

Volcanology Basics for Students

Volcanology · Answer Key · 25 Questions

1. What is the molten rock called while it is still beneath the Earth's surface?

- A) Lava
- B) Magma**
- C) Ash
- D) Tephra

2. Which of the following is a wide, gently sloping volcano formed by thin, runny lava flows?

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

3. What is the name of the tectonic region surrounding the Pacific Ocean known for frequent volcanic activity?

- A) The Atlantic Ridge
- B) The Ring of Fire**
- C) The Mid-Ocean Belt
- D) The Alpine Fault

4. Which volcanic feature is formed when the top of a volcano collapses after an eruption?

- A) Vent
- B) Fissure
- C) Caldera**
- D) Crater

5. What is the term for a volcanic hazard consisting of a fast-moving current of hot gas and rock?

- A) Lahar
- B) Pyroclastic flow**
- C) Tsunami
- D) Lava fountain

6. Which gas is most commonly emitted in large quantities by active volcanoes?

- A) Oxygen
- B) Nitrogen
- C) Water vapor**
- D) Helium

7. What type of rock is formed when volcanic lava cools and solidifies?

- A) Sedimentary
- B) Metamorphic
- C) Igneous**
- D) Limestone

8. A 'Lahar' is specifically defined as what type of volcanic hazard?

- A) A flow of mud and volcanic debris**
- B) An earthquake triggered by magma
- C) A cloud of toxic sulfur gas
- D) A large ocean wave

9. Which instrument is primarily used by scientists to detect volcanic earthquakes?

- A) Barometer
- B) Seismograph**
- C) Thermometer
- D) Anemometer

10. What is the most common material ejected during an explosive volcanic eruption?

- A) Solid gold
- B) Volcanic ash**
- C) Liquid iron
- D) Frozen water

11. What do geologists call a volcano that is not currently erupting but is expected to erupt again in the future?

- A) Extinct
- B) Dormant**
- C) Active
- D) Defunct

12. Which type of volcano is typically symmetrical, cone-shaped, and built of alternating layers of lava and ash?

- A) Composite volcano**
- B) Shield volcano
- C) Cinder cone
- D) Fissure vent

13. What is the name of the opening in the Earth's crust through which volcanic materials reach the surface?

A) Conduit

B) Vent

C) Magma chamber

D) Fissure

14. Which state in the United States is famous for its massive shield volcanoes, such as Mauna Loa?

A) California

B) Alaska

C) Hawaii

D) Washington

15. What is the name of the study of volcanoes and volcanic phenomena?

A) Seismology

B) Volcanology

C) Meteorology

D) Hydrology

16. Small, steep-sided volcanoes built entirely from loose volcanic fragments are known as:

A) Cinder cones

B) Shield volcanoes

C) Stratovolcanoes

D) Composite volcanoes

17. Which volcanic hazard refers specifically to the cooling of lava into solid rock?

A) Tephra fall

B) Lava flow

C) Pyroclastic surge

D) Ash fall

18. What is the name for the large underground pool of liquid rock beneath a volcano?

A) Magma chamber

B) Lava lake

C) Crater

D) Vent

19. Volcanic ash is made up of tiny fragments of what?

- A) Plastic and rubber
- B) Hardened mud
- C) Glass, minerals, and rock**
- D) Compressed organic matter

20. Which of these is considered a 'dormant' volcano in the United States, famously erupting in 1980?

- A) Mount St. Helens**
- B) Kilauea
- C) Yellowstone
- D) Mauna Kea

21. What term describes the thickness or 'stickiness' of magma?

- A) Buoyancy
- B) Viscosity**
- C) Density
- D) Gravity

22. Which of the following is often a precursor signal that a volcano might erupt?

- A) Increased earthquake activity**
- B) Decrease in temperature
- C) Change in wind direction
- D) Cloud formation

23. What is the name of a long crack in the Earth's surface through which lava can erupt?

- A) Fissure**
- B) Caldera
- C) Summit
- D) Vent

24. Approximately how many active volcanoes are there on Earth?

- A) About 100
- B) About 1,500**
- C) About 50,000
- D) Over 1 million

25. Which volcanic product is often mined and used in items like pumice stones or concrete?

- A) Pumice**
- B) Basalt
- C) Diamond
- D) Coal