

# Maharashtra University of Health Sciences, Nashik

Local Inquiry Committee Report

For Academic Year -----

## (For Grant of Continuation / Extension of Affiliation for affiliated B.Sc. in Paramedical Technology Colleges

College Code: \_\_\_\_\_ Date of Inspection : \_\_\_ / \_\_\_ / \_\_\_

Name of College : \_\_\_\_\_

Sr. No.	Particulars to be verified	Remark of the LIC
1	Course Conducted	
2	Numbers of Students Enrolled	
3	Separate Class available /Not available	
4	Curriculum Followed/ Not Followed	
5	Time table/Duty/ Theory/ Practical Conducted Yearly	
6	Separate List of Books for BPMT	
7	Library Reading Area : Available/ Not Available	
8	Hostel Facility : Available/ Not Available	

Data Verified by the Committee members:

Member

Member

Member

Chairman





**BACHELOR OF PARA MEDICAL TECHNOLOGY (BPMT)**

**Course Name :- Perfusion**

**3<sup>rd</sup> Year : Assessment System & Syllabus**

Sr. No	Paper	Subject	Subject Code	Theory			Practical			Total Marks
				IA	Final	Total	IA	Final	Total	
1	Paper - I	Applied Perfusion Technology - I		30	60	90	30	80	110	200
2	Paper - II	Applied Perfusion Technology - II		30	60	90	30	80	110	200
3	Paper - III	Recent Advances - III		30	60	90	30	80	110	200

**Paper - I**

**Applied Perfusion Technology-I**

Sr. No.	Topics	Theory	Practical
1	Pharmacokinetics and pharmacodynamics of the drugs used in cardiopulmonary by pass	12	12
2	Physiology of pulsatile perfusion technology	12	12
3	Principles and methodology of cardiopulmonary bypass	12	12
4	Oxygenators : general considerations and principles	12	12
5	Heat exchangers : general considerations and principles and complications	12	12
6	Priming fluids:its principles and hemodilution	12	12
7	Blood cells trauma	12	12
8	Anticoagulation in bypass : its monitoring and complications	12	10

**Paper - II**

**Applied Perfusion Technology-II**

Sr. No.	Topics	Theory	Practical
1	Inflammatory response to cardiopulmonary bypass	24	24
2	Blood conservations and dialysis during cardiopulmonary bypass	24	22
3	Micro pore filters	24	24
4	Perfusion as a method of cardiopulmonary bypass	24	24
5	Complications and its management during cardiopulmonary bypass	24	24
6	Perfusionist in minimal invasive surgery	24	24

**Paper - III**

**Recent Advances**

Sr. No.	Topics	Theory	Practical
1	Recent advances in perfusion technology	4	-
2	Cardiopulmonary resuscitation	12	12
3	Pediatric cardiac surgery*	48	48

\* It is a highly skilled work and required advanced and elaborate training to be a paediatric perfusion technician



## PRACTICALS – PERFUSION TECHNOLOGY

1. Calculation of PCV on CPB and amount of blood to be added to bring the PCV on CPB to particular level
2. Interpretation and correction of a given arterial blood gas
3. Interpretation and correction of a given electrolyte abnormally
4. Calculation of body surface area
5. Performing an ACT estimation and interpretation of results
6. Setting of a dummy CPB circuit
7. Managing a simulated perfusion accident on a dummy CPB circuit including changing oxygenators when on CPB, managing falling/leaking reservoir levels, venous airlocks, air in the arterial line, cardioplegia delivery failure, increased arterial line pressure, recognition of a possible dissection, run a way pump head, recognition of heat exchanger water leak into the CPB circuit, components and their uses, method of sterilization and complications related to them
8. Identification of various CPB circuit components and their uses, method of sterilization and complications related to them
9. Identification of drugs and their pharmacology
10. Calculating vascular resistance on CPB and management of increased perfusion pressure on bypass



## LIST OF BOOKS

Subject/Topic	Author/Editor
Anatomy	BD Chaurasia
physiology	Chaudhary
Biochemistry	Satyanarayana
Pathology	Harsh Mohan
pharmacology	Tripathi
microbiology	Anantnarayan
Perfusion technology	Gravlee Marce
Perfusion technology	Christina vora
Bypass technology	Charles Reed
Management of Adult Cardiac Surgery	Bojar

	THEORY	PRACTICALS
PAPER 1	6 JULY 2024	11 JULY 2024
PAPER 2	7 JULY 2024	11 JULY 2024
PAPER 3	9 JULY 2024	11 JULY 2024





महाराष्ट्र आरोग्य विज्ञान विद्यापीठ, नाशिक  
 MAHARASHTRA UNIVERSITY OF HEALTH SCIENCES, NASHIK

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3	Paper - III	Recent Advances - III		30	60	90	30	80	110	200

**Paper - I**

**Applied Perfusion Technology-I**

Sr. No.	Topics	Doctor	Date
1	Pharmacokinetics and pharmacodynamics of the drugs used in cardiopulmonary by pass	Dr. Karan	3/2/24
2	Physiology of pulsatile perfusion technology	Dr. Mohd.	7/2/24
3	Principles and methodology of cardiopulmonary bypass	Dr. Harsh	20/2/24
4	Oxygenators : general considerations and principles	Dr. Swapnil	15/3/24
5	Heat exchangers : general considerations and principles and complications	Dr. Tarun	16/6/24
6	Priming fluids: its principles and hemodilution	Dr. Palak	2/5/24
7	Blood cells trauma	Dr. Mohd	7/5/24
8	Anticoagulation in bypass : its monitoring and complications	Dr. Karan	21/5/24

**Paper - II**

**Applied Perfusion Technology-II**

Sr. No.	Topics	Doctor	Date
1	Inflammatory response to cardiopulmonary bypass	Dr. Harsh	1/6/24
2	Blood conservations and dialysis during cardiopulmonary bypass	Dr. Tarun	4/6/24
3	Micro pore filters	Dr. Swapnil	16/3/24
4	Perfusion as a method of cardiopulmonary bypass	Dr. Karan	2/3/24
5	Complications and its management during cardiopulmonary bypass	Dr. Mohd	10/3/24
6	Perfusionist in minimal invasive surgery	Dr. Harsh	16/3/24

**Paper - III**

**Recent Advances**

Sr. No.	Topics	Doctor	Date
1	Recent advances in perfusion technology	Dr. Palak	3/5/24
2	Cardiopulmonary resuscitation	Dr. Tarun	10/5/24
3	Pediatric cardiac surgery	Dr. Swapnil	16/5/24



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Associate Professor

**Dr. Prashant Patil**

Associate Professor



**Dr. Uday Jadhav**

Professor & Head

**Dr. Sushrut Potwar**

Associate Professor

NAME OF FACULTY	SIGN
MR.ASHOK SARUK (JSO)	
MR.SHASHIKANT MEMANE (JSO)	
MRS.VAISHALI METE (LAB TECHNICIAN )	
MR.SHEETAL VALVI (LAB TECHNICIAN )	
MS.VAISHNAVI KATE (PERFUSIONIST ON CONTRACT BASIS)	
MS. KALYANI DALVI (PERFUSIONIST ON CONTRACT BASIS)	
MR.PRASHANT DHURIYA (PERFUSIONIST ON CONTRACT BASIS)	
MS.SHRADDHA MAKHAJANKAR (PERFUSIONIST ON CONTRACT BASIS)	

**Dr. Uday E. Jadhav**  
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