**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Directions: You must cite where you found the information please. Example: textbook page 325, notes, etc. Google is not an option. Thank you. ☺**

**Multiple Choice:**

1. Magma that forces its way into rocks and hardens is called a(n):
   1. Extrusion
   2. Fault
   3. Unconformity
   4. Intrusion
2. A petrified fossil forms when
   1. An organism is frozen
   2. Minerals replace all of part of an organism
   3. An organism becomes trapped in amber
   4. Gases escape from the organism and leave carbon behind
3. The earliest forms of life appeared during
   1. The Paleozoic Era
   2. The Cenozoic Era
   3. Precambrian Time
   4. The Mesozoic Era
4. On the geologic time scale, eras are divided into
   1. Ages
   2. Indexes
   3. Periods
   4. Relative dates
5. Fossils provide evidence for all of the following EXCEPT for
   1. Changes in the Earth’s surface
   2. How the Earth originally formed
   3. How environments on Earth have changed over time
   4. How groups of organisms have changed over time
6. In the Cambrian Explosion,
   1. The supercontinent broke apart
   2. An asteroid collided with Earth
   3. A great number of different organisms evolved
   4. Mammals spread into every environment on Earth
7. Most fossils form when organisms die and are buried in
   1. Sediment
   2. Faults
   3. Unconformities
   4. Ice
8. The Mesozoic Era is often called the
   1. Age of Mammals
   2. Age of Fish
   3. Age of Reptiles
   4. Age of Amphibians
9. Scientists use radioactive dating to
   1. Determine the absolute ages of rocks
   2. Discover the source of index fossils
   3. Determine the relative ages of extrusions
   4. Find and trace fossils in igneous rock
10. Reptiles evolved from
    1. Dinosaurs
    2. Mammals
    3. Birds
    4. Amphibians

**True OR False:**

1. Dinosaurs “ruled” Earth during the Paleozoic Era. \_\_\_\_\_
2. A scientist who studies fossils is called a(n) paleontologist. \_\_\_\_\_
3. Geologists often use potassium-40 to date materials that lived up to about 50,000 years ago. \_\_\_\_\_
4. Animals without backbones are called invertebrates. \_\_\_\_\_
5. Index fossils are useful because they tell the absolute ages of rock layers. \_\_\_\_\_

**Fill in the Blank:**

1. The gradual change in living things over long periods of time is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a radioactive element is the time it takes for half of the radioactive atoms to decay.
3. Fossils are almost always found in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rock.
4. Plants and animals first reached land during the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Era.
5. The earliest life forms were probably similar to present-day \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Critical Thinking:**

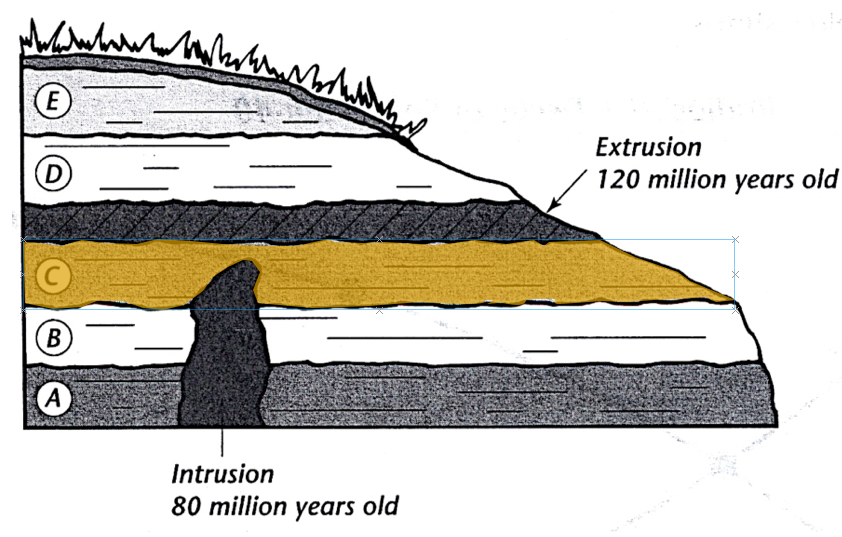
1. **Interpreting Diagrams**

**Use the diagram below to answer questions 21-23.**

|  |  |  |  |
| --- | --- | --- | --- |
| *Precambrian Time* | *Paleozoic Era* | *Mesozoic Era* | *Cenozoic Era* |

1. What is this called, and why do geologists use it?
2. Where on this figure would you place a mark for when Pangea formed?
3. Where on this figure would you place a mark for when humans appeared?

**Use the diagram below to answer questions 24 and 25.**



1. What is the age of layer C? Explain your answer.
2. If erosion wore away layer E and then a new layer formed, what would be the result?
3. **Essays**
4. What is the law of superposition, and how is it used?
5. What are index fossils, are how are they used? Describe an example in your explanation.
6. Describe how a cast is related to a mold.
7. What occurred at the end of the Cretaceous Period, and how did it affect life on Earth? Describe one hypothesis for why this event occurred.
8. What does the fossil record show about how life has changed on earth?