

Microbiology Essentials: Facts and Figures

Microbiology · Answer Key · 20 Questions

1. In what year did Antonie van Leeuwenhoek first report his observations of 'animalcules' to the Royal Society?

- A) 1676**
- B) 1776
- C) 1876
- D) 1576

2. How many microns (micrometers) are typically contained in one millimeter?

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

3. Louis Pasteur developed the first vaccine for rabies in which year?

- A) 1885**
- B) 1855
- C) 1905
- D) 1825

4. Robert Koch received the Nobel Prize in Physiology or Medicine in 1905 for his work on which disease?

- A) Malaria
- B) Tuberculosis**
- C) Cholera
- D) Anthrax

5. Alexander Fleming discovered penicillin in a London laboratory in which year?

- A) 1918
- B) 1928**
- C) 1938
- D) 1948

6. Approximately what percentage of the atmosphere is composed of nitrogen, which nitrogen-fixing bacteria help process?

- A) 28%
- B) 78%**
- C) 50%
- D) 10%

7. The Gram stain procedure was developed by Hans Christian Gram in which decade?

- A) 1850s
- B) 1860s
- C) 1870s
- D) 1880s**

8. How many domains of life are recognized in the system proposed by Carl Woese in 1990?

- A) 2
- B) 3**
- C) 4
- D) 5

9. Dmitri Ivanovsky is credited with discovering the first virus (Tobacco Mosaic Virus) in which year?

- A) 1892**
- B) 1912
- C) 1872
- D) 1922

10. What is the approximate number of bacterial cells estimated to inhabit the human microbiome?

- A) Trillions**
- B) Billions
- C) Millions
- D) Thousands

11. In 1952, which scientists confirmed that DNA is the genetic material of bacteriophages?

- A) Hershey and Chase**
- B) Watson and Crick
- C) Franklin and Wilkins
- D) Darwin and Wallace

12. Joseph Lister introduced the use of carbolic acid as an antiseptic in surgery during which year?

- A) 1867**
- B) 1887
- C) 1857
- D) 1897

13. The first human case of the H5N1 avian influenza virus was identified in which year?

A) 1997

B) 1987

C) 2007

D) 2017

14. How many micrometers wide is a typical E. coli bacterium?

A) 1-2

B) 5-10

C) 15-20

D) 50-100

15. Edward Jenner successfully tested the first smallpox vaccine in which year?

A) 1796

B) 1896

C) 1696

D) 1756

16. Approximately how many species of bacteria have been formally named according to the LPSN database?

A) Over 20,000

B) Under 1,000

C) Exactly 5,000

D) Over 1,000,000

17. The process of pasteurization involves heating liquids to a temperature of about 63°C for how many minutes?

A) 30

B) 10

C) 5

D) 60

18. How many subunits comprise the 70S ribosome found in prokaryotes?

A) 2

B) 3

C) 4

D) 5

19. In 1977, Carl Woese used which specific molecule to define the Archaea domain?

A) 16S rRNA

B) DNA polymerase

C) Mitochondrial DNA

D) ATP

20. How many micrometers are typically in the length of a human red blood cell?

A) 7-8

B) 1-2

C) 20-30

D) 50-60