Understanding Earthquakes and Their Measurement

Science · Practice Test · 23 Questions

1. What is the best-known scale used to describe the magnitude of an earthquake?

A) Mercalli scale
B) Richter scale
C) Moment Magnitude scale
D) Saffir-Simpson scale

2. The Richter scale gives a measure of the energy released at the earthquake's _____.

A) epicentre
B) surface
C) focus
D) fault line

3. Who devised the Richter scale?

A) Charles Darwin
B) Albert Einstein
C) Charles E. Richter
D) Galileo Galilei

4. What is the typical range of the Richter scale?

A) 1 to 5
B) 0 to 10
C) 1 to 10
D) 0 to 12

5. An instrument that detects and records the intensity of seismic waves generated by an earthquake is called a(n) _____.

A) barometer
B) seismograph
C) altimeter
D) thermometer

6. A place of origin of an earthquake inside the earth is called the _____.

A) epicentre
B) fault
C) seismic focus
D) crust

7. The depth of the seismic focus below the earth's surface is called the _____.

A) epicentral distance
B) focal depth
C) seismic radius
D) crustal thickness

8. The point on the surface of the earth directly above the focus of an earthquake is called the _____.

A) seismic focus
B) fault scarp
C) epicentre
D) core

9. Waves generated inside the earth's surface due to an earthquake are called _____.

A) sound waves
B) light waves
C) seismic waves
D) radio waves

10. The graphical record of the intensity of seismic waves is called a _____.

A) seismograph
B) seismogram
C) sonogram
D) echogram

11. The Richter scale is logarithmic, meaning a change of one unit corresponds to a _____ times change in energy.

A) 2
B) 5
C) 10
D) 100

12. An earthquake with a magnitude of 7 or more on the Richter scale is considered _____.

A) mild
B) moderate
C) strong
D) destructive

13. A seismograph works based on the principle of a _____.

A) lever
B) pulley
C) vibrating pendulum
D) spring

14. When an earthquake occurs, the freely suspended bob of the pendulum in a seismograph _____.

A) shakes violently
B) does not shake and remains in place
C) swings wildly
D) falls off

15. Which of the following is NOT a typical damaging effect of earthquakes mentioned in the text?

A) Damage to buildings and roads
B) Landslides
C) Floods caused by river course changes
D) Volcanic eruptions

16. Underground nuclear explosions can cause _____.

A) heavy rainfall
B) powerful vibrations and earthquakes
C) magnetic storms
D) acid rain

17. An earthquake under the ocean floor can generate powerful sea waves called _____.

A) hurricanes
B) typhoons
C) tsunamis
D) monsoons

18. Tsunamis can travel at speeds of about _____ km/h in deep water.

A) 70-80
B) 100-200
C) 700-800
D) 1000-1200

19. What can happen to sewer systems during an earthquake?

A) They get cleaner
B) They may burst open, releasing sewage
C) They become more efficient
D) They are unaffected

20. Earthquakes can cause _____ in hilly areas and mountains.

A) droughts
B) landslides
C) floods
D) blizzards

21. Communication systems can be disrupted by earthquakes due to _____.

A) power surges
B) uprooted electric poles and collapsed towers
C) internet outages
D) radio interference

22. A shallow earthquake has a focal depth of _____.

A) more than 700 km
B) 70-300 km
C) 60-70 km
D) less than 10 km

23. Intermediate earthquakes have a focal depth between _____ km.

A) 0-60
B) 60-70
C) 70-300
D) 300-700