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**Questions for Science Bowl**

**TOSS-UP**

1. ERSC-91; Multiple Choice: On a topographic map, lines that indicate water depth are termed:

w) isogonic lines

x) bathymetric lines

y) isopachs

z) none of these

ANSWER: X -- BATHYMETRIC LINES

**BONUS**

1. ERSC-91; Multiple Choice: In geological studies, a fault in the earth's surface in which the

hanging wall has moved UP relative to the footwall is termed:

w) overthrust fault

x) reverse fault

y) tear fault

z) none of these

ANSWER: X -- REVERSE FAULT

**TOSS-UP**

2. ERSC-91; Multiple Choice: In geological studies, a fault in the earth's surface along which

primarily horizontal movement has taken place is termed:

w) overthrust fault

x) strike-slip fault

y) reverse fault

z) none of the above

ANSWER: X -- STRIKE-SLIP FAULT

**BONUS**

2. ERSC-91; Multiple Choice: In studies of the surface of the earth, a reverse fault having a dip

between 10 and 45 degrees is known as a:

w) thrust fault

x) normal fault

y) strike-slip fault

z) neither of these

ANSWER: W -- THRUST FAULT

**TOSS-UP**

1. ERSC-91; Short Answer: What type of certain fossils help geologists match rock layers?

ANSWER: Index Fossils

**BONUS**

1. ERSC-91; Short Answer: Index fossils are useful because they tell what types of ages of the rock layers?

ANSWER: Relative Ages

**TOSS-UP**

2. Chemistry; Short Answer: What is a process in which elements break down by releasing particles and energy?

Answer: Radioactive Decay

**BONUS**

2. Chemistry; Short Answer: For an igneous rock, when would it be its “birthday”?

Answer: The day it hardened

**TOSS-UP**

1. ERSC-91; Short Answer: What is the name given to a flat-topped plateau bordered on all sides

by cliffs?

ANSWER: MESA or BUTTE

**BONUS**

1. ERSC-91; Multiple Choice: You are adrift off the coast of Miami, Florida in the Gulf Stream.

Where would you most likely land?

w) Argentina

x) Louisiana

y) New York

z) The British Isles

ANSWER: Z -- THE BRITISH ISLES

**TOSS-UP**

2. ERSC-91; Short Answer: A troughlike downfold of strata is called a:

ANSWER: SYNCLINE

**BONUS**

2. ERSC-91; Multiple Choice: The horse latitude which occurs at approximately 30o - 35o north is also known as the:

w) doldrums

x) calms of Cancer

y) calms of Capricorn

z) trough of the Pacific

ANSWER: X -- CALMS OF CANCER

**TOSS-UP**

1 ERSC-91; Short Answer: Of the three types of corals, Scleractinian, Rugose and Tabulate, which one is still in existence today?

ANSWER: SCLERACTINIAN

**BONUS**

1. ERSC-91; Multiple Choice: A circular cavity ground out of bedrock by running water is called a:

w) cave

x) pothole

y) sinkhole

z) kettle hole

ANSWER: X – POTHOLE

**TOSS-UP**

2. ERSC-91; Multiple Choice: A yazoo stream flows through which of the following?

w) gorge

x) divide

y) backswamp

z) water gap

ANSWER: Y – BACKSWAMP

**BONUS**

2. ERSC-91; Multiple Choice: Which of the following is a famous hanging trough waterfall?

w) Yellowstone Falls

x) Yosemite Falls

y) Niagara Falls

z) Victoria Falls

ANSWER: X -- YOSEMITE FALLS

**TOSS-UP**

1. ERSC-91; Short Answer: What is a break in the earth’s crust?

ANSWER: Fault

**BONUS**

1. ERSC-91; Short Answer: What is a mass of igneous rock which magma has cooled down and harden into called?

ANSWER: Intrusion

**TOSS-UP**

2. Chemistry; Short Answer: What is it called when the surface of new rock layers meet a much older rock surface beneath them?

Answer: Unconformity

**BONUS**

2. Chemistry; Short Answer: What is a piece of rock that is contained in another rock?

Answer: Inclusion

**TOSS-UP**

1. ERSC-91; Multiple Choice: A wave with a wavelength of 40 meters and a height of 2 meters will NOT be refracted in water with a depth of more than:

w) 1 meter

x) 2 meters

y) 10 meters

z) 20 meters

ANSWER: Z -- 20 METERS

**BONUS**

1. ERSC-91; Multiple Choice: The lag time between precipitation period and peak discharge period of a river:

w) is increased by urbanization

x) is decreased by urbanization

y) is shorter for a large drainage basin than for a small one

z) depends upon the hydraulic heads

ANSWER: X -- IS DECREASED BY URBANIZATION

**TOSS-UP**

2. ERSC-91; Short Answer: Give the general term used to designate the sand, silt, and mud

deposited by a stream, along its bank or upon its floodplain, during periods of high water.

