**7th**

\_\_\_\_ 1. Cells are

|  |  |
| --- | --- |
| a. | the structures that contain all of the materials necessary for life. |
| b. | found in all organisms. |
| c. | sometimes specialized for particular functions. |
| d. | All of the above |

\_\_\_\_ 2. Which of the following is a true statement about all living things?

|  |  |
| --- | --- |
| a. | They cannot sense changes in their external environment. |
| b. | They have one or more cells. |
| c. | They do not need to use energy. |
| d. | They reproduce asexually. |

\_\_\_\_ 3. Organisms must have food because

|  |  |  |  |
| --- | --- | --- | --- |
| a. | food is a source of energy. | c. | organisms never make their own food. |
| b. | food supplies cells with oxygen. | d. | All of the above |

\_\_\_\_ 4. A change in an organism's environment that affects the organism's activities is a

|  |  |  |  |
| --- | --- | --- | --- |
| a. | response. | c. | metabolism. |
| b. | stimulus. | d. | producer. |

\_\_\_\_ 5. When a duck dives under water, its inner eyelids automatically raise to cover the duck's eyes. In this case, water acts as

|  |  |  |  |
| --- | --- | --- | --- |
| a. | homeostasis. | c. | a reaction. |
| b. | a stimulus. | d. | an enzyme. |

\_\_\_\_ 6. Maintaining a body temperature of 37°C and a stable amount of sugar in your blood are both examples of

|  |  |  |  |
| --- | --- | --- | --- |
| a. | homeostasis. | c. | photosynthesis. |
| b. | metabolism. | d. | respiration. |

\_\_\_\_ 7. A monkey is made up of trillions of

|  |  |  |  |
| --- | --- | --- | --- |
| a. | stimuli. | c. | eggs. |
| b. | minerals. | d. | cells. |

\_\_\_\_ 8. Which of the following is NOT found in animal cells?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | cell wall | c. | lysosomes |
| b. | cell membrane | d. | vesicle |

\_\_\_\_ 9. Different \_\_\_\_ work together in an organ.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | organ systems | c. | organisms |
| b. | tissues | d. | prokaryotes |

\_\_\_\_ 10. Which of the following refers to all of the organisms in a particular area?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | population | c. | community |
| b. | ecosystem | d. | organelles |

\_\_\_\_

11. Which of the following are NOT covered by a membrane?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | Golgi complex | c. | ribosomes |
| b. | mitochondria | d. | None of the above |

\_\_\_\_ 12. Which of the following statements is NOT part of the cell theory?

|  |  |
| --- | --- |
| a. | The most basic component of any organism is the cell. |
| b. | All cells originate from other cells. |
| c. | All cells have a nucleus and a cell membrane. |
| d. | All living things are made up of one or more cells. |

\_\_\_\_ 13. Which of the following is an example of a tissue in your body?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | blood | c. | muscle cells |
| b. | fat | d. | All of the above |

\_\_\_\_ 14. Which of the following is an example of an organ?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | a plant leaf | c. | heart |
| b. | stomach | d. | All of the above |

\_\_\_\_ 15. Which of the following best describes the function of the nervous system?

|  |  |
| --- | --- |
| a. | It breaks down food into very small particles so that it can be used by all of your body's cells. |
| b. | It transmits information back and forth between your brain and the other parts of your body. |
| c. | It takes oxygen into your body and expels carbon dioxide. |
| d. | It keeps blood and oxygen flowing through all parts of your body. |

\_\_\_\_ 16. \_\_\_\_ are the basic units of living things.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | Organisms | c. | Cells |
| b. | Tissues | d. | Organs |

\_\_\_\_ 17. Why is an elephant larger than a human?

|  |  |
| --- | --- |
| a. | It has larger cells than a person does. |
| b. | It has a larger surface-to-volume ratio of its cells than a person does. |
| c. | It has more cells than a person does. |
| d. | None of the above |

