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| COS # |  | Question |
| 9.0 |  | At which taxonomic level do the baboons *Papio annubis* and *Papio cynocephalus* differ?  |
| 9.0 |  | Cell shape, movement, and obtaining energy are three ways to identify members of which kingdom? |
| 9.0 |  | Eukaryotes that are not members of the kingdoms Plantae, Animalia, or Fungi belong to what kingdom? |
| 9.0 |  | What correctly differentiates Archaebacteria from other bacteria? |
| 9.0 |  | Protista is an example of which of the seven major taxons? |
| 9.0 |  | Similar genera are grouped into which of the seven major taxons? |
| 9.0 |  | To which group does an organism that is eukaryotic, is multicellular, has a cell wall and is responsible belong?  |
| 9.0 |  | To which group does an organism that is a prokaryotic, is unicellular, has unique ribosomal RNA, and is commonly found in harsh, anaerobic environments belong? |
| 9.0 |  | Two organisms in the same order will also have to be in which other taxons? |
| 9.0 |  | Under Linnaeus’s system of classification, plants and animals are sorted into groups based on what characteristics? |
| 9.0 |  | Which correctly lists the kingdoms in the current six-kingdom classification? |
| 9.0 |  | What correctly describes the main difference between the five-kingdom and six-kingdom systems for classification?  |
| 9.1 |  | A typical virus consists of what two structures? |
| 9.1 |  | Amoebas move using extensions of cytoplasm called what? |
| 9.1 |  | An important role of fungi in an ecosystem is what? |
| 9.1 |  | Be able to identify organisms that move by means of cilia, flagella, and pseudopodia. |
| 9.1 |  | Be able to identify viral structures. |
| 9.1 |  | How do viruses cause infection? |
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| 9.1 |  | Many cases of food poisoning are caused by bacterial poisons called what? |
| 9.1 |  | Photosynthesis, nitrogen fixation, and nutrient recycling all describe the role of which single-celled organisms? |
| 9.1 |  | Viruses are considered to be non-living. Why is this so? |
| 9.1 |  | What is algae’s most important contribution to humans? |
| 9.1 |  | What is the MOST important role of fungi in an ecosystem? |
| 9.1 |  | What type of organism causes the human disease ringworm? |
| 9.1 |  | Why are viruses studied as part of biology? |
| 10.0 |  | Flowering plants are classified as monocots or dicots according to the number of what structures? |
| 10.0 |  | Be able to classify monocots and dicots based on their number of flowering parts, number of embryo parts, and their arrangement of vascular tissue in the stem. |
| 10.0 |  | In what structure in angiosperms are seeds found?  |
| 10.0 |  | Know the characteristics of each plant grouping. eg. Mosses, gymnosperms, angiosperms. |
| 10.0 |  | Monocots and dicots are subdivisions of what plant grouping? |
| 10.0 |  | Pines, spruces, and firs are examples of what plant grouping? |
| 10.0 |  | What are vascular plants that reproduce by making seeds, but that do not produce flowers called? |
| 10.0 |  | What is the function of the phloem in a plant? |
| 10.0 |  | What is the function of the xylem in a plant? |
| 10.0 |  | What is the primary function of a fruit? |
| 10.0 |  | What structures do both mosses and ferns use to reproduce? |
| 10.0 |  | Be able to classify a variety of plants as monocots or dicots. |
| 10.0 |  | Why are nonvascular plants typically smaller and shorter than vascular plants? |
| 10.1 |  | Be able to identify the structure and know the function of the flower. |
| 10.1 |  | From the following roots: monocot, dicot, prop, aerial, which is *most* likely to be used as a food source? |
| 10.1 |  | How will the closing of a plant’s stomata affect the plant? |
| 10.1 |  | If some of the xylem of a young oak tree were destroyed, it would most likely interfere with the tree’s ability to do what? |
| 10.1 |  | In a plant, what would happen if the pistil were removed? |
| 10.1 |  | What is the main function of the stem? |
| 10.1 |  | What is the primary function of a fruit? |
| 10.1 |  | What is the primary function of root hairs? |
| 10.1 |  | What structure within a plant’s ovary will develop into a seed? |
| 10.1 |  | Where are pollen grains produced within an angiosperm? |
| 10.1 |  | Why are nonvascular plants typically smaller and shorter than vascular plants? |
| 11.0 |  | A new organism is discovered. After careful observation, scientists conclude that it is a mammal. Which two characteristics would the organism possess to lead the scientist to this conclusion? |
| 11.0 |  | Classify organisms based on symmetry, type of skeleton. |
| 11.0  |  | Be able to classify basic organisms such as fish, reptile, amphibian, bird, and mammal according to type of body temperature, body covering, locomotion, etc. |
