

Names: _____

Score: ____/83

Benjamin N. Cardozo Dynamic Planet Test

- Labeling Questions are worth 1 Point Each (1 point per labeled/identified item)
- Multiple Choice Questions are worth 2 Points Each
- Short Answer Questions are worth 3 Points Each

Dynamic Planet

1) Who came up with the theory of continental drift, but was discredited due to a lack of explanation for the mechanism behind the motion of the continental masses? (2)

- A) Henry Hess
- B) Robert Dietz
- C) Albert Wegener
- D) Isaac Newton

2) While the theory of continental drift was ignored in the 1920s, it eventually was revived in the 1960s, leading to the theory of plate tectonics. Which of the following does **not** support the early theory of continental drift, nor for the plate tectonics theory in the 1960s? (2)

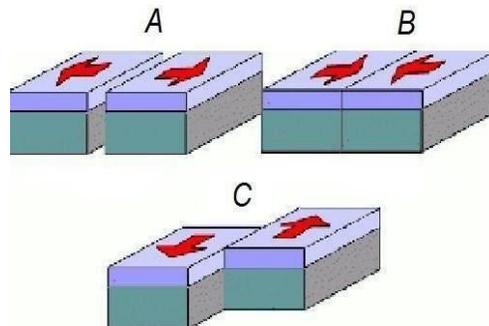
- A) Evidence found through studying the magnetic properties of rocks, in which the polarity of rocks reverse depending on the date at which the rock formed.
- B) Finding of fossils that suggested the continents were once connected in the past.
- C) Development of the theory of sea-floor spreading.
- D) The continental masses appear to fit together like a puzzle.
- E) The continental crust is able to push through the oceanic crust, thus allowing for the movement of the continents.

Use the following diagram to match the letter choice to the corresponding plate boundary in questions 3—5. (3 Points Total)

3) ____ represents a transform boundary.

4) ____ represents a convergent boundary.

5) ____ represents a divergent boundary.



6) Which of the following is a transform plate boundary? (2)

A) The Great Rift Valley of East Africa

B) The San Andreas fault

C) The Mid-Atlantic Ridge

D) The Marianas Trench

7) What causes the movement of the continental plates? (3)

8) Which two plates make up the San Andreas Fault? (3)

9) Name two differences between oceanic plates and continental plates. (3)

10) Which of the following may form or occur as a result of continental-continental plate collisions? (2)
(Circle multiple answers).

A) Volcanoes

B) Mountains

C) Subduction zones

D) Earthquakes

E) B, C, & D

11) Which of the following may form or occur as a result of oceanic-continental plate collisions? (Circle multiple answers). (2)

A) Trenches

B) Volcanoes

C) Subduction zones

D) Earthquakes

E) All of the above

12) The East African Rift is an example of a _____, which is splitting the African Plate into the _____ and the _____. (2)

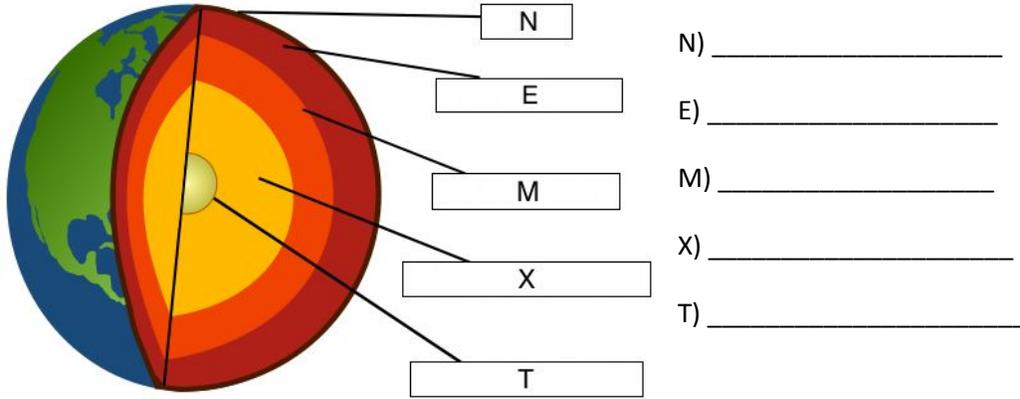
13) List the chemical (compositional) layers of the Earth. (3)

a) _____, b) _____, c) _____

14) List the mechanical layers of the Earth. (3)

a) _____, b) _____, c) _____, d) _____, e)

15) Label the mechanical layers of the Earth. (5 Points)



16) Which of the following is true about both P-waves and S-waves? (Circle two answers). (2)

- A) They can both travel through solids.
- B) They can both travel through liquids and solids.
- C) They are both types of body waves.
- D) They are both types of surface waves.

