

Basic Nuclear Energy Facts

Physics · Practice Test · 8 Questions

1. What element is most commonly used as fuel in commercial nuclear power plants?

- A) Uranium
- B) Coal
- C) Iron
- D) Hydrogen

2. What is the process of splitting a heavy atomic nucleus into smaller parts called?

- A) Nuclear Fusion
- B) Nuclear Fission
- C) Photosynthesis
- D) Combustion

3. Which particle is absorbed by an atomic nucleus to trigger a fission chain reaction?

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

4. What nuclear reaction powers the Sun and other stars by combining light atomic nuclei?

- A) Nuclear Fission
- B) Nuclear Fusion
- C) Radioactive Decay
- D) Geothermal Heat

5. Which famous equation developed by Albert Einstein explains how mass transforms into nuclear energy?

- A) $A = \pi r^2$
- B) $E = mc^2$
- C) $F = ma$
- D) $V = IR$

6. What is the white cloud seen rising from the cooling towers of a nuclear power plant?

- A) Smoke from coal
- B) Carbon dioxide gas
- C) Chemical pollution
- D) Clean water vapor

7. What components are inserted into a nuclear reactor core to absorb neutrons and control the reaction rate?

- A) Control rods
- B) Solar panels
- C) Turbines
- D) Fuel pellets

8. From which specific part of an atom is nuclear energy released?

- A) Electron cloud
- B) Outer shell
- C) Atomic nucleus
- D) Valence shell