

\_\_\_\_\_ 1. When a marine geologist collects a core of undeformed ocean-floor sediment, she knows that the youngest layer is on the top of the core and the oldest is at the bottom because of the principle of \_\_\_\_.

- a. supposition      b. suspension      c. **superposition**      d. inclusion      e. cross-cutting relationships

\_\_\_\_\_ 2. In a disconformity the contact representing missing rock strata separates beds that are at an angle to one another. True (T) **False (F)**

\_\_\_\_\_ 3. The crust and upper mantle form the \_\_\_\_\_.

- a. **lithosphere**      b. asthenosphere  
c. core      d. outer core  
e. moho discontinuity.

\_\_\_\_\_ 4. The contact between formations C and E is a(n) \_\_\_\_\_.

- a. angular unconformity      b. **disconformity**  
c. nonconformity      d. anticline  
e. syncline

\_\_\_\_\_ 5. Fault D is what type of fault?

- a. **normal**      b. reverse      c. right lateral strike slip      d. left lateral strike slip

\_\_\_\_\_ 6. The foot wall block is \_\_\_\_\_ of the fault plane

- a. left      b. **right**

\_\_\_\_\_ 7. The fault is \_\_\_\_\_ than formation C. We know this because of the principle of \_\_\_\_\_.

- a. younger, superposition      b. **younger, cross-cutting relationships**  
c. older, superposition      d. older, cross-cutting relationships

\_\_\_\_\_ 8. On the diagram the first thing to occur was \_\_\_\_\_.

- a. deposition of formation E      b. deposition of formation B  
c. fault D      d. **deposition of formation A**

\_\_\_\_\_ 9. \_\_\_\_\_ can occur when water-saturated soil turns from a solid to a liquid as a result of an earthquake.

- a. creep      b. **liquefaction**      c. solifluction      d. soil collapse      e. gelatinization

\_\_\_\_\_ 10. The geologic structure represented on the map is a(n)

- a. unconformity      b. right lateral strike-slip fault  
c. **left lateral strike-slip fault**      d. thrust fault  
e. a horse of a different color

\_\_\_\_\_ 11. Horsts and grabens reflect responses to tensional stress fields. **True (T)** False (F)



- \_\_\_\_\_ 26. What is the current geologic Era?  
 a. Cretaceous      b. Paleozoic      c. **Cenozoic**      d. Precambrian      e. Mesozoic
- \_\_\_\_\_ 27. S-waves are compressional waves in which the rock vibrates back and forth in the direction of wave propagation. True (T) **False (F)**
- \_\_\_\_\_ 28. What is the term used for the decay product of a parent isotope?  
 a. son      **b. daughter**      c. offspring      d. relatives      e. split
- \_\_\_\_\_ 29. Correlating rock units that are on separate continents usually involves  
 a. **fossils**      b. glacial deposits  
 c. similarity of rock types      d. cross-cutting relationships
- \_\_\_\_\_ 30. Which response lists rock in the order of increasing grain size and increasing metamorphism?  
 a. **slate, phyllite, schist**      b. schist, slate, phyllite  
 c. phyllite, slate, schist      d. slate, schist, phyllite  
 e. quartzite, marble, hornfels
- \_\_\_\_\_ 31. Which type of foliation is produced by uniform confining pressure?  
 a. slaty cleavage      b. schistose texture  
 c. gneissic texture      c. shearing  
 e. **none of these is correct**
- \_\_\_\_\_ 32. A basin is a variety of a  
 a. dome      b. anticline      c. monocline      d. fault      e. **none of these is correct**
- \_\_\_\_\_ 33. Quartzite is the metamorphic product of  
 a. **quartz sandstone**      b. granite  
 c. rhyolite      d. olivine  
 e. limestone
- \_\_\_\_\_ 34. A Benioff earthquake zone is significant in plate tectonic theory because it  
 a. locates rift valleys on continents  
 b. coincides with mid-oceanic ridges  
 c. **traces the descent of a sea-floor slab subducting into an oceanic trench or under a continent**  
 d. may predict quake locations under transform faults  
 e. usually indicates where mantle plumes generate andesitic magma
- \_\_\_\_\_ 35. Which foundation material would most readily fail and undergo liquefaction during groundshaking?  
 a. weakly cemented, unsaturated, sandstone strata  
 b. **unconsolidated, water-saturated mud and clay**  
 c. dry, mechanically compacted, clay rich, fill material  
 d. well cemented, water-saturated, sandstone strata  
 e. granitic bedrock
- \_\_\_\_\_ 36. The oldest rocks are found in the center of an eroded syncline. True (T) **False (F)**
- \_\_\_\_\_ 37. A migmatite is a mixed \_\_\_ rock.  
 a. **metamorphic and igneous**  
 b. metamorphic and pyroclastic  
 c. metamorphic and sedimentary  
 d. contact and regional metamorphic  
 e. contact and hydrothermal metamorphic