ANSWER: ALLUVIUM

**BONUS**

2. ERSC-91; Short Answer: Which term is associated with dry stream channels with nearly vertical walls and flat bottoms which are characteristic of semi-arid regions. They may suddenly become filled with torrential waters after heavy rains.

ANSWER: ARROYO

**TOSS-UP**

1. ERSC-91; Multiple Choice: What percentage of the earth's water is fresh water?

w) 50%

x) 22%

y) 7%

z) 3%

ANSWER: Z -- 3%

**BONUS**

1. ERSC-91; Multiple Choice: The deep, least productive part of a lake is called the:

w) littoral zone

x) profundal zone

y) photic zone

z) limnetic zone

ANSWER: X -- PROFUNDAL ZONE

**TOSS-UP**

2. ERSC-91; Multiple Choice: Which of the following does NOT affect sea level change?

w) Antarctic ice sheet

x) small glaciers and ice caps

y) Arctic sea ice

z) Greenland ice sheet

ANSWER: Y -- ARCTIC SEA ICE

**BONUS**

2. ERSC-91; Multiple Choice: If all the Earth's ice melted, the increase in sea level would be

approximately:

w) 100 meters

x) 2 meters

y) 70 meters

z) 20 meters

ANSWER: Y -- 70 METERS

**TOSS-UP**

1. ERSC-91; Multiple Choice: The curved body of water formed when a meandering river reshapes and cuts off one of its bends is called:

w) an Essing pond

x) an Oxbow lake

y) a Swensen pool

z) a Groovy pool

ANSWER: X -- AN OXBOW LAKE

**BONUS**

1. ERSC-91; Multiple Choice: The chemical union of iron, oxygen and water forms

w) magnetite

x) hematite

y) limonite

z) pyrite

ANSWER: Y – LIMONITE

**TOSS-UP**

2. ERSC-93; Multiple Choice: According to the protoplanet hypothesis, the solar system begins as which of the following?

w) a star

x) a vacuum

y) a huge cloud of dust and gas

z) a group of comets.

ANSWER: Y -- A HUGE CLOUD OF DUST AND GAS

**BONUS**

2. ERSC-91; Multiple Choice: Give the term that describes different crystalline modifications of the same chemical substance. Is it:

w) polymorphism

x) isomorphism

y) tetrahedral

z) perovskite

ANSWER: W – POLYMORPHISM

**TOSS-UP**

1. ERSC-91; Multiple Choice: Of the energy used in the United States, about what percent is

provided by hydroelectric power?

w) 4%

x) 20%

y) 50%

z) 75%

ANSWER: W -- 4%

**BONUS**

1. ERSC-91; Multiple Choice: The B-horizon of a pedalfer soil is noted for its accumulation of:

w) carbonate

x) nitrogen

y) humus

z) oxides

ANSWER: Z – OXIDES

**TOSS-UP**

2. ERSC-91; Multiple Choice: Pedocal soils are usually found to have developed

in:

w) forests

x) swamps

y) grasslands

z) jungles

ANSWER: Y -- GRASSLANDS

**BONUS**

2. ERSC-91; Multiple Choice: High quality crop soil requires humus as a major component. Which of the following best describes the composition of humus?

w) fine sand particles

x) decaying organic matter

y) mineral like clay matter

z) chemical fertilizers

ANSWER: X -- DECAYING ORGANIC MATTER

**TOSS-UP**

1. ERSC-91; Multiple Choice: The aquifer of a famous artesian formation in the Great Plains is a

layer of rock called the:

w) Clinton limestone

x) Dakota sandstone

y) Pierre shale

z) Vermont marble

ANSWER: X -- DAKOTA SANDSTONE

**BONUS**

1. ERSC-91; Multiple Choice: The principal aquifer of the artesian wells of Florida is a:

w) porous sandstone

x) fissured limestone

y) series of clay beds

z) mass of pumice

ANSWER: X -- FISSURED LIMESTONE

**TOSS-UP**

2. Chemistry; Short Answer: Who was a Scottish doctor and farmer who formed the principle of uniformitarianism?

Answer: James Hutton

**BONUS**

2. Chemistry; Short Answer: How many main groups of classifications of rocks are in the world of scientists?

Answer: 3

**TOSS-UP**

1. ERSC-91; Short Answer: Name the 3 main groups of rocks.

ANSWER: Igneous, Sedimentary, and metamorphic.

**BONUS**

1. ERSC-91; Short Answer: What is the series of processes on and beneath Earth’s surface that slowly change rocks from one kind to another?

ANSWER: The Rock Cycle

**TOSS-UP**

2. Chemistry; Short Answer: When erosion wears away a mountain, what kind of rock is then exposed?

Answer: Igneous

**BONUS**

2. Chemistry; Short Answer: What law is used to determine the relative ages of sedimentary rock layers?

Answer: Law of superposition

**TOSS-UP**

1. ERSC-91; Short Answer: What are the major pieces that the earth’s rocky outer layer consists of?

ANSWER: Plates

**BONUS**

1. ERSC-91; Short Answer: What theory states that earth’s plates move slowly in various directions?

ANSWER: Theory of Plate Tectonics