

Earth Science and Human Health

Earth Science · Answer Key · 8 Questions

1. What atmospheric change at high altitudes primarily causes acute mountain sickness in humans?

- A) A decrease in the percentage of oxygen in the air
- B) A drop in overall atmospheric pressure and oxygen partial pressure**
- C) An increase in carbon dioxide concentration
- D) A sudden drop in ambient air temperature

2. Which chemical element, found naturally in Earth's oceans and soil, is required by the human thyroid gland to produce essential hormones?

- A) Iodine**
- B) Fluorine
- C) Lithium
- D) Phosphorus

3. Radon-222 is a naturally occurring radioactive gas produced by the decay of uranium in Earth's crust. Prolonged exposure to it is a leading cause of which condition?

- A) Skin cancer
- B) Leukemia
- C) Lung cancer**
- D) Liver failure

4. Which type of solar ultraviolet radiation reaching Earth's surface is responsible for triggering Vitamin D synthesis in human skin?

- A) UVA rays
- B) UVC rays
- C) Infrared rays
- D) UVB rays**

5. Human bones and teeth are composed mostly of a biological crystalline mineral form of calcium phosphate known as what?

- A) Calcite
- B) Hydroxyapatite**
- C) Gypsum
- D) Halite

6. As a deep-sea diver descends, increasing hydrostatic pressure causes higher amounts of which ambient gas to dissolve into body tissues, causing a narcotic effect?

- A) Carbon dioxide
- B) Helium
- C) Nitrogen**
- D) Argon

7. Inhalation of volcanic ash poses serious respiratory risks largely because the ash contains tiny particles of which mineral compound?

- A) Crystalline silica**
- B) Calcium carbonate
- C) Potassium nitrate
- D) Magnesium sulfate

8. Iron, the most abundant element by mass in Earth's core, is essential in the human body as the key component of which oxygen-transporting protein?

- A) Myosin
- B) Hemoglobin**
- C) Collagen
- D) Albumin