**Topic B TEKS 8.11ABCD Review**

 1. Animals that are killed by other animals for food are known as:

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 2. A living thing that can make its own food is called a:

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 3. An herbivore and a carnivore are both examples of:

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\_\_\_\_ 4. Which of the following statements is TRUE about food webs?

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| --- | --- |
| a. | They consist of non-overlapping food chains in an ecosystem. |
| b. | They consist of overlapping food chains in an ecosystem. |
| c. | Each organism eats one kind of food. |
| d. | There are always more consumers than producers in an ecosystem. |

\_\_\_\_ 5. Certain worms infect snails, crawl into their eye stalks and even take over their minds! They force the snails to crawl up into the canopy in sight of the birds, pulsing in the eyestalks like maggots, the birds favorite food. After the birds eat the snails and the worms inside them, the worms reproduce in the birds’ digestive tract and their larvae infect the birds’ droppings, which are then eaten by a new batch of snails, only to infect them. How is this parasitic relationship similar to the predator-prey relationship? In both types of interactions:

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| --- | --- |
| a. | neither organism is harmed. |
| b. | both organisms benefit |
| c. | both organisms are harmed |
| d. | one organism benefits while the other is harmed |



 6. In the figure above, what organisms are competing for duck weed?

 7. In the figure above, herons are in competition for what resource?

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\_\_\_\_ 8. The rings of a 400 year old tree cross section are measured, and it is found that each ring has a width that perfectly correlates to the recorded rainfall for one year, counting from outside, in. During the years of the greatest recorded rainfall, the rings are 8-9 millimeters wide, while the years of least recorded rainfall have rings only 1-2 millimeters wide. Rainfall records only go back about 200 years, so what would the rings 300 in from the outside need to measure to show a major drought 300 years ago?

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. |  less than 3 meters | b. |  less than 3 feet | c. |  less than 3 inches | d. |  less than 3 mm |

 9. Long frilly gills on giant Japanese salamanders and extra gill slits on some sharks are likely adaptations to compete better for what abiotic resource?

\_\_\_\_ 10. Abiotic variables that may affect life are:

|  |  |  |  |
| --- | --- | --- | --- |
| a. | temperature and oxygen level | c. | sunlight |
| b. | rain, sleet or snow | d. | all of these |



\_\_\_\_ 11. According to the graph, the amount of dissolved oxygen available to fish increases as the water temperature:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | gets warmer | b. |  gets cooler | c. | levels out | d. | stays the same |

\_\_\_\_ 12. Variables that affect the growth rate of an **animal** population include the following EXCEPT:

|  |  |  |  |
| --- | --- | --- | --- |
| a. | the amount of food | c. | new species being introduced |
| b. |  the amount of space | d. | getting sunlight to make food |

\_\_\_\_ 13. Extinction of a species population will **NOT** be caused by:

|  |  |  |  |
| --- | --- | --- | --- |
| a. |  catastrophic changes in the environment. | c. | reintroduction of the endangered species. |
| b. | newly-introduced predators. | d. | increased competition for resources. |

\_\_\_\_ 14. A group of scientists discover an area of land that has not been affected by humans. They take notes on the animal and plant populations, as well as the water, soil, and rocks in the area. The scientist are studying a(n):

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | ecosystem | b. |  biosphere | c. |  pollution impact | d. | species |

illustration of a water lily



\_\_\_\_ 15. If annual rainfall increased and caused ponds in this habitat to become deeper, how, after many generations, might the traits of these water lilies change?

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. |  Brighter flowers | b. | Longer stems | c. | Wider leaves | d. | Thicker roots |

\_\_\_\_ 16. Koalas live almost entirely on leaves from eucalyptus trees and they are native exclusively to Australia. Destruction of the koalas’ habitat will most likely lead to the koalas:

|  |  |  |  |
| --- | --- | --- | --- |
| a. | eating other kinds of leaves. | c. | having reduced population |
| b. | becoming larger. | d. | producing more offspring. |

\_\_\_\_ 17. The Resurrection Fern (*Selaginella lepidophylla*) can shrivel up into a ball and remain that way for many years. When moisture is available, the dry leaves absorb the water and unroll. The plant will then turn green and grow. Under which environmental conditions did this ability develop?

|  |  |
| --- | --- |
| a. | Atmosphere with little carbon dioxide |
| b. |  Climate including periods of prolonged drought |
| c. |  High density of many competitor plant species |
| d. |  Abundant insect pollinators of many varieties |

\_\_\_\_ 18. The population of an organism will likely decrease if there is an increase in:

|  |  |  |  |
| --- | --- | --- | --- |
| a. |  soil nutrients available to the organism | c. | food resources eaten by the organism |
| b. | predators that prey on the organism | d. | rainfall in the habitat of the organism |

\_\_\_\_ 19. The Grey Mangrove tree (*Avicennia marina*) grows in the salty, coastal regions of South America, Africa, and Australia. Mangrove forests are found in areas where high tide brings in salt water and then the tide recedes, leaving the soil behind very salty. Which of the following traits would be found in populations of Mangroves living in this environment?

|  |  |
| --- | --- |
| a. | Underground bulbs for the storage of food |
| b. | Flowers which attract insect pollinators |
| c. | Roots which can filter out salt |
| d. | Leaves which can reduce water absorption |

Human activity can affect the organisms and populations in an environment. Look at the diagram provided.