\_\_\_\_ 18. Genes are found on

|  |  |  |  |
| --- | --- | --- | --- |
| a. | chromosomes. | c. | proteins. |
| b. | alleles. | d. | anthers. |

\_\_\_\_ 19. The process that produces sex cells is

|  |  |  |  |
| --- | --- | --- | --- |
| a. | mitosis. | c. | meiosis. |
| b. | photosynthesis. | d. | probability. |

\_\_\_\_ 20. The passing of traits from parents to offspring is

|  |  |  |  |
| --- | --- | --- | --- |
| a. | probability. | c. | recessive. |
| b. | heredity. | d. | meiosis. |

\_\_\_\_ 21. If you cross a white flower (with the genotype ***pp***) with a purple flower (with the genotype ***PP***), the possible genotypes of the offspring are

|  |  |  |  |
| --- | --- | --- | --- |
| a. | ***PP*** and ***pp***. | c. | all ***PP***. |
| b. | all ***Pp***. | d. | all ***pp***. |

\_\_\_\_ 22. How many chromosomes are present in a normal human sex cell?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 22 | c. | 46 |
| b. | 23 | d. | 92 |

\_\_\_\_ 23. The set of instructions for each characteristic donated by the parent to the offspring is called

|  |  |  |  |
| --- | --- | --- | --- |
| a. | mitosis. | c. | heredity. |
| b. | genes. | d. | meiosis. |

\_\_\_\_ 24. How many sets of instructions for each characteristic does a fertilized egg receive from EACH parent?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 1 | c. | 3 |
| b. | 2 | d. | 4 |

\_\_\_\_ 25. Although Darwin did not realize it, the variations he observed among the individuals of a population of finches were caused by

|  |  |  |  |
| --- | --- | --- | --- |
| a. | genetic resistance. | c. | fossils. |
| b. | mutations. | d. | selective breeding. |

\_\_\_\_ 26. The theory of evolution combines the principles of

|  |  |
| --- | --- |
| a. | natural selection and artificial selection. |
| b. | natural selection and genetic resistance. |
| c. | selective breeding and genetic inheritance. |
| d. | natural selection and genetic inheritance. |

\_\_\_\_ 27. A human's arm, a cat's front leg, a dolphin's front flipper, and a bat's wing

|  |  |
| --- | --- |
| a. | have similar kinds of bones. |
| b. | are used in similar ways. |
| c. | share many similarities with insect wings and jellyfish tentacles. |
| d. | have nothing in common. |

\_\_\_\_ 28. What body part of the Galápagos finches appears to have been MOST modified by natural selection?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | their webbed feet | c. | the bone structure of their wings |
| b. | their beaks | d. | the color of their eyes |

\_\_\_\_ 29. The opposable thumb allows humans to grasp objects firmly. Because this feature helped humans to survive over time, it is called a(n)

|  |  |  |  |
| --- | --- | --- | --- |
| a. | adaptation. | c. | mutation. |
| b. | genetic variation. | d. | vestigial structure. |

\_\_\_\_ 30. Individuals in a population that have traits or abilities that give them a competitive advantage over other population members are more likely to survive and reproduce. This principle is called

|  |  |  |  |
| --- | --- | --- | --- |
| a. | species separation. | c. | genetic mutation. |
| b. | genetic resistance. | d. | natural selection. |

\_\_\_\_

31. The red-eyed tree frog, the smoky jungle frog, and the strawberry dart-poison frog all have their own \_\_\_\_, which help them to survive life in a tropical rain forest.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | adaptations | c. | vestigial structures |
| b. | speciations | d. | selective breedings |

\_\_\_\_ 32. Structures and behaviors for finding food, protection, and for moving from place to place are an organism's \_\_\_\_ to its environment.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | selective breedings | c. | adaptations |
| b. | speciations | d. | traits |

