

Advanced Foundations of Science

Basic Science · Practice Test · 10 Questions

1. Which process describes the direct transition of a substance from a solid phase to a gas phase without passing through the liquid state?

- A) Condensation
- B) Sublimation
- C) Deposition
- D) Evaporation

2. In the human circulatory system, which blood vessels are responsible for carrying deoxygenated blood away from the heart to the lungs?

- A) Pulmonary arteries
- B) Pulmonary veins
- C) Aorta
- D) Coronary arteries

3. What is the chemical name for the compound commonly known as 'baking soda'?

- A) Sodium carbonate
- B) Sodium hydroxide
- C) Sodium bicarbonate
- D) Calcium carbonate

4. Which fundamental force is responsible for holding the nucleus of an atom together?

- A) Electromagnetic force
- B) Weak nuclear force
- C) Strong nuclear force
- D) Gravitational force

5. What is the term for the phenomenon where light bends as it passes from one medium into another of a different density?

- A) Reflection
- B) Diffraction
- C) Refraction
- D) Polarization

6. In genetics, which nitrogenous base is found in RNA but replaced by thymine in DNA?

- A) Cytosine
- B) Adenine
- C) Guanine
- D) Uracil

7. Which part of the electromagnetic spectrum has the shortest wavelength?

- A) Gamma rays
- B) Ultraviolet
- C) Infrared
- D) Radio waves

8. What is the primary function of the Golgi apparatus within a eukaryotic cell?

- A) ATP production
- B) Protein synthesis
- C) Modification, sorting, and packaging of proteins
- D) Storage of genetic material

9. What is the atomic number of the element that has the symbol 'Fe'?

- A) 24
- B) 26
- C) 28
- D) 30

10. Which law of thermodynamics states that the entropy of an isolated system always increases over time?

- A) First law
- B) Second law
- C) Third law
- D) Zeroth law