

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

## ***STUDY GUIDE – CHAPTERS 25-27***

### Multiple Choice & Numerical Fill-In Topics (73 points)

- early Earth conditions
- early life forms
- changes in Earth's atmosphere
- stromatolites/microfossils
- endosymbiotic theory
- evolution of water to land
- fossils (including transitional fossils)
- Hox genes
- exaptations
- principle of superposition
- adaptive radiation
- types of genetic drift
- levels of taxonomy
- homologous structures
- analogous structures
- alignment of homologous genes
- phylogenetic trees
- outgroups
- molecular clocks
- genes used for molecular clocks
- Protista, Plantae, Fungi, Animalia
- monophyletic vs. polyphyletic
- how to read a clade/evolutionary tree
- shared derived character
- shared ancestral character
- prokaryotic vs. eukaryotic ribosomes
- bacterial reproduction
- Archaea vs. Bacteria vs. Eukarya
- "extreme" archaeobacteria
- ecological roles of bacteria
- types of bacterial nutrition
- symbiosis
- allopatric speciation
- sympatric speciation

### Free Response Topics (30 points)

- evidence for evolution
- fossils
- phylogenetic trees  
(how to draw and interpret)
- principle of superposition
- bacterial structure and function
- mechanisms of isolation/speciation

