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

**Geologic History/Dating Exam Study Guide**

**Vocabulary (define the following in your own words):**

half life

Charles Lyell

geologic time scale

strata

lithification

radioactive decay

period

era

fossil correlation

law of superposition

original horizontality

unconformity

mass extinction

relative dating

uniformitarianism

de-extinction

epoch

absolute dating

disconformity

nonconformity

angular unconformity

**Concepts to study:**

1. What is lithification and how can it help create the geologic time scale?
2. Compare and contrast relative and absolute dating.
3. Look at the Precambrian Era and compare it to the Paleozoic Era. Why is the Paleozoic broken into more periods even though the Precambrian Era is a much longer section of Earth’s history?
4. Describe how studying the geologic time scale can help someone have a more in-depth understanding of the evolution of life.
5. Why is uniformitarianism important to geology?
6. Why do scientists need a geologic time scale?
7. Explain how fossils provide evidence to Earth’s past.
8. When did geologic time begin?
9. What era are we currently in? What period?
10. List the eons
11. Explain why scientists know more about the Cenozoic than they do about other eras.
12. Which period is known as the age of fish? Which periods were dinosaurs dominant? Which era did mammals occur in?
13. Rank the divisions of time from shortest to longest: Eon, Period, Epoch, Era.
14. Distinguish among eons, eras, periods, and epochs, using specific examples.
15. What is the most common radioactive element when it comes to absolute dating rocks?
16. Compare and contrast a nonconformity, angular unconformity, and a disconformity (draw pictures and label please)
17. How do we use rock layers to determine geologic history?
18. If a fossil is found in a rock layer, what do we know about the relative age of the fossil?
19. How do geologists use the fossil record to determine geologic history?
20. What major (extinction) event on the geologic timeline occurred most recently?
21. How are radioactive elements used to date rocks and other objects?
22. What are the differences between absolute age dating and relative age dating?
23. What is de-extinction and in what circumstance should it be done?
24. What type of rock are fossils typically found in?
25. Be able to apply the principles of geology as well as construct a rock column that includes fault/intrusions and order your drawing from youngest to oldest.
26. Please order this picture from youngest to oldest and explain what happened.



1. What principles of geology are being used in the diagram below?

