

**B.Sc., CARDIOPULMONARY AND PERFUSION CARE TECHNOLOGY**

**SECOND YEAR**

**SUBJECT CODE & NAME – 1411 – CLINICAL MICROBIOLOGY**

**PUZZLES - TOPIC – STERILIZATION – CHEMICAL METHOD**

**1. Clinical Case Scenario Puzzle – 10 Marks:**

*Objective:*

Apply knowledge of chemical disinfectants to solve a real-world infection control crisis.

*Task:*

You are the infection control officer in a hospital. After cardiac surgery, 3 patients develop **Pseudomonas aeruginosa** wound infections.

Investigation reveals the **heart-lung machine** was disinfected using **70% isopropyl alcohol**.

**Question:**

1. Why did the disinfection fail and reason for failure?
2. Recommend the correct chemical method and justify its mode of action and applications?

*Rubrics (10 marks)*

| Criteria                                        | Description                           | Marks |
|-------------------------------------------------|---------------------------------------|-------|
| Identifies failure of alcohol                   | Correctly states $\geq 2$ limitations | 4     |
| Recommended chemical method                     | Correctly                             | 2     |
| Justifies with MOA + suitability (applications) | Correctly justifies                   | 3     |
| Clarity & logic                                 | Well-structured answer                | 1     |