Cumulative Exam (Unit 1-4) – Twitter Review Questions

MT-1: Identify three (3) ways in which life in freshwater and saltwater ecosystems can be limited.

- Answer: 1) Access to nutrients (phosphates/nitrates) 2) Temperature changes 3) Dissolved oxygen levels

MT-2: Explain the main reason as to why Wegener's continental drift hypothesis was rejected.

- Answer: He could not explain the how and why the tectonic plates moved

MT-3: What must happen to the water table in order to decrease the probability of flooding?

- Answer: Water table must decrease/drop lower

MT-4: How is it possible to distinguish two different locations that are located at the exact latitude north of the equator?

- Answer: Use longitude coordinates in conjunction with latitude coordinates

MT-5: Contour lines that are close to each other on a topographic map indicate a _____ gradient.

- Answer: Steep

MT-6: NEED TO KNOW: Be able to record measurements of length, mass, and volume using proper units

- Answer: Length– centimeters (cm) ; Mass– grams (g) ; Volume– milliliters (mL)

MT-7: A preliminary untested explanation for an experiment is also known as a _____.

- Answer: Hypothesis

MT-8: Identify where most of Earth's freshwater supply is found/contained.

- Answer: Ice Caps/Glaciers

MT-9: NEED TO KNOW: Correct order of soil horizons and what occurs within each section.

- Answer: Soil Profile

MT-10: The formation of the supercontinent Pangaea was explained through what hypothesis?

- Answer: Continental Drift Hypothesis

MT-11: Botanical garden is converted into paved parking lot. Describe change (increase or decrease) in transpiration, runoff, & groundwater.

- Answer: Transpiration – Decreases ; Runoff – Increases ; Groundwater - Decreases

MT-12: The source of all seismic waves of an earthquake originates from the _____.

- Answer: Focus

MT-13: What is the single most erosive agent on Earth?

- Answer: Water

MT-14: Describe the purpose/role of a watershed (river basin).

- Answer: This area of land drains back into main body of water (lake, river, etc)

MT-15: Identify the three most influential factors that affect how violently a volcano erupts.

- Answer: Concentration of dissolved gases in magma ; Magma temperature ; Magma composition

MT-16: A soil's texture in mainly determined by its _____.

- Answer: Particle Size

MT-17: Mantle convection currents produce subduction zones along a _____ boundary.

- Answer: Convergent

MT-18: Identify the rock type that is formed from the cooling of lava. (Be specific)

- Answer: Extrusive Igneous Rock

MT-19: Order the three soil textures from largest to smallest.

- Answer: Sand → Silt → Clay

MT-20: Identify the two main sources of heat energy for all Earth's systems.

- Answer: Sun & Earth's interior (core)

MT-21: NEED TO KNOW: Be able to identify all features produced along all plate boundaries (Convergent/Divergent vs Continental/Oceanic)

MT-22: What feature is produced along a convergent oceanic-oceanic boundary?

- Answer: Volcanic Island Arc

MT-23: Identify three (3) factors that determine the rate of soil erosion.

- Answer: Climate ; Vegetation type ; Slope steepness

MT-24: What is the relationship between rocks and minerals?

- Answer: Most rocks are made up of a mixture of minerals

MT-25: What is the name of the region in which there is a high percentage of active volcanoes on Earth?

- Answer: Ring of Fire

MT-26: What is the most visible external expression of a rock that has gone through the greatest weathering within a fast flowing river?

- Answer: Rough edges of rocks are smoothed out by the water

MT-27: What is the difference between an earthquake's focus and epicenter?

- Answer: Focus – Point of origin where earthquake occurs ; Epicenter – Point directly above the focus on surface of Earth

MT-28: Where along a stream is the water sample expected to have the lowest amount of pollutants.

- Answer: At/near the beginning of the river

MT-29: What force is responsible for all mass movement events.

- Answer: Gravity

MT-30: Compared to the density of an entire block, what is the density of one piece of the original block?

- Answer: Density is the same for both

MT-31: What two (2) forces are most responsible for the production of upper horizon layers, such as Horizon A.

- Answer: Weathering & Biological Activity

MT-32: Igneous, sedimentary, and metamorphic rocks are all classified by _____.

- Answer: How they are formed

MT-33: What is the difference between an experiment's independent and dependent variables?

- Answer: Independent (IV) – Variable that is changed/manipulated ; Dependent (DV) – Variable that is measured in response to the IV

MT-34: The ability of a stream to transport materials as part of its load depends largely on its _____.

