

Buzzer Question # 1

Question Type: toss-up

Question Format: Multiple Choice

Category: Physical

Question: _____

Which body of water has the highest salinity?

Answer W: _____

Mediterranean Sea

Answer X: _____

Red Sea

Answer Y: _____

Baltic Sea

Answer Z: _____

Black Sea

Correct Answer: X: Red Sea

Buzzer Question # 2

Question Type: Bonus

Question Format: Short Answer

Category: Physical

Question:

What is the approximate time interval between successive high tides in an area with a diurnal tidal cycle?

Correct Answer: accept any answer between 23 and 25 hours

Buzzer Question # 3

Question Type: toss-up

Question Format: Multiple Choice

Category: Geography

Question:

The deepest place on Earth is in the Marianas Trench. Where is this located?

Answer W:

South of the Aleutian Chain

Answer X:

Northeast of New Zealand

Answer Y:

Southeast of Guam

Answer Z:

East of Puerto Rico

Correct Answer: Y: Southeast of Guam

Buzzer Question # 4

Question Type: Bonus

Question Format: Short Answer

Category: Geography

Question:

Nautical charts denote depths in units of fathoms.
About how many meters are equal to 100 fathoms?

Correct Answer: accept any number between 180 and 200 meters

Buzzer Question # 5

Question Type: toss-up

Question Format: Multiple Choice

Category: Chemical

Question:

Seawater in the vicinity of a major phytoplankton bloom is characterized by...

Answer W:

low CO₂ and high nutrient content.

Answer X:

low O₂ and high nutrient content.

Answer Y:

high O₂ and low nutrient content.

Answer Z:

high CO₂ and low nutrient content.

Correct Answer: Y: high O₂ and low nutrient content.

Buzzer Question # 6

Question Type: Bonus

Question Format: Short Answer

Category: Geological

Question:

Why are most atolls in the Pacific Ocean?

Correct Answer: Atolls are formed when a coral reef forms around a volcanic island and the island then sinks or is eroded so that the original volcanic island is below sea level. Coral reefs only form in tropical waters and most volcanic islands are found in the Pacific Ocean.

Buzzer Question # 7

Question Type: toss-up

Question Format: Multiple Choice

Category: Geology

Question: _____

Which feature is at the greatest depth in the ocean?

Answer W: _____

Abyssal plain

Answer X: _____

Continental shelf

Answer Y: _____

Submarine canyon

Answer Z: _____

Continental rise

Correct Answer: W: Abyssal Plain

Buzzer Question # 8

Question Type: Bonus

Question Format: Short Answer

Category: Physical

Question:

What is it called when nutrients deep in the ocean are brought to the surface by water currents?

Correct Answer: Upwelling

Buzzer Question # 9

Question Type: toss-up

Question Format: Multiple Choice

Category: Physical

Question:

Which property of seawater is changing rapidly in the halocline?

Answer W:

Salinity

Answer X:

Temperature

Answer Y:

Density

Answer Z:

Color

Correct Answer: W: Salinity

Buzzer Question # 10

Question Type: Bonus

Question Format: Short Answer

Category: Geological

Question:

What is the deepest part of the Atlantic Ocean?

Correct Answer: The Puerto Rico Trench

Buzzer Question # 11

Question Type: toss-up

Question Format: Multiple Choice

Category: Geology

Question:

What is a flat-topped, submerged seamount or mountain called?

Answer W:

Massif

Answer X:

Gyot (ghee-oh)

Answer Y:

Plateau

Answer Z:

Cordillera

Correct Answer: X: Gyot (ghee-oh)

Buzzer Question # 12

Question Type: Bonus

Question Format: Short Answer

Category: Geography

Question:

Its surface temperature can reach over 36 degrees Celsius, making which ocean the warmest?

Correct Answer: Indian Ocean

Buzzer Question #13

Question Type: toss-up

Question Format: Multiple Choice

Category: Physical

Question:

What is the generating force and the restoring force of sea swell?

Answer W:

The generating force is wind and the restoring force is surface tension.

Answer X:

The generating force is wind and the restoring force is gravity.

Answer Y:

The generating force is a sudden movement of the sea floor, and the restoring force is gravity.

Answer Z:

The generating force is low atmospheric pressure, and the restoring force is gravity.

Correct Answer: X: The generating force is wind and the restoring force is gravity.