\_\_\_\_ 33. In order for the red-eyed tree frog to produce fertile offspring, it should mate with its own species, which is

|  |  |  |  |
| --- | --- | --- | --- |
| a. | any frog. | c. | the tropical rain forest frog. |
| b. | the red-eyed tree frog. | d. | any amphibian. |

\_\_\_\_ 34. According to Darwin, the four steps in natural selection are

|  |  |
| --- | --- |
| a. | reproduction, genetic mutation, separation, and natural breeding. |
| b. | natural breeding, genetic variation, adaptation, and reproduction. |
| c. | separation, genetic variation, adaptation, and natural selection. |
| d. | overproduction, genetic variation, struggle to survive, and successful reproduction. |

\_\_\_\_ 35. "**K**ings **P**lay **C**hess **O**n **F**ine-**G**rained **S**and" is a mnemonic device that helps one remember

|  |  |
| --- | --- |
| a. | the scientific names of different organisms. |
| b. | the six kingdoms. |
| c. | the seven levels of classification. |
| d. | the difference between prokaryotic and eukaryotic cells. |

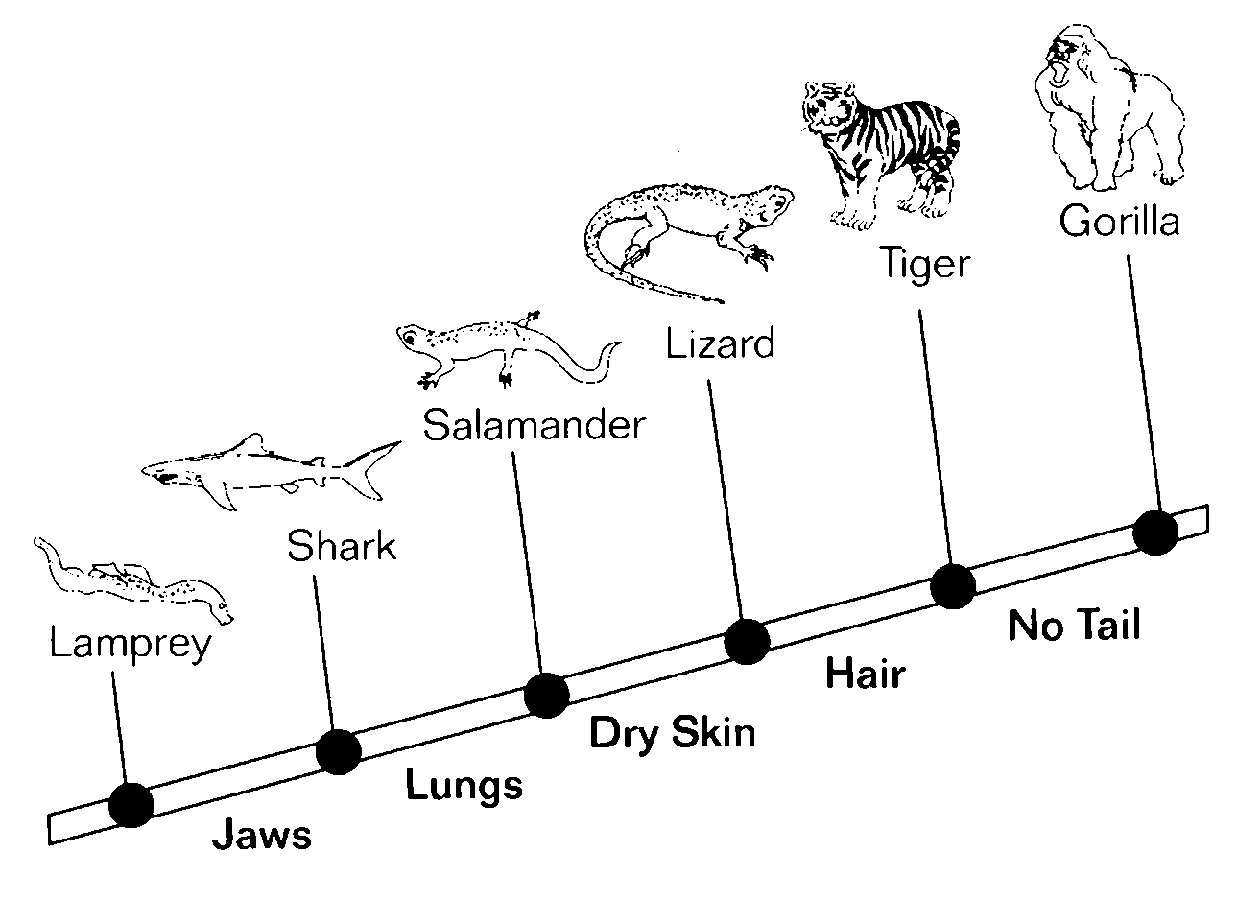
\_\_\_\_ 36. The seven levels of classification, from general to specific, are:

