

Buzzer Question # 1

Question Type: toss-up

Question Format: Multiple Choice

Category: Physical

Question: _____

As oceanic waves move close to shore and begin to be influenced by the bottom, they become breakers. Which of the following is NOT a common type of breaker?

Answer W: _____

Spilling breaker

Answer X: _____

Plunging breaker

Answer Y: _____

Surging breaker

Answer Z: _____

Fetching breaker

Correct Answer: Z: Fetching breaker

Buzzer Question # 2

Question Type: Bonus

Question Format: Short Answer

Category: Geology

Question:

In the wave equation, C equals L divided by T. What are the variables C, L, and T?

Correct Answer:

C = wave speed

L = wave length

T = wave period

Buzzer Question # 3

Question Type: toss-up

Question Format: Multiple Choice

Category: Chemistry

Question:

If 1000 grams of seawater are evaporated, about how many grams of salts are left?

Answer W:

35

Answer X:

75

Answer Y:

115

Answer Z:

350

Correct Answer: W: 35

Buzzer Question # 4

Question Type: Bonus

Question Format: Short Answer

Category: Geography

Question:

Name the current that divides to form the Alaska Current and the California Current.

Correct Answer: North Pacific current OR North Pacific Drift

Buzzer Question # 5

Question Type: toss-up

Question Format: Multiple Choice

Category: geography

Question:

Which ocean has the most islands?

Answer W:

Pacific

Answer X:

Atlantic

Answer Y:

Southern

Answer Z:

Indian

Correct Answer: W: Pacific

Buzzer Question # 6

Question Type: Bonus

Question Format: Short Answer

Category: Geography

Question:

What unit of distance is approximately the length of one minute of latitude anywhere on Earth?

Correct Answer: nautical mile

Buzzer Question # 7

Question Type: toss-up

Question Format: Multiple Choice

Category: Chemical

Question:

What kinds of waves transmit energy through all states of matter?

Answer W:

longitudinal waves

Answer X:

transverse waves

Answer Y:

orbital waves

Answer Z:

internal waves

Correct Answer: W: longitudinal waves

Buzzer Question # 8

Question Type: Bonus

Question Format: Short Answer

Category: geological

Question:

What kind of sediments form from minerals that precipitate from seawater?

Correct Answer: Hydrogenous sediments

Buzzer Question # 9

Question Type: toss-up

Question Format: Multiple Choice

Category: Chemical

Question: _____

What dissolved gas in seawater is responsible for maintaining its pH?

Answer W: _____

Nitrogen

Answer X: _____

Oxygen

Answer Y: _____

Carbon Dioxide

Answer Z: _____

Argon

Correct Answer: Y: Carbon Dioxide

Buzzer Question # 10

Question Type: Bonus

Question Format: Short Answer

Category: Physical

Question:

Why is the effect of the moon on the Earth's tides over twice as large as the effect of the sun?

Correct Answer: The distance from the moon to the Earth is much less than the distance from the sun to the Earth.

Buzzer Question # 11

Question Type: toss-up

Question Format: Multiple Choice

Category: Physical

Question:

About what percent of the earth's water is in the ocean?

Answer W:

98.5 %

Answer X:

85.6 %

Answer Y:

71.3 %

Answer Z:

51.9 %

Correct Answer: W: 98.5 %

Buzzer Question # 12

Question Type: Bonus

Question Format: Short Answer

Category: Geological

Question:

Some oceanic ridges have vents that spew hot, mineral-rich water that supports some forms of marine life. What are these vents called?

Correct Answer: Black smokers

Buzzer Question # 13

Question Type: toss-up

Question Format: Multiple Choice

Category: Geology

Question: _____

Manganese nodules are...

Answer W: _____

volcanic in origin

Answer X: _____

pelagic biogenous sediments

Answer Y: _____

pelagic hydrogenous sediments

Answer Z: _____

lithogenous sediment

Correct Answer: Y: pelagic hydrogenous sediments

Buzzer Question # 14

Question Type: Bonus

Question Format: Short Answer

Category: Geography

Question:

What is the name for the area of the Earth between about 5 degrees north and 5 degrees south of the equator, where there is often little or no wind?

