

Fundamentals of Microbiology

Microbiology · Practice Test · 20 Questions

1. What is the primary difference between a prokaryotic cell and a eukaryotic cell?

- A) Presence of a nucleus
- B) Ability to reproduce
- C) Need for oxygen
- D) Presence of ribosomes

2. Which type of microorganism is responsible for causing diseases like the common cold and influenza?

- A) Bacteria
- B) Fungi
- C) Viruses
- D) Protozoa

3. What is a common characteristic of yeast and mold?

- A) They are viruses
- B) They are bacteria
- C) They are fungi
- D) They are protozoa

4. Which scientist is often credited with developing the first effective vaccine?

- A) Louis Pasteur
- B) Robert Koch
- C) Edward Jenner
- D) Alexander Fleming

5. What is the process by which bacteria reproduce asexually?

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

6. Which of the following is an example of a beneficial microorganism found in the human gut?

- A) Salmonella
- B) E. coli (some strains)
- C) Lactobacillus
- D) Staphylococcus aureus

7. What is the primary component of a bacterial cell wall?

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

8. Which term describes a microorganism that can live in the absence of oxygen?

- A) Aerobic
- B) Anaerobic
- C) Facultative
- D) Microaerophilic

9. What essential function do viruses lack, requiring them to infect host cells?

- A) Metabolism
- B) Reproduction
- C) Genetic material
- D) Cellular structure

10. What are the small, rod-shaped structures found in some bacteria that allow them to move?

- A) Pili
- B) Capsules
- C) Flagella
- D) Ribosomes

11. Which disease is caused by the bacterium *Mycobacterium tuberculosis*?

- A) Malaria
- B) Tuberculosis
- C) Cholera
- D) Typhoid fever

12. What is the function of antibiotics?

- A) To kill viruses
- B) To boost the immune system
- C) To kill or inhibit the growth of bacteria
- D) To prevent fungal infections

13. What is the process where a virus replicates inside a host cell?

- A) Fermentation
- B) Photosynthesis
- C) Viral replication
- D) Decomposition

14. What are single-celled organisms without a nucleus or membrane-bound organelles called?

- A) Eukaryotes
- B) Viruses
- C) Prokaryotes
- D) Fungi

15. Which type of microorganism is responsible for making bread rise?

- A) Bacteria
- B) Viruses
- C) Yeasts
- D) Protozoa

16. What is the main shape of *Coccus* bacteria?

- A) Rod-shaped
- B) Spiral-shaped
- C) Spherical
- D) Comma-shaped

17. Which scientist observed microorganisms for the first time using a microscope?

- A) Louis Pasteur
- B) Robert Hooke
- C) Antonie van Leeuwenhoek
- D) Gregor Mendel

18. What is a collection of microorganisms growing on a surface called?

- A) Spore
- B) Plankton
- C) Biofilm
- D) Colony

19. Which microorganism is the cause of malaria?

- A) Bacterium
- B) Fungus
- C) Virus
- D) Protozoan

20. What is the process by which organisms break down dead organic matter?

- A) Fermentation
- B) Decomposition
- C) Nitrogen fixation
- D) Respiration