Buzzer Question # 14

Question Type: Bonus

Question Format: Short Answer

Category: Physical

Question:

Why does Great Britain have a relatively mild climate?

Correct Answer: The warm Gulf Stream moderates the climate.

Buzzer Question # 15

Question Type: toss-up

Question Format: Multiple Choice

Category: Geology

Question: _____

A fjord 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: W: Erosion by glaciers

Buzzer Question # 16

Question Type: Bonus

Question Format: Short Answer

Category: Physical

Question:

What is the average salinity of the ocean?

Correct Answer: accept any answer between 32 and 37

Buzzer Question # 17

Question Type: toss-up

Question Format: Multiple Choice

Category: Geology

Question:

How are coral reefs formed?

Answer W:

Movements of the Earth's crust due to plate tectonics

Answer X:

Tiny plants related to diatoms that deposit the mineral silica

Answer Y:

Tiny animals related to sea anemones that deposit the mineral calcium carbonate

Answer Z:

Tiny animals related to amphipods that deposit hard skeletons made of chitin

Correct Answer: Y: Tiny animals related to sea anemones that deposit the mineral calcium carbonate

Buzzer Question # 18

Question Type: Bonus

Question Format: Short Answer

Category: Biology

Question:

What is the term for the deepest environment of the ocean?

Correct Answer: hadal zone or hadalpelagic zone

Buzzer Question # 19

Question Type: toss-up

Question Format: Multiple Choice

Category: Physical

Question:

Why does the Coriolis Effect influence the motion of winds and ocean currents?

Answer W:

The Earth revolves around the sun

Answer X:

The Earth rotates on its axis

Answer Y:

The moon revolves around the Earth

Answer Z:

The Earth's crustal plates are constantly in motion

Correct Answer: X: The Earth rotates on its axis

Buzzer Question # 20

Question Type: Bonus

Question Format: Short Answer

Category: Chemistry

Question: _____

As oceans absorb carbon dioxide from the air, what acid is produced?

Correct Answer: Carbonic acid

Buzzer Question # 21

Question Type: toss-up

Question Format: Multiple Choice

Category: Biology

Question:

There was a very productive fishery for anchovies along the coast of Peru because:

Answer W:

Phytoplankton production is high there because there is no grazing by copepods.

Answer X:

Phytoplankton production is high there because wind-driven upwelling brings nutrients from deeper water to the surface.

Answer Y:

Phytoplankton production is high because there is almost no wind and little mixing of the water.

Answer Z:

Phytoplankton production is high because of El Niño.

Correct Answer: X: Phytoplankton production is high there because wind-driven upwelling brings nutrients from deeper water to the surface.

Buzzer Question # 22

Question Type: Bonus

Question Format: Short Answer

Category: Biology

Question:

Which organisms form the base of the food chain at hydrothermal vents due to their ability to convert carbon and nutrients into organic matter in the absence of sunlight?

Correct Answer: Chemosynthetic Bacteria

Buzzer Question # 23

Question Type: toss-up

Question Format: Multiple Choice

Category: Geological

Question: _____

Where are you most likely to find a fresh water lens?

Answer W: _____

At the mouth of a river

Answer X: _____

Suspended below salt water

Answer Y: _____

Beneath a sandy oceanic island

Answer Z: _____

In an estuary

Correct Answer: Y: Beneath a sandy oceanic island

Buzzer Question # 24

Question Type: Bonus

Question Format: Short Answer

Category: Geography

Question:

What area of the ocean was Columbus referring to when he wrote about a sea full of vegetation resembling pine branches so dense he thought it was shallow and the ships would run aground?

Correct Answer: Sargasso Sea

Buzzer Question # 25

Question Type: toss-up

Question Format: Multiple Choice

Category: Geology

Question: _____

What is the main mineral in a coral reef?

Answer W: _____

Halite

Answer X: _____

Calcite

Answer Y: _____

Gypsum

Answer Z: _____

Feldspar

Correct Answer: X: Calcite

Buzzer Question # 26

Question Type: Bonus

Question Format: Short Answer

Category: Chemistry

Question: _____

Name two sources of molecular oxygen on the surface of the ocean.

Correct Answer:

1. Transport of oxygen from the atmosphere to the ocean surface across the air-sea interface.
2. Photosynthesis in the photic zone.

