

Ch 01: Introduction to Microbiology

1. Who was the first pioneer in Microbiology to use the term “cell” to describe the small, honeycomb-like spaces seen in cork?

- a. Girolamo Fracastoro
- b. Robert Hooke
- c. Edward Jenner
- d. Ignaz Semmelweis

ANSWER: b

2. Which researcher in the Golden Age of Microbiology was commissioned by French Emperor Napoleon III to create a scientific study on spoilage of beer and wine?

- a. Robert Koch
- b. Joseph Lister
- c. Louis Pasteur
- d. Francesco Redi

ANSWER: c

3. Who was the first person to identify the corona virus using electron microscopy in 1964?

- a. June Almeida
- b. Elizabeth Bugie
- c. Ruth Ella Moore
- d. Antonie van Leeuwenhoek

ANSWER: a

4. Which agent was sent in letters through the U.S. Postal Service to media outlets as an act of bioterrorism in 2001?

- a. Anthrax
- b. Cholera
- c. Ebola
- d. Smallpox

ANSWER: a

5. The Healthcare Infection Control Practices Advisory Committee (HICPAC) develops guidelines for healthcare workers to prevent disease transmission in the workplace as a special section of which governmental agency?

- a. ACA – Affordable Care Act
- b. CDC – Centers for Disease Control and Prevention
- c. EPA – Environmental Protection Agency
- d. FDA – Food and Drug Administration

ANSWER: b

6. The Schick test is a skin test developed in 1913 to demonstrate immunity or susceptibility to which disease?

- a. Diphtheria
- b. Polio
- c. Smallpox
- d. Yellow fever

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ANSWER: a

7. What is the term that describes an early belief that living things spontaneously arise from non-living materials?

- a. Cell theory
- b. Germ theory
- c. Abiogenesis
- d. Pasteurization

ANSWER: c

8. Antonie van Leeuwenhoek used which term to describe the tiny organisms he saw with a single-lens microscope?

- a. Cells
- b. Germs
- c. Vital forces
- d. Animalcules

ANSWER: d

9. Which term describes an extensive, possibly world- wide disease event as in the 1918 Spanish Flu or the more recent COVID-19 outbreak?

- a. Dissemination
- b. Epidemic
- c. Germ Warfare
- d. Pandemic

ANSWER: d

10. In 1907, which disease was spread by a woman identified as a carrier but who refused to stop working as a cook and eventually was forced into involuntary quarantine?

- a. Anthrax
- b. Influenza
- c. Typhoid fever
- d. Bubonic plague

ANSWER: c

11. Which term describes a hypothesis or basic assumption based on scientific study and deduction as used by Koch?

- a. Pathogenesis
- b. Postulate
- c. Presumption
- d. Pustule

ANSWER: b

12. Which unsuccessful process was used that injected healthy individuals with fluid from cowpox pustules to try to provide immunity to smallpox?

- a. Antisepsis
- b. Chemotherapy
- c. Streaking

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- d. Variolation

ANSWER:

d

13. Which term describes the process by which genetic material is transferred from one bacterium to another?

- a. Antibiotics
- b. Aseptic technique
- c. Conjugation
- d. Contribution

ANSWER:

c

14. What is the term used for the process of heating various foods such as dairy products just enough to kill microorganisms, but without altering the taste?

- a. Abiogenesis
- b. Miasma theory
- c. Pasteurization
- d. Variolation

ANSWER:

c

15. A person who is vulnerable to disease or infection due to ineffective natural body defenses is identified by which of the following clinical terms?

- a. Conjugated
- b. Inoculated
- c. Contagious
- d. Immunocompromised

ANSWER:

d

16. Who first tried to reduce post-operative infections by soaking dressings in carbolic acid and spraying it over surgical set-ups?

- a. Elizabeth Bugie
- b. Joseph Lister
- c. Robert Koch
- d. Hans Gram

ANSWER:

b

17. Ignaz Semmelweis tried to educate other physicians in ways to reduce incidence of which disease by following hand washing practices of midwives attending to perinatal patients?

- a. Puerperal fever
- b. Typhoid fever
- c. Cholera
- d. Polio

ANSWER:

a

18. Which scientist, who was both a microbiologist and biochemist, was part of the team in 1944 that discovered the antibiotic used to treat *Mycobacterium tuberculosis* infections, but was denied recognition when the Nobel Prize was

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awarded?

- a. Elizabeth Bugie
- b. Paul Ehrlich
- c. Robert Koch
- d. August von Wassermann

ANSWER:

a

19. Which of the following is a guiding moral and ethical principle that surgical technologists are taught early on, but should apply to all members of the surgical team?

- a. Body substance isolation
- b. Personal protective equipment
- c. Surgical conscience
- d. Transmission-based precautions

ANSWER:

c

20. Who was the first to establish the principles of aseptic techniques including use of masks, sterile gowns and gloves, and phenol skin scrubbing?

- a. Almeida
- b. Koch
- c. Lister
- d. Pasteur

ANSWER:

c

21. Surgical team members utilize all of the following to prevent disease transmission EXCEPT:

- a. Aseptic and sterile technique
- b. Koch's postulates
- c. Personal protective equipment
- d. Surgical conscience

ANSWER:

b

22. Which early pioneer in microbiology first theorized that disease was spread through direct contact or airborne transmission?

- a. Girolamo Fracastoro
- b. Edward Jenner
- c. John Needham
- d. Francesco Redi

ANSWER:

a

23. Which laboratory culture technique was developed by Robert Koch and still used today?

- a. Pasteurization by heating
- b. S-shaped flasks with broth
- c. Streak plate wire loop method
- d. Variolation with pustule fluid

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ANSWER:

c

24. Who was first to categorize microorganisms as either aerobic or anaerobic?

- a. Jenner
- b. Koch
- c. Lister
- d. Pasteur

ANSWER:

d

25. Which of the following is NOT a category of transmission-based precautions?

- a. Airborne
- b. Contact
- c. Droplet
- d. Injection

ANSWER:

d

26. Which term describes the presence of a disease continuously present in certain geographic areas and involves relatively few individuals with a low mortality rate?

- a. Concentric
- b. Endemic
- c. Epidemic
- d. Pandemic

ANSWER:

b

27. Which of the following is NOT a component of personal protective equipment (PPE)?

- a. Back brace
- b. Face masks
- c. Goggles
- d. Gowns

ANSWER:

a

28. Standard Precautions is a combination of the major features of Universal Precautions and which of the following?

- a. Body substance isolation
- b. Cough etiquette
- c. Hand hygiene
- d. Surgical conscience

ANSWER:

a

29. Who was the first to discover and name the antibiotic penicillin after observing areas of demarcation on used culture plates contaminated with the mold *Penicillium notatum*?

- a. Paul Ehrlich
- b. Alexander Fleming
- c. Rebecca Lancefield

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d. Ruth Ella Moore

ANSWER:

b

30. Which visual analogy is used to describe the way in which factors combine to allow for the infectious process to occur, but can be stopped by interruption of any component in the process?

- a. Cars on a train
- b. Links of a chain
- c. Pages in a book
- d. Steps on a ladder

ANSWER:

b

31. Explain the meaning and significance of a “surgical conscience” for surgical technologists and other members of the surgical team?

ANSWER:

Varies