Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Biology Final Exam Review**

1. What is a population in ecology?
2. All members of a population are members of the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. How are a population and a community different?
4. Define ecosystem.
5. Explain the difference between biotic and abiotic.
6. Define ecological succession.
7. Draw a food chain containing a producer, primary/first level consumer, secondary/second level consumer and tertiary/third level consumer.
8. Where is the highest amount of energy found in a food chain?
9. Define trophic level.
10. Explain the difference between a producer and a consumer.
11. What do the following eat? Herbivore Carnivore Omnivore
12. What is the function of a decomposer in an ecosystem?
13. How is climate different from weather?
14. How is the movement of energy different from the movement of nutrients (ex. carbon and nitrogen?)
15. Define and give an example of: mutualism commensalism parasitism competition predation
16. How can competition be reduced in a population?
17. What factors would cause a population’s numbers to increase? Decrease?
18. How are immigration and emigration different?
19. How are density dependent and density independent factors different?
20. What happens to the concentration of DDT as it moves though a food chain?
21. Describe Lamarck’s theory of evolution.
22. What was different about the finches Charles Darwin observed on the various Galapagos Islands?
23. What conclusion did Darwin come to after observing the tortoises and finches?
24. What was the name of Charles Darwin’s book published in 1859?
25. Organisms that are the most likely to survive have variations that are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
26. What is another name for “survival of the fittest?”
27. Organisms with similar physical characteristics are thought to have descended from a \_\_\_\_\_\_\_\_\_\_.
28. Define gene pool.
29. What is meant by the term reproductive isolation?
30. Explain the difference between temporal, geographic and behavioral isolation.
31. Define vestigial structure.
32. What proportion of all species that have ever lived has become extinct?
33. Explain the difference between punctuated equilibrium and gradualism.
34. Define genetic drift.
35. What is the current system used by scientists to give universally accepted names?
36. List the order of taxa starting with the most general and ending with the most specific.
37. What are the two parts of a scientific name?
38. Explain how to correctly write a scientific name.
39. Which two kingdoms did Linnaeus recognize?
40. If two organisms have similar genomes, it is likely that they share a common \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
41. What nucleic acids are contained in the cells of all organisms?
42. Name the four kingdoms that have eukaryotic cells.
43. Which kingdom contains very diverse organisms that do not fit into the other kingdoms?
44. How are the cell walls of plants and fungi different?
45. Are protists prokaryotic or eukaryotic?
46. Why are algae considered an important group of organisms?
47. Draw and label the three shapes of prokaryotes.
48. How are the two prokaryotic kingdoms different?
49. What roles do bacteria play in the environment?
50. How do fungi get their food?
51. What is the main function of fungi in the environment?
52. What causes the human disease ringworm?
53. What are the characteristics of all organisms in Kingdom Plantae?
54. Do all plants produce seeds?
55. What do plants need to conserve in order to live on land?
56. Bryophytes do not have vascular tissue. How do they get water?
57. What are the two types of vascular tissue?
58. What does xylem do?
59. What does phloem do?
60. Angiosperms have flowers, and gymnosperms have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
61. What is the purpose of a flower’s petals?
62. Which part of the flower produces pollen grains?
63. Describe the structure of a seed.
64. What is the purpose of the seed coat?
65. What is dormancy?
66. What is germination?
67. Describe the differences between seeds dispersed by wind and those dispersed by animals.
68. What adaptation of a cactus allows it to soak up rain water quickly?
69. The needles (leaves) on a cactus are an adaptation to reduce \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ loss.
70. Why does a carnivorous plant capture insects?
71. How are annual, biennials and perennials different?
72. What is the purpose of a plant’s stomata?
73. What happens in the mesophyll of a plant’s leaf?
74. Describe the plant’s response in gravitropism, phototropism and thigmotropism.
75. Define anterior, posterior, dorsal and ventral.
76. Describe the difference between radial and bilateral symmetry.
77. What is homeostasis?
78. What is the most important function of the skin?
79. What do swollen lymph nodes indicate?
80. Which blood cells contain hemoglobin?
81. What is the function of the esophagus?
82. Describe the function of the endocrine system.
83. Describe the functions of the skeletal system.
84. What are the functions of the spleen?
85. How is the circulatory system like a transportation system?
86. Name three substances transported by the circulatory system.
87. How does the body respond to a stimulant drug? A depressant?
88. What system of the body is immediately affected by alcohol?
89. Describe the effects of alcohol on the body.
90. Where does fertilization take place?
91. What is a zygote?
92. What is the body’s most important nonspecific defense?
93. Name ways HIV can be spread.
94. Which cells are specifically targeted by HIV?
95. Name two functions of the excretory system.
96. Compare the treatment of a viral disease to that of a bacterial disease.
97. Can a virus be prevented with a vaccine?