

B.Sc. CARDIO PULMONARY PERFUSION CARE TECHNOLOGY
THIRD YEAR
PAPER III – CARDIO PULMONARY BYPASS AND ITS COMPLICATIONS
STERILE TECHNIQUES AND SURGICAL ASEPSIS MAINTENANCE

Q.P. Code: 801423

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on: **(3 x 10 = 30)**

1. Elaborate on the complications. During and termination of Cardiopulmonary bypass.
2. Write the components of Cardiopulmonary bypass circuit, Support your answer with the basic bypass circuit diagram with label.
3. Explain briefly on the following special investigations a) Echocardiography
b) Angiography c) Liver function test d) Renal function test.

II. Write notes on: **(8 x 5 = 40)**

1. When do you conclude heparin resistance and its management?
2. What is the pore size of Arterial filter, Gas filter and Cardiotomy filter?
Where will you incorporate exactly in your bypass circuit?
3. As a perfusionist what are the precautions will you take while cooling and rewarming the patient to avoid cerebral damage?
4. Write down on the policies of maintenance on heart lung machine and cleaning protocol executed in your institution for Hemotherm and heart lung machine.
5. Explain about Alpha stat and pH stat.
6. What are the possible causes for ECG activity during cardioplegic arrest?
7. How do you manage the loss of electrical power during cardiopulmonary bypass?
8. Elaborate about pre bypass checklist and its importance.

III. Short answers on: **(10 x 3 = 30)**

1. Retrograde cerebral perfusion and its uses.
2. Explain the importance of bubble detector in the cardiopulmonary bypass circuit and its working principle.
3. Write about the cardiopulmonary bypass implication of increased cardiothoracic ratio on a chest x-ray.
4. Mention about the types of Hypothermia with its Temperature range.
5. Pre bypass filter, its pore size and importance.
6. What is Sick cell anemia, write down the perfusion technique?
7. Glucose management during bypass.
8. Mention the common complications during Aortic and Venous Cannulation.
9. Name the sites of Temperature monitoring.
10. Write what are the differences between Adult and Paediatric Cardiopulmonary bypass circuits?