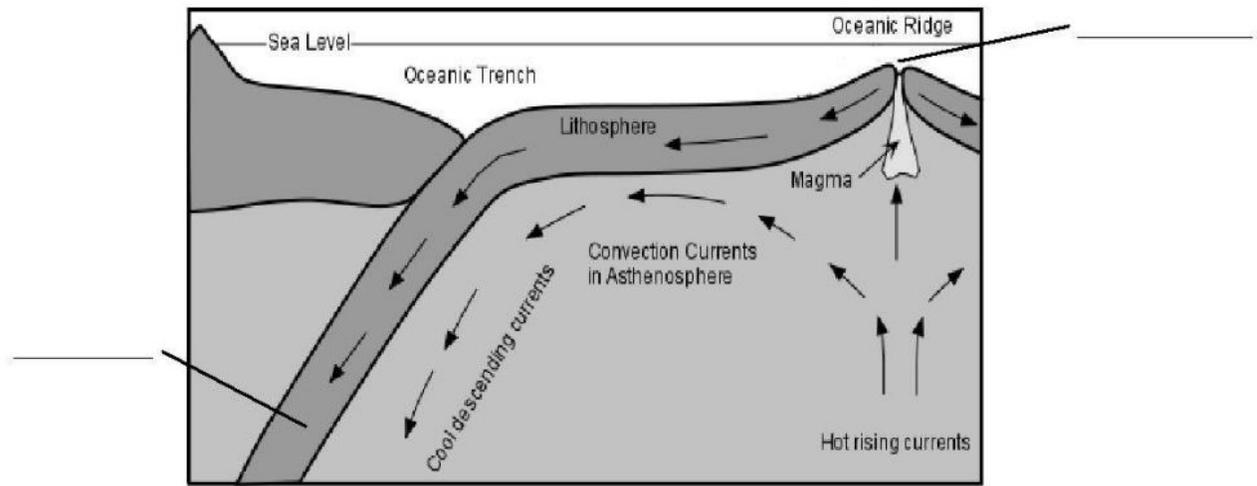
17) One **difference** between P-waves and S-waves is that _____. (2)

- A) P-waves are transverse waves while S-waves are longitudinal waves
- B) P-waves are body waves whereas S-waves are a type of surface wave
- C) P-waves are longitudinal waves while S-waves are transverse waves
- D) P-waves can travel through solids and liquids whereas S-waves can only travel through liquids

18) What is the seismic boundary between the crust and the mantle called? (2)

- A) Gutenberg Discontinuity
- B) Conrad Discontinuity
- C) Lehmann-Bullen Discontinuity
- D) Mohorovicic Discontinuity

19) Label the two processes that are also responsible for plate movement as shown in the diagram below. (2 Points Total)



20) What was Andrijas Mohorovicic known for? (2)

A) He was the first to conclude that the Earth is made up of different compositional layers after analyzing data that showed as seismic waves traveled throughout the earth, their velocities changed.

B) He was known for his three laws of motion.

C) He was known for his work in the development of the sea-floor spreading theory in the 1960s.

D) He was known for his contributions to the theory of continental drift in the 1920s, claiming that the continental masses were able to plow through the oceanic plates as to explain the movement of the plates.

21) The picture below is of the Sierra Mountain Range in Nevada. From the picture, what type of fault led to the formation of the mountains? (2)



A) Reverse fault

C) Strike-slip fault

B) Normal fault

D) Transverse Fault

Identify the types of faults below. (3 Points Total)



22) _____ 23) _____

24) _____

25) Which type of fault is caused by compressional forces? (2)

- A) Normal faults
- B) Reverse faults
- C) Strike-slip faults
- D) Transverse faults

26) Which type of fault is caused by shearing forces? (2)

- A) Normal faults
- B) Reverse faults
- C) Strike-slip faults
- D) Thrust faults

27) The cause of hot-spots are _____. (3)

28) Where can a volcano form? (2)

- A) Subduction zones
- B) Mid-Ocean ridges
- C) Hotspots
- D) All of the above

29) The most destructive earthquake waves are the _____. (2)

- A) P waves
- B) Surface waves
- C) S waves
- D) Q waves

30) Approximately _____, of earthquakes occur at plate boundaries. (2)

- A) twenty-five percent
- B) fifty-percent
- C) seventy-five percent
- D) ninety-percent

31) What is isostasy? (3)

32) Which of the following is an example of isostasy? (2)

- A) Accumulation of sediment or collisions leading to the formation of mountains causes the crust to depress lower into the asthenosphere
- B) Glacial retreat causing for the crust to rebound
- C) Both A and B
- D) None of the above

In the following images below, identify what type of volcano it is. (3 Points Total)



33) _____



34) _____



35) _____

36) Which of the following can cause an explosive eruption? (2)

- A) High pressure and high viscosity of magma
- B) High pressure and low viscosity of magma

C) Low pressure and low viscosity of magma

D) Low pressure and high viscosity of magma

37) Which of the following can cause an effusive eruption? (2)

A) High pressure and high viscosity of magma

B) High pressure and low viscosity of magma

C) Low pressure and high viscosity of magma

D) Low pressure and low viscosity of magma

38) Which type of volcano is generally formed due to lava flows from effusive eruptions? (2)

A) Shield volcano

B) Composite volcano

C) A & B

D) None of the above

39) Placing geologic events in a chronological order from their position in the rock record is (2)

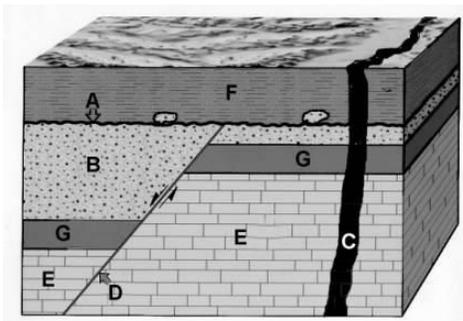
A) tectonics

B) radiometric dating

C) relative dating

D) absolute dating

40) What geologic law is used to show that dike C is younger than layer F? (2)



A) Law of Original Horizontality

B) Law of Superposition

C) Law of Inertia

D) Law of Crosscutting Relationships

41) Which of the following lists the correct order of events labeled A-E in the diagram below from oldest to youngest? (Note that E represents the fault). (2)

A) CBADE

B) EDABC

C) CDBAE

D) None of the above

