

History of Microbiology Milestones

Microbiology · Answer Key · 29 Questions

1. Who is considered the "first true microbiologist" and "Father of Microbiology"?

- A) Lucretius
- B) Girolamo Fracastoro
- C) Antonie van Leeuwenhoek**
- D) Francesco Redi

2. What did Girolamo Fracastoro propose regarding disease?

- A) Disease is caused by air currents.
- B) Disease is caused by "invisible creatures".**
- C) Disease is caused by imbalances in humors.
- D) Disease is caused by divine punishment.

3. Which scientist demonstrated that maggots do not arise spontaneously from decaying meat?

- A) John Needham
- B) Lazzaro Spallanzani
- C) Francesco Redi**
- D) Rudolf Virchow

4. Who conducted experiments that appeared to support spontaneous generation in 1745?

- A) Antonie van Leeuwenhoek
- B) Francesco Redi
- C) John Needham**
- D) Lazzaro Spallanzani

5. What method did Lazzaro Spallanzani use to disprove spontaneous generation?

- A) Heating sealed broth**
- B) Exposing broth to air
- C) Using sterile conditions
- D) Observing microorganisms under a microscope

6. What groundbreaking concept was introduced by Edward Jenner in 1796?

- A) Antiseptic surgery
- B) Vaccination**
- C) Antibiotics
- D) Handwashing

7. What preventive measure against disease was demonstrated by Ignaz Semmelweis in the 1840s?

A) Sterilization of instruments

B) Routine handwashing

C) Boiling water

D) Wearing masks

8. What concept did Rudolf Virchow introduce in 1858 that challenged spontaneous generation?

A) Biogenesis

B) Germ Theory

C) Aseptic technique

D) Pasteurization

9. Louis Pasteur resolved the spontaneous generation debate with what type of experiments?

A) Petri dish experiments

B) Swan-neck flask experiments

C) Microscope observations

D) Animal testing

10. Which of these was NOT developed by Louis Pasteur?

A) Aseptic techniques

B) Pasteurization process

C) Vaccines for anthrax and rabies

D) Koch's Postulates

11. Who introduced the system of antiseptic surgery in Britain in 1867?

A) Louis Pasteur

B) Robert Koch

C) Joseph Lister

D) Paul Ehrlich

12. Which scientist provided irrefutable proof of the Germ Theory of Disease?

A) Louis Pasteur

B) Robert Koch

C) Joseph Lister

D) Ignaz Semmelweis

13. Who discovered salvarsan, the first "magic bullet"?

- A) Robert Koch
- B) Paul Ehrlich**
- C) Alexander Fleming
- D) Selman Waksman

14. What significant discovery did Alexander Fleming make in 1928?

- A) Streptomycin
- B) Penicillin**
- C) Tuberculosis vaccine
- D) Salvarsan

15. Which antibiotics were discovered by Selman Waksman?

- A) Penicillin and Salvarsan
- B) Streptomycin and Neomycin
- C) Anthrax vaccine and Rabies vaccine**
- D) Typhoid vaccine and Cholera vaccine

16. What was the main transition in the history of microbiology as described in the summary?

- A) From Germ Theory to spontaneous generation
- B) From spontaneous generation to Germ Theory**
- C) From ancient medicine to modern surgery
- D) From observation to experimentation

17. Who suggested that disease was caused by "invisible creatures" around 98-55 B.C.?

- A) Girolamo Fracastoro
- B) Lucretius**
- C) Antonie van Leeuwenhoek
- D) Francesco Redi

18. Antonie van Leeuwenhoek was the first to observe and describe living microorganisms, which he called:

- A) Bacteria
- B) Viruses
- C) Animalcules**
- D) Fungi

19. The theory of Spontaneous Generation was opposed by which scientist's demonstration with maggots?

- A) John Needham
- B) Lazzaro Spallanzani
- C) Francesco Redi**
- D) Rudolf Virchow

20. What was the primary goal of Lazzaro Spallanzani's improved experiments on infusions?

- A) To prove spontaneous generation
- B) To support the Germ Theory
- C) To disprove spontaneous generation**
- D) To discover new microorganisms

21. The development of vaccination is credited to which historical figure?

- A) Ignaz Semmelweis
- B) Edward Jenner**
- C) Louis Pasteur
- D) Robert Koch

22. Ignaz Semmelweis's work in the 1840s highlighted the importance of:

- A) Sterile surgical instruments
- B) Patient isolation
- C) Handwashing**
- D) Air purification

23. Rudolf Virchow's concept of Biogenesis stated that:

- A) Disease is caused by germs.
- B) Living cells arise only from pre-existing cells.**
- C) Spontaneous generation is possible under certain conditions.
- D) Microorganisms can be seen with the naked eye.

24. What technique, developed by Louis Pasteur, is used to kill harmful microorganisms in liquids like milk?

- A) Fermentation
- B) Distillation
- C) Pasteurization**
- D) Sterilization

25. Robert Koch established a set of criteria to prove that a specific microorganism causes a specific disease, known as:

- A) Leeuwenhoek's Rules
- B) Pasteur's Principles
- C) Koch's Postulates**
- D) Semmelweis's Guidelines

26. Paul Ehrlich's discovery of salvarsan in 1910 was significant because it was:

- A) The first antibiotic
- B) The first vaccine
- C) The first "magic bullet" for syphilis treatment**
- D) The first method to observe bacteria

27. Penicillin, the first antibiotic, was discovered accidentally by:

- A) Selman Waksman
- B) Robert Koch
- C) Louis Pasteur
- D) Alexander Fleming**

28. Selman Waksman is known for discovering which antibiotics?

- A) Penicillin and Salvarsan
- B) Streptomycin and Neomycin**
- C) Amoxicillin and Azithromycin
- D) Ceftriaxone and Vancomycin

29. The history of microbiology is characterized by a shift from spontaneous generation to the:

- A) Theory of Evolution
- B) Germ Theory of Disease**
- C) Theory of Relativity
- D) Plate Tectonics Theory