Natural Phenomena: Lightning and Earthquakes

Science · Practice Test · 22 Questions

1. What natural phenomena are discussed in this text?

A) Lightning and earthquakes
B) Volcanoes and tsunamis
C) Hurricanes and tornadoes
D) Floods and droughts

2. What type of force is produced when a comb is rubbed with dry hair or a balloon with wool?

A) Gravitational force
B) Magnetic force
C) Electrostatic force
D) Nuclear force

3. According to the text, what is lightning?

A) A small electric spark
B) A massive electric charge flowing
C) A sudden release of heat
D) A sound wave in the atmosphere

4. What is the process of giving an electric charge to an object called?

A) Charging by friction
B) Charging by conduction
C) Charging by induction
D) Charging the object

5. What are the two types of electric charges?

A) Positive and neutral
B) Negative and neutral
C) Positive and negative
D) Like and unlike

6. What happens when like charges are brought near each other?

A) They attract
B) They repel
C) They neutralize each other
D) They create a magnetic field

7. What happens when unlike charges are brought near each other?

A) They repel
B) They attract
C) They remain neutral
D) They explode

8. What is an electroscope used for?

A) Measuring temperature
B) Detecting electrical charge and its nature
C) Generating electricity
D) Storing electrical energy

9. In charging by induction, what happens to the nearer end of an uncharged object when the charged object is positively charged?

A) It becomes positively charged
B) It becomes negatively charged
C) It remains neutral
D) It repels electrons

10. What is the process of transferring electric charge from a charged object to the earth called?

A) Conduction
B) Induction
C) Earthing
D) Friction

11. What is a lightning conductor?

A) A device to store lightning
B) A device to attract lightning
C) A device to protect buildings from lightning damage
D) A device to generate lightning

12. What is thunder?

A) The flash of light during lightning
B) The sudden expansion of air due to heat from lightning
C) An electric discharge between clouds
D) A sound produced by storm clouds

13. What are the harmful effects of lightning?

A) Causing fires, shattering buildings, and burning trees
B) Producing ozone in the atmosphere
C) Regulating the nitrogen cycle
D) Cooling the Earth's atmosphere

14. What is the innermost layer of the Earth?

A) Crust
B) Mantle
C) Outer core
D) Inner core

15. What is the main cause of earthquakes mentioned in the text?

A) Volcanic eruptions
B) Meteorite impacts
C) Movement of tectonic plates
D) Underground water flow

16. What is the outermost layer of the Earth called?

A) Mantle
B) Core
C) Crust
D) Lithosphere

17. What is the approximate thickness of the Earth's crust?

A) 5-10 km
B) 30-50 km
C) 2,900 km
D) 6,360 km

18. Benjamin Franklin discovered that there are two kinds of electrical charges: positive and negative. Who is credited with this discovery?

A) Isaac Newton
B) Albert Einstein
C) Benjamin Franklin
D) Nikola Tesla

19. When a charged glass rod is rubbed with silk, what type of charge does it acquire?

A) Negative
B) Positive
C) Neutral
D) Both positive and negative

20. What is the primary function of a lightning conductor?

A) To store electrical charge
B) To provide a path for lightning to safely reach the earth
C) To create lightning
D) To insulate buildings from lightning

21. Why is it advised not to take a bath or shower during thunderstorms?

A) Water can cause electrical appliances to malfunction
B) Water is an excellent conductor of electricity
C) Water can freeze during a storm
D) Water can attract lightning

22. What role does lightning play in the regulation of the nitrogen cycle?

A) It converts atmospheric nitrogen into oxygen
B) It fixes atmospheric nitrogen to the soil
C) It destroys nitrogen compounds in the soil
D) It prevents nitrogen from entering the atmosphere