

Historical Milestones in Quantum Physics

Quantum Physics · Answer Key · 10 Questions

1. Which scientist introduced the concept of the 'quantum of action' in 1900 to solve the ultraviolet catastrophe?

- A) Max Planck**
- B) Albert Einstein
- C) Niels Bohr
- D) Louis de Broglie

2. The 1927 Solvay Conference is most famous for the debate between which two physicists regarding the interpretation of quantum mechanics?

- A) Werner Heisenberg and Erwin Schrödinger
- B) Albert Einstein and Niels Bohr**
- C) Max Born and Wolfgang Pauli
- D) Paul Dirac and Richard Feynman

3. In 1922, which experiment provided direct evidence of the quantization of angular momentum in atoms?

- A) Davisson-Germer experiment
- B) Stern-Gerlach experiment**
- C) Michelson-Morley experiment
- D) Franck-Hertz experiment

4. Who was the first person to propose the wave-particle duality of matter in his 1924 doctoral thesis?

- A) Erwin Schrödinger
- B) Max Born
- C) Louis de Broglie**
- D) Werner Heisenberg

5. Which physicist was awarded the 1932 Nobel Prize in Physics for the creation of quantum mechanics, specifically the discovery of allotropic forms of hydrogen?

- A) Werner Heisenberg**
- B) Paul Dirac
- C) Erwin Schrödinger
- D) Wolfram Kunz

6. The concept of 'matrix mechanics' was formulated in 1925 by whom?

- A) Erwin Schrödinger
- B) Werner Heisenberg, Max Born, and Pascual Jordan**
- C) Louis de Broglie and Wolfgang Pauli
- D) Paul Dirac and Enrico Fermi

7. What phenomenon did the Davisson-Germer experiment of 1927 demonstrate, confirming a core hypothesis of quantum mechanics?

- A) Electron diffraction**
- B) Photoelectric effect
- C) Quantization of charge
- D) Blackbody radiation

8. Which scientist famously coined the term 'entanglement' (Verschränkung) in 1935?

- A) Albert Einstein
- B) Niels Bohr
- C) Erwin Schrödinger**
- D) John Bell

9. In 1926, which physicist derived the wave equation that describes how the quantum state of a physical system changes over time?

- A) Max Born
- B) Erwin Schrödinger**
- C) Wolfgang Pauli
- D) Paul Dirac

10. Who received the Nobel Prize in Physics for the discovery of the exclusion principle, which explains the shell structure of atoms?

- A) Wolfgang Pauli**
- B) Enrico Fermi
- C) John von Neumann
- D) Hideki Yukawa