| 11.0 |  | Frogs, salamanders, and toads have thin, moist skin to aid in which of the following processes? |
| 11.0 |  | How are birds different from snakes? |
| 11.0 |  | How are humans classified?  |
| 11.0 |  | Jellyfish are classified as having what type of symmetry? |
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| 11.0 |  | Snakes, crocodiles, alligators, and turtles are all classified as reptiles because of which of the following characteristics? |
| 11.0 |  | What characteristics are used to classify organisms such as sponges, fish, whales, and jellyfish into the animal kingdom? |
| 11.0 |  | What is one way that lobsters are classified? |
| 11.0 |  | Which of these animals, earthworm, snack, dragonfly, is classified as an invertebrate? |
| 12.0 |  | A certain beetle closely resembles a stinging wasp and lives in the same ecosystem. This adaptation is an example of what? |
| 12.0  |  | A leaf frog is not easily seen by predators because it closely resembles leaves in order to blend in with its environment. This adaptation is an example of what?  |
| 12.0 |  | According to Darwin, evolution occurs because of what process? |
| 12.0 |  | Beak shape in finches is determined by what environmental factor? |
| 12.0 |  | Organisms with traits well suited to their environment survive and reproduce at a greater rate than organisms that are less well adapted in the same environment. This is known as what? |
| 12.0 |  | The viceroy butterfly, with its bright orange and dark brown coloring, resembles the monarch butterfly, which has an undesirable taste to predators. The viceroy caterpillar resembles bird droppings to disguise it from predators. These adaptations of the viceroy are examples of what? |
| 12.0 |  | What do homologous structures in organisms suggest about the ancestry of organisms?  |
| 12.0 |  | What does the fossil record show? |
| 12.0 |  | What factor usually influences migratory behavior? |
| 12.0 |  | What is a factor that is *necessary* for the formation of a new species? |
| 12.0 |  | What is the process by which a species becomes better suited to its environment? |
| 12.0 |  | What is the process by which two species, for example, a flower and a pollinating insect, evolve in response to each other called? |
| 12.0 |  | What is the separation of populations by barriers such as rivers, mountains, or bodies of water called? |
| 13.0 |  | Bacteria and fungi that break down dead organisms and wastes to release back into the environment that can be recycled by other organisms occupy what niche in an ecosystem? |
| 13.0 |  | Bacteria that break down the nutrients in dead matter into simpler substances that are taken up by plant roots are called what? |
| 13.0 |  | Be able to recognize the trophic levels. |
| 13.0 |  | In a food web, what type of organism receives energy from every other type? |
| 13.0 |  | Organisms that manufacture organic nutrients for an ecosystem are called what? |
| 13.0 |  | Using an energy pyramid be able to determine how much energy is available at each level. |
| 13.0 |  | The diagram, which shows how energy moves through an ecosystem, is known as a what? |
| 13.0 |  | The photosynthetic algae are at what trophic level? |
| 13.0 |  | The primary producers in a grassland ecosystem would most likely be what? |
| 13.0 |  | What is a biotic factor that affects the size of a population in a specific ecosystem? |
| 13.0 |  | What is a biotic factor that might affect the life of a water-dwelling organism? |
| 13.0 |  | Which example below illustrates a relationship between a consumer and a producer? |
| 13.0 |  | What BEST explains why the snowy owl and the arctic fox can occupy the same trophic level in the tundra food web? |
| 13.1 |  | More oxygen can dissolve in cold water than in warm water. How might this fact affect fish? |
| 13.1 |  | Trees depend on sunlight for photosynthesis. What is sunlight? |
| 13.1 |  | What happens if the niches of two organisms overlap? |
| 13.1 |  | What is a biotic factor that would have the GREATEST affect on the size of a deer population in a specific ecosystem?  |
| 14.0 |  | Carbon is introduced into the atmosphere by what means? |
| 14.0 |  | How is carbon stored in the biosphere? |
| 14.0 |  | In an ecosystem, which of the following choices happens to the atoms of certain chemical elements such as carbon, oxygen, and nitrogen? |
| 14.0 |  | Precipitation and evaporation are important components of what biogeochemical cycle? |
| 14.0 |  | Be able to identify the parts of the nitrogen cycle. |
| 14.0 |  | The paths of water, carbon, and nitrogen pass from the non-living environment to living organisms and back to the non-living environment in closed cycles are called what? |
| 14.0 |  | What are recycled in the biosphere?  |
