

PUZZLE

Subject: 1422-Cardio Pulmonary Bypass and Perfusion Technology

UNIT – I – PREBYPASS CHECKLIST

FINDING Puzzle: Pre-Bypass Checklist Challenge

Instructions

- Read the clues below about the pre-bypass checklist for cardiopulmonary bypass (CPB).
- There are **five hidden errors or omissions** in the checklist steps described.
- Your task: **Identify and explain each error or omission**, referencing the correct protocol.
- For each finding, briefly justify why it is critical for patient safety or procedure success.
- Structure your answer as:
 1. Error/Omission
 2. Why it is critical
 3. What should be done instead

Puzzle Scenario

A perfusionist is preparing for CPB using the following pre-bypass checklist. Review the steps and find the five issues:

1. Patient chart and procedure reviewed.
2. Sterility: Packaging checked, expiry date confirmed, but heat exchanger leak test skipped.
3. Heart-lung machine (HLM): Power connected, startup normal, backup power not checked.
4. Electricity: Power cords connected, but UPS chords not checked.
5. Roller pump: Direction verified, speed control checked, but occlusion setting not confirmed.
6. Gas line: Flow meter functional, hoses checked, but CO₂ flush not performed.
7. Lines & pump tubings: Connections secure, cross lining checked, but debubbling not done.
8. Cardio-delivery system: Solution checked, but systemic lines not de-bubbled.
9. Safety devices: Alarm engaged, but level sensor not tested.
10. Temperature control: Water lines connected, but function not verified.
11. Anticoagulants & drugs: Heparin available, but emergency drugs not checked.

Rubric (10 Marks)

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Criteria	Marks	Description
Identification	5	Correctly identify all five errors/omissions
Explanation	3	Clear, concise explanation of why each is critical
Correction	2	State what should be done instead for each error/omission