

Advanced Microbiology Trivia

Microbiology · Answer Key · 12 Questions

1. In what year did Robert Koch publish his postulates for proving the etiological agent of a disease, a foundational principle in medical microbiology?

- A) 1880
- B) 1882
- C) 1884**
- D) 1886

2. What was the approximate diameter, in nanometers, of the first bacteriophage, discovered by Frederick Twort in 1915?

- A) 10-20 nm
- B) 20-30 nm
- C) 40-50 nm**
- D) 70-80 nm

3. Selman Waksman, Nobel laureate for his discovery of streptomycin in 1944, isolated this antibiotic from which genus of bacteria?

- A) Streptomyces**
- B) Bacillus
- C) Actinomyces
- D) Pseudomonas

4. The first successful vaccine, developed by Edward Jenner against smallpox, utilized material from which animal in 1796?

- A) Sheep
- B) Cow**
- C) Horse
- D) Pig

5. Félix d'Hérelle described bacteriophages in 1917. Approximately how many bacteriophages can infect a single bacterium?

- A) 1-10
- B) 10-100
- C) 100-1000
- D) 1000-10,000**

6. Emil von Behring was awarded the first Nobel Prize in Physiology or Medicine in 1901 for his work on diphtheria antitoxin. By what year did he demonstrate the effectiveness of this serum therapy?

- A) 1888
- B) 1890**
- C) 1892
- D) 1894

7. What is the approximate percentage of microbial cells in the human gut microbiome compared to human cells, according to some estimates from the early 2000s?

- A) 1:1
- B) 1:10
- C) 10:1**
- D) 100:1

8. The discovery of penicillin by Alexander Fleming in 1928 was attributed to contamination by which specific fungal species?

- A) *Penicillium notatum***
- B) *Aspergillus niger*
- C) *Candida albicans*
- D) *Rhizopus stolonifer*

9. In 1953, Watson and Crick published their DNA structure. What is the approximate length, in angstroms, of one complete turn of the B-DNA double helix?

- A) 23 Å
- B) 34 Å**
- C) 46 Å
- D) 58 Å

10. What was the approximate number of known distinct bacterial species identified and cataloged by the end of the 19th century?

- A) Less than 100
- B) Around 500**
- C) Over 1000
- D) Several thousand

11. The development of the electron microscope in the 1930s by Ernst Ruska and Max Knoll allowed for the visualization of viruses. What is the approximate smallest size, in nanometers, of viruses that could be resolved by the early electron microscopes?

- A) 1-5 nm
- B) 10-20 nm**
- C) 20-50 nm
- D) 50-100 nm

12. The discovery of Archaea as a distinct domain of life was proposed by Carl Woese and George Fox in what year based on ribosomal RNA sequencing?

- A) 1968
- B) 1977**
- C) 1985
- D) 1992