

Historical Milestones in Basic Science

History Of Science · Answer Key · 25 Questions

1. Who is credited with the discovery of the law of universal gravitation in his 1687 publication, 'Philosophiae Naturalis Principia Mathematica'?

- A) Isaac Newton**
- B) Johannes Kepler
- C) Galileo Galilei
- D) Albert Einstein

2. Which scientist is famously associated with the discovery of the structure of DNA via X-ray crystallography, known as Photo 51?

- A) Rosalind Franklin**
- B) Barbara McClintock
- C) Dorothy Hodgkin
- D) Ada Lovelace

3. In 1911, Ernest Rutherford discovered which part of the atom through his famous gold foil experiment?

- A) The electron
- B) The nucleus**
- C) The neutron
- D) The valence shell

4. Which element was the first to be discovered in the Sun via spectroscopy before it was found on Earth?

- A) Helium**
- B) Neon
- C) Argon
- D) Krypton

5. Who wrote the seminal 1859 book 'On the Origin of Species', which introduced the scientific theory of evolution by natural selection?

- A) Gregor Mendel
- B) Alfred Russel Wallace
- C) Charles Darwin**
- D) Jean-Baptiste Lamarck

6. What medical breakthrough did Edward Jenner achieve in 1796 that laid the foundation for immunology?

- A) Discovery of penicillin
- B) Creation of the smallpox vaccine**
- C) Identification of bacteria
- D) Development of anesthesia

7. Marie Curie was the first person to win two Nobel Prizes in two different scientific fields. Which were they?

- A) Physics and Chemistry**
- B) Chemistry and Biology
- C) Physics and Medicine
- D) Medicine and Chemistry

8. In 1610, Galileo Galilei used a telescope to discover the four largest moons orbiting which planet?

- A) Mars
- B) Saturn
- C) Jupiter**
- D) Venus

9. Which scientist discovered the existence of 'electromagnetic induction' in 1831, leading to the invention of the electric generator?

- A) Nikola Tesla
- B) Michael Faraday**
- C) James Clerk Maxwell
- D) Thomas Edison

10. Louis Pasteur is widely recognized for developing the process that kills microorganisms in food products such as milk and wine. What is it called?

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

11. What did Dmitri Mendeleev create in 1869 that allowed him to predict the existence of undiscovered elements?

- A) The first Periodic Table**
- B) The atomic model
- C) Quantum theory
- D) Laws of thermodynamics

12. Who successfully demonstrated the first sustained, controlled nuclear chain reaction at the University of Chicago in 1942?

A) J. Robert Oppenheimer

B) Enrico Fermi

C) Richard Feynman

D) Leo Szilard

13. In 1928, Alexander Fleming discovered which substance, marking the beginning of the antibiotic era?

A) Streptomycin

B) Tetracycline

C) Penicillin

D) Sulfonamide

14. What significant astronomical observation did Edwin Hubble announce in 1929 regarding the state of the universe?

A) The universe is static

B) The universe is expanding

C) The universe has a fixed size

D) The universe is contracting

15. Which ancient Greek scientist is known for formulating the principle of buoyancy, often referred to as his 'Eureka' moment?

A) Archimedes

B) Aristotle

C) Pythagoras

D) Plato

16. The Cavendish Experiment in 1798 was the first to successfully measure which physical constant?

A) The speed of light

B) The universal gravitational constant

C) The charge of an electron

D) Planck's constant

17. Which female astronomer discovered 'pulsars' in 1967, a finding for which her advisor received the Nobel Prize?

A) Cecilia Payne-Gaposchkin

B) Vera Rubin

C) Jocelyn Bell Burnell

D) Henrietta Swan Leavitt

18. Who formulated the laws of planetary motion, describing how planets orbit the Sun in elliptical paths?

- A) Nicolaus Copernicus
- B) Tycho Brahe
- C) Johannes Kepler**
- D) Ptolemy

19. What did Robert Hooke name in 1665 after observing cork under a microscope?

- A) Molecules
- B) Atoms
- C) Cells**
- D) Organelles

20. Which scientist is credited with the development of the first successful polio vaccine in the early 1950s?

- A) Jonas Salk**
- B) Albert Sabin
- C) Louis Pasteur
- D) Robert Koch

21. In 1905, Albert Einstein published his paper on the Photoelectric Effect, which helped prove which aspect of light?

- A) Wave-particle duality**
- B) Light as a pure wave
- C) Light as a massless particle
- D) Refraction properties

22. Who identified the three laws of motion that provided the basis for classical mechanics?

- A) Isaac Newton**
- B) René Descartes
- C) Johannes Kepler
- D) Christiaan Huygens

23. What substance did William Harvey correctly identify as being circulated throughout the body by the heart in 1628?

- A) Lymph
- B) Blood**
- C) Oxygenated air
- D) Nutrient-rich chyle

24. Which early 20th-century scientist developed the theory of continental drift, published in 1915?

- A) Harry Hess
- B) Alfred Wegener**
- C) Charles Lyell
- D) James Hutton

25. The 'Double Helix' model of DNA was published in 1953 by which two scientists?

- A) Watson and Crick**
- B) Franklin and Wilkins
- C) Hershey and Chase
- D) Meselson and Stahl