

**Biology Study Guide**  
**2<sup>nd</sup> Semester**

**VOCABULARY / Directions: Using complete sentence define the following words**

1. Binomial nomenclature
2. class
3. classification
4. division
5. family
6. genus
7. kingdom
8. order
9. phylum
10. taxonomy
11. cladistics
12. eubacteria
13. fungus
14. phylogeny
15. vestigial structure
16. camouflage
17. embryo
18. Homologous structure
19. mimicry
20. natural selection
21. adaptive radiation
22. allelic frequency
23. gene pool
24. genetic drift
25. polyploid
26. speciation
27. convergent evolution
28. geographic isolation
29. punctuated equilibrium
30. stabilizing selection

## ESSAYS

**Directions: Answer the questions using full and complete sentences**

1. What type of evolutionary evidence do fossils provide?
2. Which type of natural selection favors the average individuals in a population?
3. A humming bird has wings that allows it to hover and fly backwards. What kind of adaptation is this?
4. What are the structural similarities between the fish and whale?
5. What is speciation due to physical barriers a result of?
6. How do species adapt to their environment over many generations according to Darwin?
7. What is the structural adaptation of an organism that enables it to resemble another harmful or distasteful species?
8. What is a subtle adaptation that allows an organism to blend in with its surroundings called?
9. What is the process called when a species finds its way to an island and then evolves into many species?
10. What is the scientific hypothesis that explains how an ancestral population of elephants speciated rapidly after a long period of stability called?
11. What do we first have to understand in order to understand population genetics?
12. What are the different sizes of peanuts in a bag called?
13. What kind of selection creates the existence of desirable characteristics in both crops and domestic animals?
14. What are the wings of bats and the forelimbs of crocodiles examples of structurally ?
15. Why is DNA a useful tool for determining possible relationships among the species of organisms?
16. What is adaptive radiation?
17. When does divergent evolution occur?
18. When does convergent evolution occur?
19. If two organisms belong to the same family, what other taxonomic groups do the organisms have in common?
20. What would be a useful characteristic to use in cladistics?
21. What is the largest taxon?
22. What group of prokaryotes often live in extreme environments?
23. What is phylogeny?
24. What is the science that groups names and species called?
25. What is the branch of biology that groups and names organisms called?

26. What is a group of related classes of plants called?
27. What is a heterotrophic eukaryote absorbs nutrients from organic material in the environment called?
28. What is the placing of information or objects into groups based on similarities called?
29. What is the system for identifying two organisms that uses two words to name the species called?
30. What are most prokaryotes that live in most habitats called?
31. What was one shortcoming of Aristotle's classification system?
32. What are two advantages of using scientific names for organisms?
33. What did Linnaeus contribute to the field of taxonomy?
34. What is a taxon?
35. What are the taxa used in biological classification system? (from largest to smallest)
36. How does the fanlike diagram differ from the cladogram?
37. What organism does not have a nucleus bound membrane?
38. How do fungi obtain food?
39. What is an animal classified as?
40. What is geographical distribution?