

B.Sc., CARDIAC TECHNOLOGY

FIRST YEAR

SUBJECT CODE & NAME – 1509 – 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 ≥ 2 limitations	4
Recommended chemical method	Correctly	2
Justifies with MOA + suitability (applications)	Correctly justifies	3
Clarity & logic	Well-structured answer	1