\_\_\_\_ 20. What percentage of organisms and populations may be able to adapt to the long-term changes caused by human activity?

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | 25% | b. | 45% | c. | 30% | d. | 51% |

\_\_\_\_ 21. Sewer drains along city streets connect to underground systems, which direct rain water and other substances to the oceans. Spraying lawns with chemicals to kill weeds and insects allows these chemicals to build up in the oceans. What is the most negative result possible from this activity?

|  |  |
| --- | --- |
| a. | Killing phytoplankton, so less CO2 is captured, warming the atmosphere |
| b. | Killing phytoplankton, so more oxygen is produced, cooling the atmosphere |
| c. | Killing phytoplankton, so less CO2 is produced, warming the atmosphere |
| d. | Killing phytoplankton, so less oxygen is captured, cooling the atmosphere |

\_\_\_\_ 22. Humans depend on thriving populations of fish for sources of food. Which of the following human activities has the greatest **negative** impact on the ability to harvest food sources from the ocean?

|  |  |
| --- | --- |
| a. | Protecting areas where certain species of fish are known to breed |
| b. | Setting a limit on the number of fish that can be caught in an area |
| c. | Allowing factories to dump their waste products into rivers and streams |
| d. | Raising threatened species in fish farms and then releasing them into the ocean |

\_\_\_\_ 23. The commercial fishing industry uses large nets to capture fish. Often these nets catch many species of organism that are not used by humans. What change could **lessen** the negative effect of this practice of the commercial fishing industry?

|  |  |
| --- | --- |
| a. | Designing nets that release unwanted species without harming them |
| b. | Exploring new and uncharted areas of the ocean where the nets can be used |
| c. | Using the nets in deeper regions of the ocean where different organisms live |
| d. | Decreasing the size of the nets, but using more of them |

\_\_\_\_ 24. Which of the following human activities will have the greatest negative impact on the balance of organisms within an ocean ecosystem?

|  |  |
| --- | --- |
| a. | Recreational boating in rivers, lakes and streams |
| b. | Mapping of the ocean floor by marine scientists |
| c. | Monitoring of major, global ocean currents |
| d. | Commercial fishing to provide food for humans |

\_\_\_\_ 25. Humans use large ships to transport materials across the ocean. Which of the effects listed is the greatest harmful effect of this human activity on the ocean ecosystem?

|  |  |
| --- | --- |
| a. | Marine animals, such as dolphins, follow ships and become disoriented, straying too far from home to return. |
| b. | Organisms attach themselves to ships and become accidentally introduced into a new area. |
| c. | Propellers from large ships disturb colonies of photosynthetic plants near the ocean’s surface. |
| d. | Noises from the ship’s navigation systems interfere with the ability of organisms to communicate with one another. |

 26. When the last individual of a species dies, that species is considered \_\_\_\_.

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 27. Which type of organism is found at the bottom of an energy pyramid representing and ecosystem?

 28. Which type of organism is found at the top of an energy pyramid representing and ecosystem?

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\_\_\_\_ 29. Which of the following might be used as an artificial reef?

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| a. | Sunken ships | b. | Old oil rigs | c. |  Concrete blocks | d. | All of these |

A student has been collecting data on the level of nitrogen in a marine bay every week. The table provided displays the results.



\_\_\_\_ 30. If conditions remain the same and this trend continues, what will be the nitrogen concentration on the 8th week of this study in number of grams of nitrogen per cubic meter?

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| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | .14 | b. | .16 | c. | .19 | d. | .22 |

 31. species range foods

brown bear - temperate forests - fruits, nuts, berries, fish, deer

polar bear - arctic ice flows - seals, reindeer

giant panda - China - bamboo

Given the information above, which of these species would be most in danger of becoming extinct if one of their food sources became unavailable?

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\_\_\_\_ 32. Which two organisms are most likely to be competitors?

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| a. | Mullet, Angelfish | b. | Whale, squid | c. | Dolphin, squid | d. | Mullet, dolphin |

 33. A doctor recommends that Alex should take antibiotics for 10 days to recover from a sickness caused by bacteria, but Alex starts feeling better in only 10 days and stops taking the medicine. What adaptation might surviving bacteria in Alex’s system gain?