

Microbiology Essentials

Microbiology · Practice Test · 8 Questions

1. Which cellular structure is responsible for protein synthesis in both prokaryotic and eukaryotic cells?

- A) Mitochondria
- B) Ribosomes
- C) Golgi apparatus
- D) Endoplasmic reticulum

2. What is the primary component of the cell wall in bacteria that provides structural integrity?

- A) Chitin
- B) Cellulose
- C) Peptidoglycan
- D) Pectin

3. Which scientist is credited with the discovery of penicillin, the first true antibiotic?

- A) Louis Pasteur
- B) Robert Koch
- C) Alexander Fleming
- D) Joseph Lister

4. In microbiology, what is the function of the Gram stain procedure?

- A) To identify viral replication
- B) To differentiate bacterial species into two large groups based on cell wall composition
- C) To measure the rate of bacterial metabolism
- D) To isolate fungi from environmental samples

5. Which of the following describes a microorganism that requires oxygen for growth and survival?

- A) Obligate aerobe
- B) Obligate anaerobe
- C) Facultative anaerobe
- D) Microaerophile

6. Viruses are considered obligate intracellular parasites because they lack the ability to:

- A) Produce their own ATP and replicate independently
- B) Synthesize lipids
- C) Maintain an internal pH
- D) Form multicellular structures

7. What term describes the process by which a bacterium reproduces by dividing into two equal halves?

- A) Conjugation
- B) Transformation
- C) Binary fission
- D) Sporulation

8. Which structure allows certain bacteria to move through an aqueous environment?

- A) Pili
- B) Capsule
- C) Flagellum
- D) Plasmid