

Which of the following observations would not bear directly on working out the sequence of geologic events in an area? **The feldspar and quartz contents of a granite.**

The half-life of carbon is about 6,000 years. Assume that a sample of charcoal is formed by burning of living wood 15,000 years ago. How much of the original carbon-14 would remain today? **between 1/4 and 1/8.**

Which of the following describes radioactive decay by beta emission?

The atomic number of the daughter isotope is one more than the parent; the mass numbers are the same.

An unconformity is a buried...**surface of erosion separating younger strata and older strata below.**

What fundamental concept states that in a horizontal sequence of conformable sedimentary data, each higher bed is younger than the bed below it? **Law of superposition.**

The radioactive isotopes uranium-238, uranium-235, and thorium-232 eventually decay to different, stable, daughter isotopes of **lead.**

Visualize five, horizontal, sedimentary strata exposed in a cliff or canyon wall identified by consecutive numbers 1 being the lowest bed and 5 being the highest. Which of the following statements concerning the strata are true? **Beds 1 and 3 are older than bed 4.**

Rapid burial and preservation of hard parts are necessary conditions for the preservation of plant or animal remains as fossils. **True.**

The proportion of parent to daughter isotopes in a radioactive decay process is 40% parent and 60% daughter. How many half-lives have elapsed since the material was 100% parent atoms? **between 1 and 2.**

What is the source of natural carbon-14? **cosmic ray collisions and neutron-capture involving atmospheric nitrogen.**

Which of the following denotes the divisions of the geologic time scale in correct order of decreasing lengths of time beginning with the longest time interval and ending with the shortest? **Eon, era, period, epoch.**

True or false: A disconformity is an erosional unconformity with parallel beds or strata above and below. **True.**

Which of the following best characterizes an angular unconformity? **tilted strata lie below the unconformity; bedding in younger strata above is parallel to the unconformity.**

With regard to the illustration below, which of the following statements is correct? **Sill 'D' was intruded between beds 'C' and 'E' after deposition of 'E'.**

Which of the following refers to the investigative process by which geologists identify and match sedimentary strata and other rocks in one area of the same age at different locations? **Correlation.**

Which of the following refers to the idea or concept that ancient life forms succeed one another in a definite, evolutionary pattern and that the contained assemblage of fossils can determine geologic ages of strata? **Principle of fossil (faunal?) succession.**

The term paleozoic describes the era of ancient life forms. **True.**

Sandstone strata and a mass of granite are observed to be in contact. Which of the following statements is correct geologically? **The granite is older if the sandstone contains pebbles of the granite.**

Most sedimentary rocks are readily dated by radiometric methods. **False.**

Which of the following refers to the process of fossilization where the pores of the original plant or bones of an animal are filled with precipitated mineral matter? **Petrification.**

What is the age of the Earth accepted by most scientists today? **4.5 billion years.**