RVCC GEOL-157 EXAM 2, Spring 2018 **Topics……** (IST) Questions come from *In Suspect Terrain*

Do the foci of most earthquakes occur at more or less than 100 km depth?

Is the Richter scale the most effective measure of an earthquakes magnitude?

What is the term used for the point where an earthquake's energy is released?

Does the first motion of an earthquake seismic wave recorded on many seismographs provide a unique solution for the orientation of the associated fault plane?

What does the S-wave shadow zone tell us about the outer core?

95% of earthquakes occur at tectonic plate boundaries where rocks converge, diverge, or slip past each other.

A one-integer increase in earthquake magnitude represents about a xx-fold increase in the release of seismic energy?

What kind of gravitational and magnetic anomalies correlate with subsurface iron-bearing (relatively heavy) materials?

What is and why does liquefaction occur?

(IST) In which direction to the sedimentary strata dip through the Delaware Water Gap?

Does the term 'sediment' include minerals extracted from water by organisms to build their shells?

Why is 'crystalline' a term used to describe igneous and metamorphic rocks?

Do compaction and cementation often occur together?

Most tsunamis are caused by shallow submarine earthquakes along what tectonic setting?

Angular unconformities are used to help establish what type of rock ages? (Relative or absolute)

A half-life is the time it takes for half of the parent element to decay to the daughter element.

What does superposition mean?

Which is more common, sandstone or mudrock?

The earliest recorded attempts at estimating the age of the Earth resulted in too (old or young) of planet.

Do short- or long-lived radioactive isotope pairs in igneous rocks provide the most accurate dates?

Seismology has produced a great amount of information about the interior structure of the Earth.

What factors affecting an earthquake intensity?

What is the guiding principle of geology?

How do surface seismic waves differ from body waves?

What causes local departures (anomalies) in Earth's gravitational field at land surface?

(IST) What is the primary scientific use of conodont fossils for the petroleum industry?

Wide continental shelves form on what type of continental margin?

What are the two types of glacial drift?

What are the two types of glaciers?

Dolostone (or dolomite) is different from limestone because …

What does detrital sediment consist of?

What are the principle types of metamorphism?

Why do ripple marks form?

What are the principle agents of metamorphism?

What happens to sediment from transporting it?

What is another term for the amount of energy released by an earthquake?

The seismic energy released by an earthquake stems from what?

(IST) What motivated seismologists to discover the systematic, world-wide distribution of earthquakes?

Hornfels is a metamorphic rock resulting from the interaction of an igneous body with what type of rock?

What are the major depositional settings?

What form of mathematical curve is a radioactive decay curve?

A marine transgression occurs when sea level _____ with respect to the land

What happened to P- and S- seismic waves when they encounter between materials of different density and elasticity?

Do cross-cutting geological relationships help establish absolute or relative ages of the features?

What are surfaces of significant time discontinuity in a stratigraphic sequence called?

There will be four rock samples that you will be asked to identify based on their general criteria, for example,

1) Is a sample, low-, medium, or high-grade metamorphic?
2) Is a sedimentary sample a carbonate or clastic rock?
3) What are two commonly recognized minerals seen in schist?
4) Is the rock mafic or felsic?