

Bacteria Quiz PDF

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What is the purpose of Gram staining in bacteria?

- A) To measure bacterial growth
- C) To differentiate bacterial cell wall types
- D) To assess bacterial motility
- C) To identify bacterial shape

What is the primary function of bacterial flagella?

- A) DNA replication
- C) Motility
- D) Energy production
- C) Protein synthesis

Describe the significance of bacteria in the nitrogen cycle.

Explain the process of binary fission in bacteria.

What is the primary method of reproduction in bacteria?

- A) Mitosis
- C) Binary fission
- D) Budding
- C) Meiosis

What role do nitrogen-fixing bacteria play in ecosystems?

- A) Decompose organic matter
- C) Produce oxygen
- D) Cause diseases in plants
- C) Convert nitrogen gas into ammonia

Which of the following is a characteristic of Gram-positive bacteria?

- A) Thin peptidoglycan layer
- C) Presence of outer membrane
- D) High lipid content
- C) Thick peptidoglycan layer

Which bacteria is known for causing tuberculosis?

- A) Escherichia coli
- C) Mycobacterium tuberculosis
- D) Staphylococcus aureus
- C) Streptococcus pneumoniae

Which bacteria are known to be pathogenic? (Select all that apply)

- A) Escherichia coli
- C) Streptococcus
- D) Mycobacterium tuberculosis

- C) Lactobacillus

What are the phases of bacterial growth? (Select all that apply)

- A) Lag phase
 C) Exponential phase
 D) Stationary phase
 C) Decline phase

Which of the following are methods used to identify bacteria in the lab? (Select all that apply)

- A) Gram staining
 C) Culture methods
 D) X-ray diffraction
 C) PCR

Which of the following are mechanisms of antibiotic resistance in bacteria? (Select all that apply)

- A) Mutation
 C) Gene exchange
 D) Photosynthesis
 C) Efflux pumps

How do beneficial bacteria contribute to human health? Provide examples.

Explain how bacteria can be used in biotechnology and industrial applications.

Which of the following are common shapes of bacteria? (Select all that apply)

- A) Cocci
- C) Spirilla
- D) Cuboidal
- C) Bacilli

Which of the following are roles of bacteria in ecosystems? (Select all that apply)

- A) Decomposition
- C) Nitrogen fixation
- D) Photosynthesis
- C) Pathogen control

Which of the following is a common shape of bacteria?

- A) Tetrahedral
- C) Cuboidal
- D) Hexagonal
- C) Spherical

What are the differences between Gram-positive and Gram-negative bacteria?

Which of the following bacteria is commonly found in the human gut?

- A) Lactobacillus
- C) Clostridium botulinum
- D) Vibrio cholerae
- C) Bacillus anthracis

Discuss the impact of antibiotic resistance on public health.