

Plate Tectonics Test Review

Match each term with the correct statement below.

C 1. Plates move together at a ____.

D 2. One plate is forced under another in a ____.

E 3. Plates pull apart at a ____

A 4. A ____ is an underwater mountain chain.

B 5. A plate that slips past another plate horizontally is a ____

- a. mid-ocean ridge
- b. transform boundary
- c. convergent boundary
- d. subduction zone
- e. divergent boundary

Indicate whether the statement is true or false.

T 6. Mid-ocean ridges are formed along lines where two plates diverge under the water.

T 7. Ocean trenches are formed along lines where an oceanic plate subducts under a continental plate.

T 8. Some mid-ocean ridges are split into sections by transform faults.

Indicate the answer choice that best completes the statement or answers the question.

D 9. The ____ is (are) an example of a transform boundary.
a. Appalachian Mountains
c. Mid-Atlantic Ridge

- b. Himalayas
- d. San Andreas Fault

B 10. The Great Rift Valley in Africa is a ____.
a. mid-ocean ridge
c. convergent boundary

- b. divergent boundary
- d. transform boundary

D 11. Active volcanoes are most likely to form at ____.
a. transform boundaries
c. the center of continents

- b. divergent boundaries
- d. convergent oceanic-continental boundaries

C 12. ____ are formed when two continental plates collide.
a. Volcanoes
c. Mountain ranges

- b. Strike-slip faults
- d. Rift valleys

Match the correct type of stress with the boundary.

B 13. Tension

C 14. Shear

A 15. Compression

- A. Convergent
- B. Divergent
- C. Transform

16. Explain how a volcanic arc occurs and where a current volcanic arc is. Draw a picture also.

A volcanic arc occurs when an oceanic plate subducts under a continental plate.



The subduction of the oceanic crust weakens & puts pressure on the continental crust, forcing magma up, forming volcanoes on the land.

17. Explain what a fault zone is and where a current fault zone in the U.S. is.

A fault zone results from a major fault causing smaller, minor cracks in the earth around it. An example is San Andreas Fault, CA.

18. List the layers of earth in order beginning with the inside moving outward.

inner core, outer core, mantle (asthenosphere & lithosphere), Crust (oceanic & continental)

19. Which two elements make up the core?

Iron & Nickel

20. The outer core spinning around the inner core causes the Magnetic field.

21. Name two types of crust. oceanic & continental

22. The upper part of the mantle and the crust make up the Lithosphere.

23. The Mantle includes the lithosphere and the asthenosphere.

24. Oceanic crust is made of which rock? basalt

25. Continental crust is made mostly of which rock? granite

26. Where are silicates found? (silicon & oxygen) Crust

27. Describe Pangea.

A supercontinent composed of all the continents pushed together in a different location than today - proposed by Wegener - thought to have existed > 250 mill. yrs. ago

19. Name 3 pieces of evidence for Continental Drift.

a. *Glossopteris* plant fossils (tropical) & *mesosaurus* fossils in regions that are currently frozen

b. Glacier strikes of the same age & deposits of the same types

c. land formations - similar age & layers of rock in mountains (Caledonian & Appalach)

20. Who is responsible for the theory of Continental Drift? Alfred Wegener

21. Coal is made from the remains of plants and animals. If coal beds are found in Antarctica, what might this indicate?

Antarctica once had a warmer, moister climate

21. Name 3 pieces of evidence for Sea Floor Spreading.

a. *Magnetic Stripes*

b. *thermal core samples - rock close to M.O.R. is warmer*

c. *Sediment samples - age & thickness of sediment close to M.O.R. = younger & thinner*

22. Who is responsible for the theory of Sea Floor Spreading? *Harry Hess*

23. Explain the temperature, age, and magnetism of ocean crust NEAR the Mid-Ocean Ridge.

Temp - warmer

Age - younger

magnetism - "normal" - same as today

24. What happens to temperature, age, and magnetism of ocean crust as you move away from the M.O.R.?

Temp - gets cooler

Age - gets older

magnetism - reversals happen

Topo Maps

23. Lines that connect areas of equal elevation are called *Contour* *Lines*.

24. A dark, bold line on a topographic map is called a(n) *index* *contour*.

25. Water always flows toward the *open* end of the "V".

26. *Hill tops* on a topographic map are represented with a closed circle and no other contour lines inside it.

27. *Depressions* on a topographic map are represented with a closed circle that has slashed marks inside it.

28. An area on a topographic map is *flat* if the lines are far apart.

29. An area on a topographic map is *steep* if lines are close together.