

Advanced Volcanology Fundamentals

Volcanology · Practice Test · 12 Questions

1. Which specific type of volcano is characterized by the accumulation of basaltic lava flows and has a broad, gently sloping profile?

- A) Cinder cone
- B) Stratovolcano
- C) Shield volcano
- D) Lava dome

2. What is the primary factor that determines whether a volcanic eruption will be explosive or effusive?

- A) The height of the volcano
- B) The viscosity of the magma
- C) The age of the surrounding rock
- D) The number of nearby earthquakes

3. Which volcanic feature is formed when a magma chamber collapses after a massive eruption, creating a large, basin-shaped depression?

- A) Caldera
- B) Fumarole
- C) Batholith
- D) Vent

4. What is the term for a fast-moving, high-temperature density current of gas and volcanic matter that flows down the side of a volcano?

- A) Lahar
- B) Tephra
- C) Pyroclastic flow
- D) Basaltic flood

5. At which type of tectonic plate boundary are the most powerful stratovolcanoes typically formed?

- A) Divergent boundary
- B) Transform boundary
- C) Subduction zone
- D) Mid-ocean ridge

6. Which term describes the size of volcanic particles, such as ash, lapilli, and volcanic bombs, collectively?

- A) Magma
- B) Tephra
- C) Obsidian
- D) Pumice

7. What is the main chemical component that significantly increases the viscosity of magma?

- A) Iron
- B) Magnesium
- C) Silica
- D) Calcium

8. A lahar is a specific type of volcanic hazard characterized by which of the following?

- A) A cloud of sulfurous gas
- B) A river of mud and volcanic debris
- C) A high-velocity earthquake wave
- D) A solidified lava plug

9. Which of these is a localized zone of hot mantle material that rises to the surface, often far from plate boundaries?

- A) Hotspot
- B) Rift zone
- C) Trench
- D) Fracture zone

10. What is the defining characteristic of a cinder cone volcano?

- A) Layered lava and ash flows
- B) Predominantly explosive, short-lived eruptions of loose pyroclastic fragments
- C) Low-viscosity lava flows forming vast plains
- D) Long-term intrusive formation of granite

11. Which of these volcanic gases is generally emitted in the greatest quantity during an eruption?

- A) Sulfur dioxide
- B) Hydrogen chloride
- C) Water vapor
- D) Carbon monoxide

12. What is the name for a volcanic vent that emits only volcanic gases, primarily steam?

- A) Geyser
- B) Fumarole
- C) Caldera
- D) Plug