

B.Sc., CARDIAC TECHNOLOGY

FIRST YEAR

SUBJECT CODE & NAME – 1509 – MICROBIOLOGY

PUZZLES - TOPIC – STERILIZATION – DECONTAMINATION

1. CLINICAL CASE STUDY: "The Outbreak in the CSSD" – 10 marks:

Case Scenario

During a routine laparoscopic cholecystectomy, the **CSSD team** receives a set of contaminated instruments (forceps, trocars, scissors) visibly soiled with blood and tissue. The next surgery is scheduled in **45 minutes**. The hospital has:

- Working **autoclave**
- **Glutaraldehyde** solution (expired 2 days ago) and **70% alcohol**
- **HEPA-filtered ventilation** in CSSD
- **No hydrogen peroxide plasma sterilizer**

Q.No	Question (2 Marks Each)
1	What is the first step in decontaminating these instruments?
2	These instruments are used inside the abdomen. According to Spaulding classification, they are: A) Non-critical B) Semi-critical C) Critical D) Environmental
3	The expired glutaraldehyde is available. Should it be used for high-level disinfection? Yes/No & why?
4	The autoclave cycle takes 30 minutes + 15 minutes cooling . Can the instruments be ready in 45 minutes? Yes/No and justify.
5	Name one future trend from the document that could prevent such time-pressure issues in CSSD.

Rubrics:

Q.No	What Student Must Do	2 Marks	1 Mark	0 Mark
1	Name the first step in decontamination	Correct step	Vague or partial	Wrong or missing
2	Choose the correct instrument category (A/B/C/D)	Right option	—	Wrong option
3	Say Yes/No + give one short reason about expired chemical	Answer with reason	Only Yes/No	Wrong or no reason
4	Say Yes/No + show time calculation	Correct math	Only Yes/No or wrong math	Wrong answer
5	Name one future trend from the slides	Close match	Vague	Wrong or blank

B.Sc., CARDIAC TECHNOLOGY