVR	Jan 2025	Apply, Analyze
4	Cardio Pulmonary Bypass circuit diagram incorporating all components	Feb 2014, Aug 2016, April 2025	Apply
5	Draw and label CPB circuit diagram for a 15 kg cyanotic child undergoing total repair for TOF.	April 2023	Apply, Analyze
6	Coming out from the Bypass.	Aug 2015	Apply
7	List out the essential monitoring device used during bypass and write short note on any two.	Aug 2017	Apply, Analyze
8	Describe the steps in weaning off from cardiopulmonary bypass.	Aug 2019	Apply, Analyze
9	Pre-bypass checklist and steps for Initiation of Cardio Pulmonary Bypass.	Sept 2022	Apply, Evaluate

II. WRITE NOTES ON

5 MARKS

S.No	Question	Reference (Month/Year)	Bloom's Taxonomy
1 1	Pre-Cardiopulmonary Bypass check list	Aug 2013, Feb 2021, Sept 2022	Understand, Evaluate

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S.No	Question	Reference (Month/Year)	Bloom's Taxonomy
2	Cannulation of the heart.	Aug 2015	Understand
3	Supporting the heart on pump (after coming out of Bypass)	Aug 2015	Understand, Apply
4	Monitoring during Cardio Pulmonary Bypass.	Feb 2016, 2019	Understand, Analyze
5	Pacing while weaning from Bypass.	Feb 2016	Understand, Analyze
6	Formula to calculate the cardiopulmonary blood flow.	Aug 2017	Understand
7	On pump coronary artery bypass grafting - perfusionist role.	Aug 2017	Understand, Apply
8	Design your own perfusion data sheet which covers all essential documentation?	Aug 2018	Apply
9	Write notes on Cannulation of the heart during bypass.	Aug 2019	Understand
10	How do you calibrate the Heart Lung Machine and check the Occlusion and Mention various Occlusion setting Methods?	Dec 2020	Understand, Apply
11	Importance and procedure of occlusion checking.	April 2023	Understand, Apply
12	Define Ideal Perfusion. Explain about Monitoring devices.	April 2024	Apply
13	Methods of occlusion checking	Jan 2025, April 2023	Apply
14	Absolute and relative indications for femoral cannulation and its complications	Jan 2025	Understand, Analyze

III. WRITE SHORT NOTES ON

3 MARKS

S.No	Question	Reference	Bloom's Taxonomy
1	Circuit alarms	Aug 2013, Aug 2014, Feb 2017, Nov 2023	Remember, Understand

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S.No	Question	Reference	Bloom's Taxonomy
2	Circuits and pump alarms	Sept 2022	Remember, Understand
3	Venting of the heart	Aug 2014	Understand, Apply
4	Perfusion record	Aug 2014	Remember, Understand
5	Cardiotomy suckers.	Aug 2015	Remember, Understand
6	O2 blender	Aug 2015	Remember, Understand
7	Protamine	Aug 2016	Remember, Understand
8	Cannulation of the heart	Aug 2016	Understand, Apply
9	Write the uses of Mannitol during Cardiac Bypass.	Aug 2017	Understand, Apply
10	Write about the disadvantages of Blood Prime.	Aug 2017	Understand, Analyze
11	Write the Formula to Calculate Bicarbonate correction.	Aug 2017	Apply
12	Write about the role of Magnesium in Cardioplegic solution.	Aug 2017	Understand, Apply
13	Write about the drug WARFARIN	Feb 2018	Remember, Understand
14	Write the formula to Calculate Haematocrit value during bypass.	Feb 2018, April 2024	Apply
15	What are the alternatives to Protamine?	Feb 2018	Remember, Understand
16	Write about the sites of venting.	Feb 2018, 2023	Remember, Understand, Apply
17	What are the causes of High arterial line pressures?	Feb 2018	Remember, Analyze
18	Describe the uses of Bivalirudin in Cardiac surgery.	Aug 2018	Understand, Apply

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S.No	Question	Reference	Bloom's Taxonomy
19	How will you manage Gas Blender Failure during bypass?	Aug 2018	Apply, Analyze
20	Write the formula for correcting Hyperkalaemia.	Aug 2018	Apply
21	Write about the importance of arterial filter in the bypass circuit.	Aug 2018, April 2025	Understand, Analyze
22	What are the sources of Blood returning to the Heart during CPB?	Aug 2018	Remember, Understand
23	Indications for Femoral Artery Bypass and describe the principle behind Venting of the Heart.	Dec 2020	Understand, Apply
24	What are the Optimal Flow rates on CPB?	Dec 2020	Remember, Apply