

Pioneers of Nuclear Energy

Nuclear Energy · Answer Key · 10 Questions

1. Who is credited with the discovery of radioactivity, laying the groundwork for nuclear physics?

- A) Marie Curie
- B) Henri Becquerel**
- C) Ernest Rutherford
- D) Albert Einstein

2. What was the name of the first experimental nuclear reactor to achieve a self-sustaining chain reaction?

- A) CP-1 (Chicago Pile-1)**
- B) Oak Ridge X-10 Graphite Reactor
- C) Hanford B Reactor
- D) Obninsk Nuclear Power Plant

3. In what year did Enrico Fermi achieve the first controlled, self-sustaining nuclear chain reaction?

- A) 1938
- B) 1942**
- C) 1945
- D) 1951

4. The discovery of nuclear fission, the process by which an atom's nucleus splits, is most closely associated with which scientists?

- A) Lise Meitner and Otto Hahn**
- B) Niels Bohr and Werner Heisenberg
- C) J. Robert Oppenheimer and Leo Szilard
- D) James Chadwick and Enrico Fermi

5. Which nation operated the world's first nuclear power plant connected to a public grid?

- A) United States
- B) United Kingdom
- C) Soviet Union**
- D) France

6. What is the term for the naturally occurring process where unstable atomic nuclei lose energy by emitting radiation?

- A) Nuclear fusion
- B) Radioactive decay**
- C) Nuclear fission
- D) Cherenkov radiation

7. The Manhattan Project was a top-secret research and development undertaking during World War II. What was its primary objective?

- A) To develop radar technology
- B) To build the first atomic bomb**
- C) To study the effects of radiation on biology
- D) To establish a global nuclear energy network

8. Who is often called the 'father of the atomic bomb' for his leadership of the Los Alamos Laboratory during the Manhattan Project?

- A) Enrico Fermi
- B) Leo Szilard
- C) J. Robert Oppenheimer**
- D) Albert Einstein

9. The first electricity generated from nuclear energy for a public power grid occurred in 1954 at which nuclear power plant?

- A) Calder Hall
- B) Shippingport Atomic Power Station
- C) Obninsk Nuclear Power Plant**
- D) Magnox Reactor

10. What fundamental particle was discovered by James Chadwick in 1932, a discovery crucial for understanding nuclear structure?

- A) Proton
- B) Electron
- C) Neutron**
- D) Photon