

# Clinical Bacteriology: Laboratory Safety, Microbial Control, and Quality Assurance

Clinical Bacteriology · Answer Key · 18 Questions

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## 1. What is the primary aim of biosecurity in a laboratory setting?

- A) To prevent the introduction of infectious disease into the general population.**
- B) To protect valuable biological materials from being taken away and misused.
- C) To confine infectious agents to reduce exposure potential.
- D) To implement full spectrum of safety and security measures.

## 2. Which category of bioterrorism agents is easily transmitted from person to person and has a high mortality rate?

- A) Category B
- B) Category C
- C) Category A**
- D) Category D

## 3. What is the purpose of biocontainment measures in a laboratory?

- A) To prevent valuable biological materials from being misused.
- B) To confine infectious agents to reduce exposure to personnel and the environment.**
- C) To manage risks posed by infectious agents and toxins.
- D) To ensure effective management of laboratory safety and security.

## 4. According to the CDC, how should blood and body fluids from every patient be treated in the laboratory?

- A) As non-infectious unless proven otherwise.
- B) As potentially infectious.**
- C) Only if the patient has a known infection.
- D) As sterile until contaminated.

## 5. Which of the following is NOT an essential practice under Standard Precautions?

- A) Do not eat, drink, smoke, or apply cosmetics in the lab.
- B) Pipette by mouth to ensure direct sample handling.**
- C) Wash hands thoroughly after removing gloves.
- D) Use appropriate barrier precautions for all pathogens.

## 6. Transmission-based precautions are used when a patient is known or suspected to be infected with an agent that requires what?

- A) Standard laboratory practices.
- B) Routine monitoring of environmental surfaces.
- C) Extra measures to prevent spread or transmission.**
- D) Only basic personal protective equipment.

**7. What type of precaution is used for pathogens transmitted through direct or indirect contact with the patient or their environment?**

- A) Airborne Precautions
- B) Droplet Precautions
- C) Contact Precautions**
- D) Standard Precautions

**8. Agents that can remain airborne and infectious over long distances require which type of precaution?**

- A) Contact Precautions
- B) Droplet Precautions
- C) Standard Precautions
- D) Airborne Precautions**

**9. What is the primary function of a Biological Safety Cabinet (BSC)?**

- A) To amplify microbial growth.
- B) To enclose a workplace and protect workers from aerosol exposure to infectious agents.**
- C) To sterilize the entire laboratory.
- D) To store hazardous chemical reagents.

**10. Which class of BSC safeguards both operators and the environment by containing potentially harmful aerosols and facilitates simple airflow?**

- A) Class III BSC
- B) Class II BSC
- C) Class I BSC**
- D) Class IV BSC

**11. Class II BSCs sterilize the air that flows over the infectious material as well as the air to be exhausted. What is a characteristic of Class IIB BSCs?**

- A) 70% of the air is recirculated into the work area.
- B) Exhaust air is discharged outside the building.**
- C) They are primarily used for non-infectious materials.
- D) They maintain a negative pressure for the interior.

**12. Which class of BSC provides the highest level of protection with a leak-proof design, HEPA-filtered supply and exhaust air, and maintains negative pressure?**

- A) Class I BSC
- B) Class II BSC
- C) Class III BSC**
- D) Class IV BSC

**13. Engineering controls are designed to:**

- A) Alter the manner in which a task is performed.
- B) Isolate or remove the hazard from the workplace.**
- C) Require personnel to wear specific PPE.
- D) Increase the frequency of cleaning procedures.

**14. Biological Safety Levels (BSL) are a series of protections delegated to laboratories based on what?**

- A) The size of the laboratory space.
- B) The type of infectious agent and the nature of the work.**
- C) The number of personnel working in the lab.
- D) The availability of basic PPE.

**15. Which BSL level is characterized by 'Moderate individual and community risk' and deals with agents linked to preventable and treatable diseases?**

- A) BSL-1
- B) BSL-2**
- C) BSL-3
- D) BSL-4

**16. In BSL-3, what are some of the secondary barrier requirements?**

- A) Doors with controlled access and sinks for handwashing.
- B) Self-closing doors with locks, waste decontamination, and pest management.**
- C) Separate laboratory building and specialized ventilation systems.
- D) No primary barriers required, only basic PPE.

**17. What is the primary method for cleaning spills of blood or body fluids in a laboratory?**

- A) Wipe with a dry cloth and dispose.
- B) Clean and disinfect the affected area.**
- C) Apply a disinfectant and leave it for 24 hours.
- D) Rinse with water and proceed with normal work.

**18. All materials contaminated with potentially infectious agents must be \_\_\_\_\_ before disposal.**

- A) Incinerated
- B) Autoclaved
- C) Decontaminated**
- D) Sterilized