DISCUSSION QUESTIONS

SESSION 9: GEOLOGIC TIME

1. Distinguish between Relative and Absolute geologic dating
2. Explain the principles of
3. Original horizontality
4. Superposition (oldest on bottom, youngest on top)
5. Cross-cutting relationships
6. Strata younger than faults that displace them
7. Dikes, sills, laccoliths, stocks, batholiths all younger than rocks then invade
8. Principle of Inclusions
9. Compare and contrast: Catastrophism and Uniformitarianism
10. Who was Archbishop Ussher? What effect did he have in thinking about the age of the earth and processes that formed it?
11. Who James Hutton? What was his contribution to the science of Geology?
12. Which is older? Granite or Sandstone?
13. 
14. Distinguish between disconformity, angular unconformity, and nonconformity
15. What is required to make a fossil?
16. Who was William Smith? What was his contribution to Geology?
17. Explain the following radiometric dating methods: What is the half life of each radioactive isotope?
18. U238-Pb206
19. U235-Pb207
20. Th232-Pb 208
21. Rb87-St87
22. K40-Ar40
23. Sm147-Nd143
24. The earth’s oldest rocks are in South Africa (3.2 billion), Northern Canada (4.0 billion). Earth formed 4.55 billion years ago.
25. What fossils are found in the Cenozoic Era, Mesozoic Era and Paleozoic Era?
26. What is the name of the geologic stratigraphic units for the Age of Reptiles?
27. What is the name of the geologic stratigraphic units for Amphibians?
28. What is the name of the geologic stratigraphic units for Age of Fishes
29. What is the name of the geologic stratigraphic units for Invertebrates?