- Answer: Velocity

MT-35: NEED TO KNOW: Be able to make unit conversions using the metric line.

- Answer: K h dk "Base" d c m

MT-36: How many meters are in 2017 centimeters?

- Answer: 2017 cm = 20.17 m

MT-37: Identify one point source of water pollution.

- Answer: Sewage pipe of an industrial power plant

MT-38: What feature is formed along a convergent continental-continental boundary?

- Answer: (Folded) Mountains

MT-39: Of the three types of seismic waves, which is the most destructive?

- Answer: Surface Waves

MT-40: According to the plate tectonic theory, a tectonic plate can be made up of what two types of lithospheric plates?

- Answer: Continental and Oceanic Lithospheric plates

MT-41: In order for a well to draw water out of the aquifer (zone of saturation), how far down must the well be drilled?

- Answer: Drilled deep enough INTO the zone of saturation, but not into the bedrock

MT-42: How are sinkholes formed?

- Answer: Water dissolves weak underground rock (limestone)

MT-43: What feature is formed when one oceanic plate subducts beneath a continental plate?

- Answer: Continental Volcano

MT-44: What type of plate boundary occurs where two plates grind past each other without destroying nor producing new lithosphere?

- Answer: Transform (Fault) Boundary

MT-45: Identify an example of a non-point source of water pollution.

- Answer: Agricultural fields leaving exposed sediments/pesticides to erode into a river source

MT-46: What are the five (5) characteristics that make up a mineral?

- Answer: Naturally occurring ; Inorganic ; Solid ; Specific crystalline structure ; Definite chemical composition

MT-47: What is the name of the process in which physical forces break rock into smaller fragments without changing its chemical composition?

- Answer: Mechanical Weathering

MT-48: Identify a natural phenomenon that occurs on Earth that is powered by energy from the Sun.

- Answer: Weather, Climate, Water Cycle, Ocean/Tidal Patterns

MT-49: 10.5 hL = __?__ mL

- Answer: 1,050,000 mL = 1.05 x 10^6 mL

MT-50: A scientist studies the impact of a medical drug on the treatment of cancer. Identify the independent variable (IV).

- Answer: Type/Dosage/Timing of drug given

MT-51: Topography serves practical uses in the real world where it allows a surveyor to know the _____ and _____ of physical features on land.

- Answer: Shape ; Elevation

MT-52: What is a scientific observation?

- Answer: Acquisition of information from a primary source or qualitative/quantitative data collected during experiment

MT-53: What type of stress (tensional/compressional/shearing) is applied as a result of a reverse fault?

- Answer: Compressional

MT-54: This type of earthquake seismic wave compresses and expands rocks in the same direction of wave travel.

- Answer: P-Waves

MT-55: Why are subduction zones not commonly found at continental-continental convergent boundaries?

- Answer: Continental crust is NOT DENSE enough to be subducted into mantle

MT-56: What is true of the mineral/crystal size of igneous rocks that have cooled rapidly? Explain why this is true?

- Answer: Very small; Not enough time to develop the crystals

MT-57: What is the relationship between topography AND vegetation to the rate of soil erosion?

- Answer: Steep land with no vegetation will lead to greatest soil erosion

MT-58: What is true about the water holding capacity of both sand and clay?

- Answer: Sand – Low/Poor ; Clay - High

MT-59: Put in the correct order the necessary steps needed to form sediments and then into sedimentary rocks. (Think rock cycle)

- Answer: Weathering, erosion, deposition, compaction, cementation

MT-60: Identify name of soil layer (and its horizon letter) that contains organic matter/nutrients, including leaves that may fall on it.

- Answer: Humus (Horizon O)

MT-61: Which texture size (sand, silt, or clay) will increase the chances of flooding and why?

- Answer: Clay due to very low porosity and low permeability

MT-62: Overuse of groundwater or due to natural weather phenomenon near coastal areas can lead to _____.

- Answer: Saltwater Intrusion

MT-63: What is true of the levels of dissolved oxygen in warm freshwater ecosystems?

- Answer: Dissolved Oxygen levels decrease

MT-64: Identify three (3) sources of groundwater contamination.

- Answer: Industrial waste/Life-stock waste/Agricultural waste

MT-65: What is the relationship between stream velocity and stream shape?

- Answer: Slower the velocity = More meandering