

- _____ 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. Horsts and grabens reflect responses to tensional stress fields. **True (T)** False (F)
- _____ 3. Which of the following is caused by crustal tension?
- a. thrust fault
 - b. reverse fault
 - c. monocline
 - d. anticline
 - e. normal fault**
- _____ 4. A cavity or body of low-density material causes a _____ pull on a gravity meter relative to average crust.
- a. stronger
 - b. greater than the surrounding rock
 - c. weaker**
 - d. rapidly increasing
 - e. Gravity can't be measured.
- _____ 5. In a disconformity the contact representing missing rock strata separates beds that are at an angle to one another. True (T) **False (F)**
- _____ 6. Seismic waves travel faster in oceanic crust than in continental crust. **True (T)** False (F)
- _____ 7. On a surface leveled by erosion the pattern of exposed beds of a plunging fold resembles that of the letter ____.
- a. X
 - b. H
 - c. V**
 - d. I
 - e. T
- _____ 8. As seismic waves pass from solid granitic bedrock into soft unconsolidated sediments the wave velocity _____ and the wave amplitude _____.
- a. increases, increases
 - b. decreases, decreases
 - c. decreases, increases**
 - d. increases, decreases
- _____ 9. The rise of the crust after removal of ice is called ____.
- a. crustal rebound**
 - b. tectonic uplift
 - c. upheaval
 - d. subduction
 - e. dynamic adjustment
- _____ 10. Most folds or bends in rocks are produced by
- a. compressive stress**
 - b. tensional stress
 - c. elastic stress
 - d. fracturing
 - e. none of these is correct
- _____ 11. As lava cools below the _____ point, a record of the earth's magnetic field is permanently trapped in the rock.
- a. freezing
 - b. burning
 - c. boiling
 - d. melting
 - e. Curie**
- _____ 12. Deep focus earthquakes commonly occur in the zone where two continental lithospheric plates converge. True (T) **False (F)**
- _____ 13. Which response best describes seismic gaps?
- a. slices of land bounded by active, dip-slip faults
 - b. unusually quiet zones along otherwise active faults**
 - c. Slices of land bounded by active, strike-slip faults
 - d. Segments of active faults with very high rates of creep
 - e. Inactive faults cutting a high ridge
- _____ 14. _____ forms when a limestone recrystallizes during metamorphism.
- a. marble**
 - b. gneiss
 - c. phyllite
 - d. quartzite
 - e. coal

- _____ 15. The crust and upper mantle form the _____.
- a. lithosphere
 - b. asthenosphere
 - c. core
 - d. outer core
 - e. moho discontinuity.
- _____ 16. The contact between formations C and E is a(n) _____.
- a. angular unconformity
 - b. disconformity
 - c. nonconformity
 - d. anticline
 - e. syncline
- _____ 17. Fault D is what type of fault?
- a. normal
 - b. reverse
 - c. right lateral strike slip
 - d. left lateral strike slip
- _____ 18. The foot wall block is _____ of the fault plane
- a. left
 - b. right
- _____ 19. 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
- _____ 20. 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
- _____ 21. _____ 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
- _____ 22. 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
- _____ 23. Which term denotes a strong, parallel alignment of coarse mica flakes and/or different mineral bands in a metamorphic rock?
- a. rock cleavage
 - b. foliation
 - c. stress streaking
 - d. marbleizing
 - e. quartzite
- _____ 24. Which of the following is a period of the Paleozoic?
- a. Quaternary
 - b. Triassic
 - c. Eocene
 - d. Cretaceous
 - e. Permian
- _____ 25. What is the term used for the decay product of a parent isotope?
- a. son
 - b. daughter
 - c. offspring
 - d. relatives
 - e. split

- _____ 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. Metamorphic rock forms from pre-existing rock when heat and pressure cause solid-state transformations. **True (T)** False (F)
- _____ 46. 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
- _____ 47. Geologically, which are just submerged parts of continents?
 a. guyots b. **continental shelves** c. continental trenches d. continental rise e. abyssal plain
- _____ 48. The low velocity zone in the mantle corresponds to the asthenosphere of plate tectonic theory. **True (T)** False (F)
- _____ 49. Geologists study the composition of the earth's core using deep drill holes. True (T) **False (F)**
- _____ 50. 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.
- _____ 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)