- \_\_\_\_\_ 38. Normal and reverse faults are the most common types of \_\_\_\_\_.  
 a. **dip-slip faults**                      b. strike-slip faults  
 c. tensional faults                      d. compressional faults  
 e. grabens
- \_\_\_\_\_ 39. If a bed strikes north it must \_\_\_\_\_.  
 a. dip south                              b. **dip either east or west**  
 c. be horizontal                        d. have a strike of 90 degrees  
 e. have a strike of 270 degrees
- \_\_\_\_\_ 40. \_\_\_\_\_ metamorphism occurs adjacent to a pluton when a body of magma intrudes a relatively cool country rock.  
 a. sedimentary                      b. igneous                      c. regional                      d. burial                      e. **contact**
- \_\_\_\_\_ 41. A \_\_\_\_\_ is the first wave to arrive at a recording station following an earthquake.  
 a. Love wave                      b. Rayleigh wave                      c. S-wave                      d. **P-wave**                      e. surface wave
- \_\_\_\_\_ 42. A single seismometer can determine both distance and direction to the focus of an earthquake. True (T) **False (F)**
- \_\_\_\_\_ 43. A seismograph located 110 degrees from an earthquake epicenter would receive  
 a. P, S and surface waves  
 b. P and surface waves  
 c. S and surface waves  
 d. Only P and S waves  
 e. **Only surface waves**
- \_\_\_\_\_ 44. The interpretation that the Earth's outer core is liquid comes from  
 a. density calculations                      b. studies of meteorites  
 c. P-wave shadow zone                      d. **S-wave shadow zone**  
 e. the outer core isn't liquid
- \_\_\_\_\_ 45. The low velocity zone in the mantle corresponds to the asthenosphere of plate tectonic theory. **True (T)** False (F)
- \_\_\_\_\_ 46. Geologists study the composition of the earth's core using deep drill holes. True (T) **False (F)**
- \_\_\_\_\_ 47. The bending of seismic waves as they pass from one material to another is called seismic \_\_\_\_\_.  
 a. **refraction**                              b. reflection  
 c. deflection                              d. attenuation  
 e. waves don't bend when they pass through different materials.
- \_\_\_\_\_ 48. Metamorphic rock forms from pre-existing rock when heat and pressure cause solid-state transformations. **True (T)** False (F)
- \_\_\_\_\_ 49. When does the magnetic field in rocks form?  
 a. **when the rocks formed**                      b. unknown  
 c. when the Earth formed                      d. during sunspot maxima  
 e. during times of unusually high sea levels
- \_\_\_\_\_ 50. Geologically, which are just submerged parts of continents?  
 a. guyots                      b. **continental shelves**                      c. continental trenches                      d. continental rise                      e. abyssal plain

\_\_\_\_\_ 51. Pelagic sediment is mainly derived from the land and is deposited on the abyssal plains by bottom currents. (T or **F**)

\_\_\_\_\_ 52. Oceanic trenches:

- a. are found along all continental margins.
- b. **are typically 8-10 km deep.**
- c. were eroded by rivers during the Ice Ages when sea-level was lower.
- d. all of these

\_\_\_\_\_ 53. Geologically quiet coasts are termed:

- a. Subduction zones.
- b. **Passive continental margins.**
- c. Atolls.
- d. Active continental margins.

\_\_\_\_\_ 54. If a bed strikes east it must \_\_\_\_\_.

- a. dip west
- b. be horizontal
- c. **dip either north or south**
- d. have a strike of 0 degrees
- e. have a strike of 180 degrees

\_\_\_\_\_ 55. Stress and strain are the same thing. (T or **F**)