Review Questions Topic 6: How the Earth Works

How do densities between continental and oceanic crust differ?

What do tectonic plate edges rarely match?

Why is it not correct to speak of “moving continents”?

What is the difference between a “continent” and a tectonic plate?

What are the two types of divergent plate boundaries, and what type of crust is involved in each?

Verbally describe how new seafloor crust is formed at seafloor spreading ridges

What are the three major geological features of a continental rift valley?

Explain how each of the geological features forms

Provide a modern-day example of a continental rift and incipient ocean basin

What are the three types of convergent plate boundaries, and what type of crust is involved in each?

Draw a cross-section through a typical continental-oceanic subduction zone, and label the following components: oceanic crust, continental crust, lithospheric mantle, asthenospheric mantle, accretionary prism, pelagic sediment, terrestrial sediment, foreland basin, arc volcano, subduction trench

Provide a real-world example of an island arc subduction zone and a continental arc subduction zone

What kind of convergent zone are the Himalayas? Why is there no subduction here?

What DOES NOT happen to the subducting slab?

Where does the magma in a subduction zone form (come from)?

Explain how to tell apart left-lateral from right-lateral transform faults

Provide a real-world example of a major transform fault in the United States

What is the difference between an active and a passive continental margin?

What does a continental shelf consist of?

Explain the four stages of how an ocean basin forms, and how this creates passive margins

Explain how Arthur Holmes’ Convection Current Hypothesis is wrong

Provide at least two reasons for why convection current hypothesis cannot explain plate motion

Explain ridge push

Explain slab pull

What is a “slab graveyard” and where is it located? How do we detect these slab remnants?