

## Physical Science 111

### Plate Tectonics

**Part One:** Multiple Choice - Choose the best answer to each question. There is only one correct answer.

- Physicists rejected Wegener's theory of Continental Drift because:
  - the fit of Africa and South America was wrong.
  - the timing of the opening of the Atlantic was off by 200 million years
  - he failed to provide a reasonable mechanism for Continental Drift
  - Mesosaurus was a swimming animal
- The lithosphere is:
  - hot and plastic
  - mostly liquid magma
  - made of sedimentary rocks
  - cool and brittle
- A divergent boundary in oceanic crust forms:
  - a subduction zone
  - the mid-oceanic ridge
  - an oceanic trench
  - a Benioff zone
- Subduction occurs at \_\_\_\_\_ boundaries.
  - convergent
  - divergent
  - transform
  - all of these
- New crust forms at \_\_\_\_\_ boundaries.
  - convergent
  - divergent
  - transform
  - all of these
- Geomagnetic reversals:
  - provided strong evidence for sea-floor spreading
  - cause the movement of plates
  - confirmed the existence of subduction zones
  - confirmed the pole wandering hypothesis
- Plates slide past each other at \_\_\_\_\_ boundaries.
  - convergent
  - divergent
  - transform
  - all of these
- The formation of the Hawaiian Islands is associated with:
  - ocean-ocean convergent boundaries
  - transform fault boundaries
  - ocean-continent convergent boundaries
  - none of these
- The energy that causes plates to move is derived from:
  - tidal forces
  - solar energy
  - magnetic energy
  - Earth's internal heat
- The San Andreas fault is a \_\_\_\_\_ boundary.
  - convergent
  - divergent
  - transform
  - none of these

**Part Two:** True/False:

- Continental crust is less dense than oceanic crust.
- Overall, oceanic crust is much older than continental crust.
- When continental plates converge subduction occurs.
- The position of the North Magnetic Pole has slowly migrated north over time.
- The thickest crust exists under the ocean.

**Part Three:** Completion:

- Plumes of molten rock originating deep within the mantle are known as \_\_\_\_\_.
- The supercontinent, whose name means "all land", that began to break apart 200 million years ago is called \_\_\_\_\_.
- The study of the Earth's ancient magnetic fields is called \_\_\_\_\_.
- Valleys formed in divergent boundaries on land are called \_\_\_\_\_.
- The theory that describes rigid plates of lithosphere moving over the asthenosphere is \_\_\_\_\_.

## Answers

### Multiple choice

1. c 2. d 3. b 4. a 5. b 6. a 7. c 8. d 9. d 10. c

### True/False

1. T 2. F 3. F 4. F 5. F

### Completion

1. hot spots 2. Pangaea 3. Paleomagnetism 4. Rift valleys 5. plate tectonics