

Physical Science Hard Facts

Physical Science · Practice Test · 10 Questions

1. In what year did Ernest Rutherford publish his discovery of the atomic nucleus based on the gold foil experiment?

- A) 1909
- B) 1911
- C) 1913
- D) 1919

2. What is the precise value of the speed of light in a vacuum as defined by the SI system in meters per second?

- A) 299,792,458
- B) 299,792,456
- C) 300,000,000
- D) 299,794,580

3. Which scientist is credited with the 1869 publication of the first widely recognized periodic table of elements?

- A) John Newlands
- B) Julius Lothar Meyer
- C) Dmitri Mendeleev
- D) Henry Moseley

4. What is the atomic number of the element Darmstadtium, which was first synthesized in 1994?

- A) 108
- B) 110
- C) 112
- D) 114

5. In 1900, Max Planck introduced the constant h to solve the ultraviolet catastrophe; what is its approximate value in Joule-seconds?

- A) 6.626×10^{-34}
- B) 1.381×10^{-23}
- C) 8.854×10^{-12}
- D) 1.602×10^{-19}

6. How many elements were officially recognized as having stable isotopes when the first standard atomic weight table was published by the IUPAC?

- A) 72
- B) 80
- C) 84
- D) 92

7. Who was the first person to measure the gravitational constant G with significant accuracy in 1798?

- A) Isaac Newton
- B) Henry Cavendish
- C) Charles-Augustin de Coulomb
- D) Pierre-Simon Laplace

8. What is the triple point temperature of water on the Kelvin scale, as defined by the ITS-90 standard?

- A) 273.15 K
- B) 273.16 K
- C) 273.17 K
- D) 273.18 K

9. In 1932, James Chadwick discovered which subatomic particle by bombarding beryllium with alpha particles?

- A) Positron
- B) Neutron
- C) Muon
- D) Neutrino

10. What is the exact number of atoms in one mole of a substance, known as the Avogadro constant, defined since 2019?

- A) 6.022×10^{23}
- B) $6.02214076 \times 10^{23}$
- C) $6.02214179 \times 10^{23}$
- D) 6.023×10^{23}