|  |  |
| --- | --- |
| a. | kingdom, class, order, phylum, family, genus, species. |
| b. | kingdom, phylum, class, family, order, genus, species. |
| c. | kingdom, phylum, class, order, family, genus, species. |
| d. | kingdom, class, phylum, order, family, genus, species. |

\_\_\_\_ 37. The scientific name for a skunk is *Mephitis mephitis*, which specifies the skunk's

|  |  |  |  |
| --- | --- | --- | --- |
| a. | kingdom and class. | c. | class and species. |
| b. | genus and species. | d. | class and genus. |

Below is a branching diagram showing the evolutionary relationships between organisms that are in the same kingdom. Examine the illustration and answer the questions that follow.



\_\_\_\_ 38. The branching diagram above shows

|  |  |
| --- | --- |
| a. | what makes each species unique from the other. |
| b. | that they came from a common ancestor. |
| c. | the evolutionary relationships between them. |
| d. | All of the above |

\_\_\_\_ 39. The words to the right of the tree most likely indicate the characteristics

|  |  |  |  |
| --- | --- | --- | --- |
| a. | they have in common. | c. | that none of the animals have. |
| b. | that make the next animal unique. | d. | All of the above |

\_\_\_\_ 40. Resources such as water, food, or sunlight are more likely to be limiting factors

|  |  |
| --- | --- |
| a. | when population size is decreasing. |
| b. | when predators eat their prey. |
| c. | when the population is small. |
| d. | when a population is approaching the carrying capacity. |

\_\_\_\_ 41. "Nature's recyclers" are

|  |  |  |  |
| --- | --- | --- | --- |
| a. | predators. | c. | producers. |
| b. | decomposers. | d. | omnivores. |

\_\_\_\_ 42. How energy moves through an ecosystem can be represented by

|  |  |  |  |
| --- | --- | --- | --- |
| a. | food chains. | c. | food webs. |
| b. | energy pyramids. | d. | All of the above |

\_\_\_\_ 43. The base of an energy pyramid represents which organisms in an ecosystem?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | producers | c. | herbivores |
| b. | carnivores | d. | scavengers |

\_\_\_\_

44. Which of the following is the correct order in a food chain?

|  |  |
| --- | --- |
| a. | sun  producers  herbivores  scavengers  carnivores |
| b. | sun  consumers  predators  parasites  hosts |
| c. | sun  producers  decomposers  consumers  omnivores |
| d. | sun  producers  herbivores  carnivores  scavengers |

\_\_\_\_ 45. The plants a ladybug lives on, the aphids that the ladybug eats, and the birds that would eat the ladybug are all

|  |  |
| --- | --- |
| a. | biotic parts of the environment. |
| b. | physical factors in the environment. |
| c. | abiotic parts of the environment. |
| d. | involved in predatory-prey relationships. |

\_\_\_\_ 46. The \_\_\_\_ part of the environment includes all of the physical factors—such as water, soil, light, and temperature—that affect organisms living in a particular area.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | ecological | c. | abiotic |
| b. | biospherical | d. | biotic |