Buzzer Question # 27

Question Type: toss-up

Question Format: Multiple Choice

Category: Physical

Question:

What is transported through the ocean in turbidity currents?

Answer W:

nutrients

Answer X:

oxygen

Answer Y:

salts

Answer Z:

sediments

Correct Answer: Z: sediments

Buzzer Question # 28

Question Type: Bonus

Question Format: Short Answer

Category: Physical

Question:

What major ocean current flows near Bermuda?

Correct Answer: Gulf Stream

Buzzer Question # 29

Question Type: toss-up

Question Format: Multiple Choice

Category: Geology

Question: _____

What is a tombolo composed of?

Answer W: _____

Lava

Answer X: _____

Sand

Answer Y: _____

Limestone

Answer Z: _____

Granite

Correct Answer: X: Sand

Buzzer Question # 30

Question Type: Bonus

Question Format: Short Answer

Category: Geology

Question:

What is the term for a ridge of sand, silt or gravel in a river channel or along a coastline?

Correct Answer: Bar (or sand bar or gravel bar)

Buzzer Question # 31

Question Type: toss-up

Question Format: Multiple Choice

Category: Technology

Question:

What was the primary purpose of the Glomar Challenger Expedition?

Answer W:

To evaluate ocean currents

Answer X:

To conduct deep sea drilling

Answer Y:

To measure ocean surface salinity

Answer Z:

To collect samples of deep sea marine life

Correct Answer: X: To conduct deep sea drilling

Buzzer Question # 32

Question Type: Bonus

Question Format: Short Answer

Category: Chemical

Question:

Some ships are equipped to vacuum them off the bottom. Others pull a continuously moving series of dredge buckets along the ocean floor to scoop them up. Another system sends remote-controlled collectors to get them from the ocean bottom. What is being mined?

Correct Answer: Manganese nodules

Buzzer Question # 33

Question Type: toss-up

Question Format: Multiple Choice

Category: Physical

Question:

What are the characteristics of neap tides?

Answer W:

High tides are at their lowest and low tides are at their highest.

Answer X:

High tides are at their highest and low tides are at their lowest.

Answer Y:

Both high tides and low tides are at their lowest.

Answer Z:

Both high tides and low tides are at their highest.

Correct Answer: W: High tides are at their lowest and low tides are at their highest.

Buzzer Question # 34

Question Type: Bonus

Question Format: Short Answer

Category: Geography

Question: _____

What waterway separates the Mediterranean Sea from the Atlantic Ocean?

Correct Answer:

Strait of Gibraltar

Buzzer Question # 35

Question Type: toss-up

Question Format: Multiple Choice

Category: Chemistry

Question: _____

Chlorinity of sea water is related to the total amount of what substance dissolved in the water?

Answer W: _____

oxygen

Answer X: _____

organic matter

Answer Y: _____

salts

Answer Z: _____

pollution

Correct Answer: Y: salts

Buzzer Question # 36

Question Type: Bonus

Question Format: Short Answer

Category: Physical

Question:

North and south of the equator are two westward moving ocean currents that derive their energy primarily from what winds that blow from the northeast and the southeast?

Correct Answer: Trade winds

Buzzer Question # 37

Question Type: toss-up

Question Format: Multiple Choice

Category: Geography

Question:

Which body of water does NOT border Asia?

Answer W:

Arctic Ocean

Answer X:

Indian Ocean

Answer Y:

Yellow Sea

Answer Z:

North Sea

Correct Answer: Z: North Sea

Buzzer Question # 38

Question Type: Bonus

Question Format: Short Answer

Category: Physical

Question:

What is the name for a narrow seaward flow of water caused by waves breaking in the surf zone and piling up against the coast?

Correct Answer: Rip current (also accept rip tide)

Buzzer Question # 39

Question Type: toss-up

Question Format: Multiple Choice

Category: Physical

Question:

At what temperature does fresh water have its maximum density?

Answer W:

0 degrees C.

Answer X:

4 degrees C

Answer Y:

32 degrees C

Answer Z:

100 degrees C

Correct Answer: X: 4 degrees C

Buzzer Question # 40

Question Type: Bonus

Question Format: Short Answer

Category: Physical

Question:

Name three events that can generate a tsunami.

Correct Answer: Any three of the following:

earthquake

landslide

volcanic eruption

meteorite impact