

Advanced Natural Disasters Knowledge

Natural Disasters · Practice Test · 25 Questions

1. Which specific tectonic process is responsible for the formation of the 'Ring of Fire' in the Pacific Ocean?

- A) Subduction
- B) Seafloor spreading
- C) Transform faulting
- D) Continental rifting

2. The Enhanced Fujita (EF) scale is used to categorize tornadoes based on what primary factor?

- A) Maximum wind speed
- B) Barometric pressure drop
- C) Estimated damage to structures
- D) Duration of the vortex

3. What is the primary scientific term for the specific location within the Earth where a rupture begins during an earthquake?

- A) Epicenter
- B) Hypocenter
- C) Fault scarp
- D) Seismic shadow zone

4. In tropical cyclone terminology, what is the 'central dense overcast'?

- A) The calm eye of the storm
- B) The high-altitude cloud shield covering the eye
- C) The outer spiral rainbands
- D) The region of maximum sustained winds

5. Which volcanic index measures the explosivity of an eruption based on volume of ejecta and height of eruption column?

- A) Mercalli Intensity Scale
- B) Volcanic Explosivity Index (VEI)
- C) Richter Scale
- D) Saffir-Simpson Scale

6. What causes a 'seiche' in a lake or semi-enclosed body of water?

- A) Tidal pull from the moon
- B) Standing waves caused by seismic activity or wind
- C) Sudden underwater volcanic eruption
- D) Excessive surface tension

7. What is the 'storm surge' in a hurricane primarily caused by?

- A) Extreme rainfall
- B) Low atmospheric pressure and wind stress
- C) Rapid sea-level rise due to tectonic shift
- D) Thermal expansion of ocean water

8. Which gas, commonly released in volcanic eruptions, is heavier than air and can cause asphyxiation in low-lying areas?

- A) Carbon dioxide
- B) Sulfur dioxide
- C) Hydrogen sulfide
- D) Methane

9. What defines a 'supercell' thunderstorm distinct from other storm types?

- A) The presence of lightning
- B) A rotating updraft known as a mesocyclone
- C) Formation in equatorial regions only
- D) Occurring exclusively at night

10. The 1908 Tunguska event in Siberia is widely classified by scientists as what type of natural disaster?

- A) Volcanic eruption
- B) Meteor airburst
- C) Massive landslide
- D) Tectonic subsidence

11. What determines the classification of a 'blizzard' versus a 'heavy snowstorm'?

- A) Total accumulation of snow
- B) Wind speed and visibility duration
- C) Temperature below freezing
- D) Barometric pressure drop

12. What is 'liquefaction' during an earthquake?

- A) The melting of permafrost
- B) Saturated soil losing strength and behaving like a liquid
- C) The rapid evaporation of groundwater
- D) The conversion of solid rock to magma

13. Which ocean basin is most frequently affected by tropical cyclones referred to as 'typhoons'?

- A) North Atlantic
- B) Northwest Pacific
- C) South Indian
- D) South Atlantic

14. What is the primary cause of a 'lahar' associated with volcanoes?

- A) Lava flow
- B) Pyroclastic density currents
- C) Rapid melting of snow and ice
- D) Tephra fall

15. What does the 'Saffir-Simpson Scale' specifically measure?

- A) Tornado intensity
- B) Hurricane wind speed
- C) Earthquake magnitude
- D) Tsunami height

16. The 'P-wave' in seismology stands for what?

- A) Pressure wave
- B) Primary wave
- C) Periodic wave
- D) Particle wave

17. Which of these phenomena is specifically triggered by underwater landslides or earthquakes?

- A) Cyclogenesis
- B) Tsunami
- C) Monsoon
- D) Drought

18. What defines 'pyroclastic flow' during a volcanic eruption?

- A) Flowing liquid lava
- B) High-density mix of hot gas and volcanic matter
- C) Ash falling slowly from the sky
- D) Mudflow caused by rain

19. Which weather pattern is defined by an unusually cool sea surface temperature in the central and eastern Pacific?

- A) El Niño
- B) La Niña
- C) Southern Oscillation
- D) Polar Vortex

20. What is the term for a windstorm that causes widespread, long-lived straight-line wind damage?

- A) Derecho
- B) Squall line
- C) Habub
- D) Chinook

21. Which layer of the atmosphere does the vast majority of weather activity occur in?

- A) Stratosphere
- B) Mesosphere
- C) Troposphere
- D) Thermosphere

22. What is the primary driver of the seasonal movement of the Intertropical Convergence Zone (ITCZ)?

- A) Solar heating of the Earth
- B) Ocean currents
- C) Volcanic ash plumes
- D) Earth's rotation speed

23. A 'Gale' on the Beaufort Scale corresponds to what wind condition?

- A) Very light breeze
- B) Storm force winds
- C) Strong winds capable of breaking twigs
- D) Hurricane force winds

24. Which scale is used specifically to categorize the intensity of damage from an earthquake, distinct from magnitude?

- A) Richter Scale
- B) Moment Magnitude Scale
- C) Modified Mercalli Intensity Scale
- D) Fujita Scale

25. What is the main cause of drought related to the 'feedback loop' of dry soil?

- A) Increased albedo
- B) Decreased evapotranspiration
- C) Higher groundwater levels
- D) Increased atmospheric humidity