Correct Answer: Doldrums OR Intertropical Convergence Zone (ITCZ)

Buzzer Question # 15

Question Type: toss-up

Question Format: Multiple Choice

Category: Chemical

Question: _____

Which physical property of water prevents extreme variation in the ocean's temperature?

Answer W: _____

density

Answer X: _____

heat capacity

Answer Y: _____

viscosity

Answer Z: _____

salinity

Correct Answer: X: heat capacity

Buzzer Question # 16

Question Type: Bonus

Question Format: Short Answer

Category: Physical

Question:

In what part of a wave do the water particles move in a direction opposite to the direction of wave movement?

Correct Answer: in the trough of the wave

Buzzer Question # 17

Question Type: toss-up

Question Format: Multiple Choice

Category: Physical

Question:

Why are estuaries sometimes described as "traps" for pollutants?

Answer W:

The slow flushing rate and typical circulation pattern causes pollutant concentrations to build up to high levels.

Answer X:

Once pollutants get into an estuary, there is no way for them to get out.

Answer Y:

The low-density surface water layer in estuaries keeps pollutants trapped near the surface.

Answer Z:

It is easy to collect and remove pollutants from estuaries

Correct Answer: W: The slow flushing rate and typical circulation pattern causes pollutant concentrations to build up to high levels.

Buzzer Question # 18

Question Type: Bonus

Question Format: Short Answer

Category: Physical

Question:

What is the layer of the ocean between the warm upper layer and the cold deep layer called?

Correct Answer: Thermocline

Buzzer Question # 19

Question Type: toss-up

Question Format: Multiple Choice

Category: Geology

Question:

What is eustasy?

Answer W:

The erosion for volcanic islands

Answer X:

The rise of coastal mountains due to converging crustal plates

Answer Y:

The rise and fall of sea level over time

Answer Z:

The variation in abundance of birds on an island

Correct Answer: Y: The rise and fall of sea level over time

Buzzer Question # 20

Question Type: Bonus

Question Format: Short Answer

Category: Biological

Question:

What gives Red Tides their characteristic color?

Correct Answer: Dinoflagellates

Buzzer Question # 21

Question Type: toss-up

Question Format: Multiple Choice

Category: Earth Science

Question:

Which designates a hurricane?

Answer W:

8 of the Richter Scale

Answer X:

10 of the Mohs Scale

Answer Y:

12 of the Beaufort Scale

Answer Z:

14 of the Enhanced Fujita Scale

Correct Answer: Y: 12 of the Beaufort Scale

Buzzer Question # 22

Question Type: Bonus

Question Format: Short Answer

Category: Physical

Question:

In an ocean with waves 20 meters high and 40 meters long, how deep would a submarine have to be to avoid feeling the effects of the storm above?

Correct Answer: 20 meters

Buzzer Question # 23

Question Type: toss-up

Question Format: Multiple Choice

Category: Chemistry

Question:

What chemical is the principle source of energy at many of Earth's hydrothermal vent systems?

Answer W:

Oxygen

Answer X:

Carbon dioxide

Answer Y:

Hydrogen sulfide

Answer Z:

Iron oxide

Correct Answer: Y: Hydrogen sulfide

Buzzer Question # 24

Question Type: Bonus

Question Format: Short Answer

Category: Physical

Question:

In an area with mixed semidiurnal tides, how many high tides occur during most days?

Correct Answer: 2

Buzzer Question # 25

Question Type: toss-up

Question Format: Multiple Choice

Category: Physical

Question:

Which of the following is NOT a predominant characteristic of subtropical regions?

Answer W:

Weak winds

Answer X:

Weak surface currents

Answer Y:

Clear skies with abundant sunshine

Answer Z:

Stormy weather with high winds

Correct Answer: Z: Stormy weather with high winds

Buzzer Question # 26

Question Type: Bonus

Question Format: Short Answer

Category: Technology

Question:

What was the name of the submersible used by Robert Ballard to obtain the first modern photographs of the sunken Titanic, 37,978 meters below the surface of the Atlantic?

Correct Answer: Alvin

Buzzer Question # 27

Question Type: toss-up

Question Format: Multiple Choice

Category: Geography

Question:

The Gulf Stream and Labrador Current are in the same ocean as which of the following?

