Answers to Study Guide:

1. The difference between evolution and natural selection is similar to the difference between an effect and a cause. Suppose there is a change in gene frequency in a population--we want to explain WHY there is evolution and one cause we can point to is natural selection. Make sure you are familiar with the definitions in your notes.
2. Adaptation strongly relates to natural selection. It is a feature of an organism which makes it more suitable for its environment. Think of a spider's venom or a the spikes on a cactus.
3. Every organism has the same instructions--DNA namely. Some organisms have similar 'base pairs' which might indicate common ancestry.
4. This is similar to #3. The idea is that at the early stages of an embryo across different species, they are very similar anatomically.
5. Analogous structures: similar form or function, but no common ancestor shared between species. Example: bird and butterfly wings. Homologous structures: similar for or function which where species do share a common ancestor. Example: forelimb of a whale and an ape.
6. Mutation creates variation. Mutation is a change in DNA sequences which brings about differences in traits (phenotypes), hince variation.
7. Evolution can be described as a change in gene frequency.
8. Look in your notes at the very beginning of unit. The idea is that as antibiotics kills bacteria that are not resistant to it and the surviving bacteria then reproduces and the gene frequency changes (there is a higher percentage of bacteria with the trait that makes it resistant to the medication).
9. They are anatomical parts in which had a use, but no longer. Example: tonsils, wisdom teeth, male nipples
10. Absolute dating does not use another thing to determine or estimate the age of the thing in question. Relative dating does.
11. The half life of a set of parent isotopes is the time it take for half of it to become daughter isotopes.
12. Layers closest to the surface are younger than the layers beneath.
13. Fossils in layers that are used in the relative dating of other layers or fossils.
14. Transition fossils and the progression of adaptations/traits can be observed over time.
15. the study of the history of life on Earth as based on fossils.
16. Look in your notes.
17. Look in your notes
18. Sedimentary
19. Look at diagram
20. Intrusive are formed beneath the surface, whereas extrusive rocks are formed above the surface. They are both igneous.
21. Weathering/Erosion, Deposition, Compaction, Cementation.
22. Father of Evolution. He observed that the finches on each island had different kinds of beaks based on the food source on each island.
23. It was not.