\_\_\_\_ 47. Which of the following is an abiotic part of a desert?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | cacti | c. | temperature |
| b. | sand | d. | both (b) and (c) |

\_\_\_\_ 48. Which of the following is a biotic part of a desert?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | cacti | c. | temperature |
| b. | sand | d. | both (b) and (c) |

\_\_\_\_ 49. Which of the following is an example of a population?

|  |  |
| --- | --- |
| a. | a flock of birds flying south for the winter |
| b. | all of the bullfrogs in a pond |
| c. | a herd of sheep grazing in a field |
| d. | all of the above |

\_\_\_\_ 50. The old adage, "birds of a feather flock together" describes which level of environmental organization?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | a population | c. | the biosphere |
| b. | an organism | d. | an ecosystem |

\_\_\_\_ 51. \_\_\_\_ is the source of energy for almost all living things.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | Sunlight | c. | Soil |
| b. | Water | d. | Food |

\_\_\_\_ 52. A(n) \_\_\_\_ is a consumer that eats both plants and animals.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | decomposer | c. | carnivore |
| b. | omnivore | d. | herbivore |

\_\_\_\_ 53. Suppose that the organisms in each level of an energy pyramid use 90 percent of the energy from the previous level. If an insect eats a plant and a bird eats the insect, about how much energy from the plant is stored in the insect for the bird to use?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 90 percent | c. | 10 percent |
| b. | 81 percent | d. | 1 percent |

\_\_\_\_ 54. Which of the following processes produces carbon dioxide?

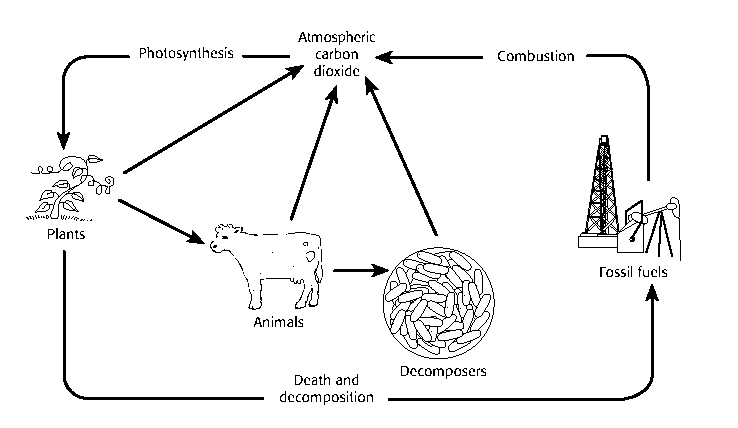
|  |  |  |  |
| --- | --- | --- | --- |
| a. | decomposition | c. | combustion |
| b. | respiration | d. | all of the above |

\_\_\_\_ 55. Which of the following statements about cycles of matter is true?

|  |  |
| --- | --- |
| a. | Matter is lost in each cycle. |
| b. | Human activity has little or no impact on cycles. |
| c. | Each cycle involves evaporation and condensation. |
| d. | Matter is moved between the physical environment and living organisms. |

\_\_\_\_ 56. Carbon from the nonliving environment becomes a part of living organisms through

|  |  |  |  |
| --- | --- | --- | --- |
| a. | photosynthesis. | c. | transpiration. |
| b. | respiration. | d. | absorption. |



\_\_\_\_ 57. How do the living organisms in the diagram return carbon to the atmosphere?

|  |  |
| --- | --- |
| a. | by way of precipitation |
| b. | through the process of photosynthesis |
| c. | by breaking down sugar molecules during respiration |
| d. | by breaking down inorganic molecules during transpiration |

\_\_\_\_ 58. What is the source of carbon in fossil fuels?

|  |  |
| --- | --- |
| a. | combustion and respiration |
| b. | carbon captured during nitrogen fixation |
| c. | the buried remains of long-dead organisms |
| d. | carbon dioxide in ground water |