| 14.0 |  | When water vapor cools during the process of condensation, it forms a liquid that can fall to the Earth as what step in the water cycle? |
| 14.0 |  | Which biogeochemical process MOST directly relies on temperature reduction, small particles, and gravity to produce its product? |
| 14.1 |  | A new island formed by volcanic action may eventually become populated with biotic communities as a result of which of the following? |
| 14.1 |  | A predator can increase the numbers of certain species in its habitat by doing which of the following? |
| 14.1 |  | An African snail brought to Hawaii became a plant-eating pest. To control the African snails, 19 snail-eating species were imported to Hawaii from all over the world. One of the imports, the cannibal snail, has nearly destroyed the native Hawaiian tree snail population. What is the MOST important conclusion suggested by the passage above? |
| 14.1 |  | Be able to recognize what succession looks like. |
| 14.1 |  | In the 1970s, it was found that small concentrations of pesticides in the water resulted in large concentrations of pesticides in organisms at the top of some food chains. The *best* explanation for this is that organisms at higher levels in a food chain do what? |
| 14.1 |  | Killing the vegetation in an ecosystem would destroy the entire ecosystem. What explains why? |
| 14.1 |  | Ladybugs were introduced as predators into an agricultural area of the United States to reduce the number of aphids feeding on grain crops. This action is an example of which of the following? |
| 14.1 |  | Native people who die due to new diseases carried to them by invaders suffer a fate similar to that of a species that becomes endangered due to which of the following? |
| 14.1 |  | The gypsy moth was brought to the U.S. in 1869 in an attempt to start a silkworm industry. Escaping soon after, the gypsy moth has become a major tree pest in the forests of the northeastern U.S. and southeastern Canada. What is the MOST significant conclusion that can be drawn from the events reported in the paragraph above? |
| 14.1 |  | The presence of parasites in an animal will usually result in which of the following? |
| 14.1 |  | What is succession? |
| 15.0 |  | Cold and long winters, very few trees, and little precipitation describe what biome? |
| 15.0 |  | Herds of grazing animals are most likely to be found in what biome? |
| 15.0 |  | Major ecosystems that occur over wide areas of land are called what? |
| 15.0 |  | Which biome has sandy soil, precipitation ranging between 2 – 4 cm annually, summer temperatures ranging from 21oC to 27oC, and animals that include kangaroo rats, rabbits, skunks and burrowing owls? |
| 15.0 |  | The biome that makes up most of the central part of the United States is called what? |
| 15.0 |  | The greatest diversity of life in the ocean is found in what part of the ocean? |
| 15.0 |  | Tropical ecosystems are more diverse than temperate zone ecosystems because of which of the following? |
| 15.0 |  | What biome is characterized by high humidity, moderate temperatures, an abundance of ferns and mosses, bears, and large evergreen trees? |
| 15.0 |  | Which biome is the transitional zone between tropical rain forest and desert? |
| 15.0 |  | Which biome would have nutrient-poor soil, hot wet weather all year, toucans, monkeys, and vines? |
| 15.0 |  | Which biome would have oak trees, maple trees, deer, squirrels, raccoons and rich fertile soil? |
| 15.0 |  | Which is a biotic factor of a marine environment? |
| 15.0 |  | Which statement describes grassland soils? |
| 16.0 |  | A tick feeding on a human is an example of what symbiotic relationship? |
| 16.0 |  | An interaction in which one organism captures and feeds on another organism is what symbiotic relationship? |
| 16.0 |  | Know the types of symbiotic relationships |
| 16.0 |  | Since the two species of barnacles attempt to use the same resources, they have what relationship with each other?   |
| 16.0 |  | Be able to determine which factors are density independent and which are density- dependent. |
| 16.0 |  | The relationship between a clown fish and a sea anemone is known as what symbiotic relationship? |
| 16.0 |  | The relationship between plants and the bees that pollinate them is an example of what symbiotic relationship? |
| 16.0 |  | Water lilies do not grow in desert sand. Water availability to these plants is considered to be what kind of a factor? |
| 16.0 |  | Water lilies do not grow in desert sand. Water availability to these plants is considered to be what kind of a factor? |
| 16.0 |  | What happens when members of the same species require the same food and space? |
| 16.0 |  | Which statement BEST explains why a disease may affect one population more than another population? |