Answer W:

Kuroshio Current

Answer X:

Agulhas Current

Answer Y:

Canaries Current

Answer Z:

Oyashio Current

Correct Answer: Y: Canaries Current

Buzzer Question # 28

Question Type: Bonus

Question Format: Short Answer

Category: Geography

Question:

Name the marginal sea which lies between South Korea and the People's Republic of China.

Correct Answer: Yellow Sea

Buzzer Question # 29

Question Type: toss-up

Question Format: Multiple Choice

Category: Geology

Question:

Where is the continental shelf the narrowest?

Answer W:

Off the coast of eastern China

Answer X:

Off the coast of eastern North America

Answer Y:

Off the coast of western South America

Answer Z:

Off the coast of northern Canada

Correct Answer: Y: Off the coast of western South America

Buzzer Question # 30

Question Type: Bonus

Question Format: Short Answer

Category: Geology

Question:

Most of the sand on tropical islands is made up of what substance?

Correct Answer: Calcium Carbonate shell fragments

Buzzer Question # 31

Question Type: toss-up

Question Format: Multiple Choice

Category: Physical

Question:

What is the process called when two large waves traveling in opposite directions meet and form a rogue wave?

Answer W:

Double refraction

Answer X:

Frequency modulation

Answer Y:

Rectilinear propagation

Answer Z:

Constructive interference

Correct Answer: Z: Constructive interference

Buzzer Question # 32

Question Type: Bonus

Question Format: Short Answer

Category: Geology

Question:

Lithospheric plates come together at which type of plate boundary?

Correct Answer: Convergent

Buzzer Question # 33

Question Type: toss-up

Question Format: Multiple Choice

Category: Chemical

Question:

The mechanism causing the crustal plates to move is thought to be produced by...

Answer W:

convection cells in the mantle

Answer X:

oceanic currents

Answer Y:

rotation of the earth

Answer Z:

gravity

Correct Answer: W: convection cells in the mantle

Buzzer Question # 34

Question Type: Bonus

Question Format: Short Answer

Category: Geography

Question:

A semi-enclosed body of water where river water mixes with ocean water is called:

Correct Answer: an Estuary

Buzzer Question # 35

Question Type: toss-up

Question Format: Multiple Choice

Category: Chemical

Question:

What is a distinguishing characteristic of the seamounts of the Pacific Plate?

Answer W:

flat top

Answer X:

eroded top

Answer Y:

conical top

Answer Z:

rising top

Correct Answer: Y: conical top

Buzzer Question # 36

Question Type: Bonus

Question Format: Short Answer

Category: History

Question:

The modern study of oceanography began in 1872 when what British ship set out to study the world's oceans?

Correct Answer: HMS Challenger

Buzzer Question # 37

Question Type: toss-up

Question Format: Multiple Choice

Category: Chemical

Question:

The epicenters of many large earthquakes are located near the Aleutian Islands because:

Answer W:

The Earth's crust is unusually thin there.

Answer X:

A mid-ocean ridge, where new oceanic crust is being generated, is located there.

Answer Y:

A subduction zone, resulting from the collision of two tectonic plates, is located there.

Answer Z:

The weight of the islands makes the Earth's crust unstable there.

Correct Answer: Y: A subduction zone, resulting from the collision of two tectonic plates, is located there.

Buzzer Question # 38

Question Type: Bonus

Question Format: Short Answer

Category: Physical

Question: _____

Water covers approximately what percentage of the Earth's surface?

Correct Answer: accept any answer between 70% - 72%

Buzzer Question # 39

Question Type: toss-up

Question Format: Multiple Choice

Category: Geology

Question: _____

A sandy beach is an example of a coastline that was mainly shaped by what?

Answer W: _____

Erosion by glaciers

Answer X: _____

Erosion by rivers

Answer Y: _____

Movements of the Earth's crust due to plate tectonics

Answer Z: _____

Erosion and deposition of sediment by waves

Correct Answer: Z: Erosion and deposition of sediment by waves

Buzzer Question # 40

Question Type: Bonus

Question Format: Short Answer

Category: Geological

Question:

What is the most abundant extrusive rock?

Correct Answer: Basalt