

Foundations of Nuclear Energy

Nuclear Energy · Answer Key · 15 Questions

1. Who is credited with discovering radioactivity, a phenomenon fundamental to nuclear energy?

- A) Albert Einstein
- B) Marie Curie
- C) Henri Becquerel**
- D) Niels Bohr

2. What year is generally recognized as the year of the first controlled, self-sustaining nuclear chain reaction?

- A) 1939
- B) 1942**
- C) 1945
- D) 1951

3. The first nuclear power plant to generate electricity for a commercial grid was located in which country?

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

4. What is the name of the scientist who developed the first nuclear reactor, known as Chicago Pile-1?

- A) Enrico Fermi**
- B) Robert Oppenheimer
- C) Leo Szilard
- D) Edward Teller

5. The process of splitting an atom's nucleus to release energy is called:

- A) Fusion
- B) Fission**
- C) Radioactive Decay
- D) Transmutation

6. In what decade was the first nuclear-powered submarine launched?

- A) 1940s
- B) 1950s**
- C) 1960s
- D) 1970s

7. What element is most commonly used as fuel in nuclear power reactors?

- A) Plutonium
- B) Thorium
- C) Uranium**
- D) Radium

8. The Manhattan Project was a World War II-era research and development undertaking responsible for producing the first:

- A) Atomic bomb**
- B) Nuclear reactor
- C) Radioisotope thermoelectric generator
- D) Fusion weapon

9. The Chernobyl disaster occurred in which year?

- A) 1980
- B) 1986**
- C) 1991
- D) 1995

10. What is the name of the unit of measurement for radioactivity?

- A) Watt
- B) Joule
- C) Becquerel**
- D) Farad

11. The first commercial nuclear power plant to generate electricity was:

- A) Calder Hall
- B) Shippingport
- C) Obninsk**
- D) Magnox

12. Which scientist proposed the famous equation $E=mc^2$, which explains the relationship between mass and energy, crucial for understanding nuclear energy?

- A) Isaac Newton
- B) Galileo Galilei
- C) Max Planck
- D) Albert Einstein**

13. The process where light atomic nuclei combine to form a heavier nucleus, releasing immense energy, is known as:

- A) Fission
- B) Chain Reaction
- C) Fusion**
- D) Isomerism

14. What was the name of the first nuclear-powered aircraft carrier?

- A) USS Enterprise**
- B) USS Nautilus
- C) USS Nimitz
- D) USS America

15. The first nuclear weapon was detonated in a test named:

- A) Little Boy
- B) Fat Man
- C) Trinity**
- D) Castle Bravo