7th Grade Life Science Midterm Exam Review

1. Oxygen- gas inhaled by animals, required for cellular respiration
2. Carbon dioxide- exhaled by animals, waste product of cellular respiration
3. Biodiversity- variety of life in a particular area
4. Genetic diversity- variety of genetic material or characteristics in a species
5. Ecosystem diversity- a type of biodiversity that refers to the number of differetn types of ecosystems found in an area
6. Indices of diversity- measurement that reflects how many different types of organisms there are in a particular location
7. Species richness- the number of species in a given area; it doesn’t take into account the number of individuals of each species or their distribution
8. Quadrats- area of size selected at random and used to determine the biodiversity or population sizes in an area
9. Stakeholders- a person who has an interest or concern for a specific topic
10. Deforestation-when many trees are removed from an area at the same time
11. Amphibian- cold-blooded vertebrate animal that has an aquatic gill-breathing larval stage typically followed by a lung breathing adult stage (# frogs, salamanders, newts)
12. Indicator species- organisms that can be monitored to gather information about an ecosystem
13. Bioremediation- the use of organisms to break down pollutants in an ecosystem
14. Extinction- when individuals of a species no longer exist in an area; may be local or global
15. Mass extinction- an event in which many species become extinct within a relatively short period of geological time
16. Coextinction- when the extinction of one organisms is followed by the extinction of a second organism and the disappearance of the first organism is directly responsible for the loss of the second organism
17. Wetlands- area of land that is saturated by water either continuously or seasonally
18. Pollution- the presence or introduction of harmful substances into an ecosystem
19. Conservation- preservation, protection, or restoration of the natural environment, including the prevention of wasteful use of a resource
20. Variation- a different version of something, like genes or traits
21. Mutations-any change in the sequence of DNA
22. DNA- hereditary material found in most organisms
23. Hardiness- resistance to disease
24. Selection- process of something being chosen as most suitable, either naturally or artificially
25. Evolution- theory that explains how changes in ancestor’s DNA allowed it to better survive and reproduce in different environments eventually causing new species to occur over a long period of time
26. Natural selection- process by which organisms that are better able to survive and reproduce pass on their desirable traits to their offspring
27. Camouflage- any coloration that allows animals to blend in to their environment therefore making them less obvious to predators or prey
28. Primary succession- pattern of ecological growth that occurs over time i an area WITHOUT any soil, vegetation, or other organisms
29. Pioneer species- first species to return to an area after a disturbance
30. Climax communities- final stage of ecological succession, in which organisms remain relatively unchanged until a disturbance occurs
31. Secondary succession- pattern of ecological growth that occurs over time in an area that DOES have soil and may have some vegetation or organisms
32. Invasive species- species that has been released into an ecosystem to which it is not native and has a detrimental impact on native species in that area.
33. Native species- species that is naturally found in that area
34. Wildfire- large, destructive, uncontrolled fire
35. Controlled burns- technique used in forestry and fire management in which the vegetation and land are set on fire and carefully monitored; also called prescribed burn
36. Drought- prolonged period of dryness leading to water shortage that can cause damage to ecosystems and crops
37. Symbiosis- long-term close interactions between species
38. Mutualism- two species interact with an outcome that benefits both.
39. Commensalism- only one species benefits, but the other is unharmed
40. Parasitism- one species benefits and the other is harmed
41. Predation- one animal, a predator, hunts and eats other animals
42. Prey- animals that are hunted and killed by predators
43. Direct competition- physically fight one another for access to a resource
44. Indirect competition- when one organism does a better job of using the available resources
45. Specialization- variation among organisms that allows them to become specialized.
46. Equilibrium- stable balance point
47. Inbreeding- reproduction between related individuals
48. Herbivores- organism that consumes only plants
49. Carnivores- organism that consumes other animals
50. Omnivores- organism that consumes both plants and animals
51. Decomposer- organism that breaks down organic material
52. Food web- combination of many food chains showing many pathways of energy in an ecosystem
53. Food Chain- model that shows a single pathway of energy that flows through an ecosystem
54. Trophic level- position of an organism in a food chain
55. Primary consumer- organism that eats autotrophs
56. Secondary Consumer- organism that feeds on primary consumers
57. Chemosynthesis- process by which some organisms use chemical energy to make food
58. Biomagnification- increased concentration of toxins in an organism that results from eating organisms with lower concentrations of those toxins
59. Matter- anything that has mass and takes up space, living or nonliving
60. Condensation- process by which gas changes to a liquid
61. Precipitation- water falling to the ground in the form of sleet, snow, hail, or rain
62. Percolation- the process of water seeping into the soil
63. Evaporation- process by which a liquid changes to a gas
64. Cellular respiration- series of chemical reactions that break apart and rearrange the atoms that make up food molecules to release the stored energy for use in cellular processes
65. Atmosphere- the envelope of gases that surrounds the earth’s surface
66. Hydrosphere- consists of all the water on Earth stored in rivers, lakes and oceans
67. Geosphere- consists of the solid portions of Earth, including rocks, soil and landforms
68. Nitrogen Fixation- involves the conversion of atmospheric nitrogen N2 to ionic forms of nitrogen like ammonium (NH4+), nitrite (NO2-), and nitrate (NO3-)
69. Fertilizer- any material, artificial or natural, that is added to soil or directly to a plant to supply a nutrient needed for the plant’s growth.
70. Ocean acidification- Excess carbon dioxide in the atmosphere is dissolving in ocean water, turning the water slightly more acidic
71. Hypothesis- proposed explanation based on evidence, usually in an “if, then, because” format
72. Controlled experiment- experiment in which the researcher changes only one variable at a time
73. Independent variable- the ONE variable that a scientist changes on purpose
74. Dependent variable- the responding variable and it is the variable that will be measured to see how it responds to the independent variable
75. Control group- group that is not exposed to the independent variable to give base line results
76. Population density- measure of how many individuals are present in a set area
77. Density dependent factor- environmental factors that affect population size differently at high and low density #competition, predation, disease
78. Density independent factor- environmental factors that affect a population the same way no matter what the population density is #natural disasters like forest fires, droughts, and floods
79. Carrying capacity- maximum population size that can be supported by the ecosystem
80. Tropical rainforest- found on or near the equator, and typically stay warm and rainy all year round, often called the “lungs of the world”
81. Stratification- different layers in which something exists; rainforest is arranged in several vertical layers
82. Organism- anything that is alive or was once alive
83. Habitat- any place where an organism lives
84. Species- a group of living organisms that interbreed with one another
85. Population- total number of individuals of that species found in a particular area that interact with one another
86. Community- sum of all the populations in an area that interact with one another is called a community
87. Biosphere- the part of the earth where life occurs, and includes both abiotic and biotic parts of every ecosystem
88. Criteria- standards or specifications that must be met by a successful design.
89. Constraints- limitations and restrictions that might limit or restrict possible solutions
90. Ecological engineering- field of science dedicated to the design of sustainable ecosystems that intend to integrate human society with the natural environment for the benefit of both.
91. Extremophiles- organisms that are able to survive and thrive in conditions typically considered extreme, such as high temperatures, acidity, or chemical concentration.
92. Abiotic factor- nonliving parts of the environment, such as water, rocks, air
93. Biotic factor- living parts of the environment, such as plants, fungi, animals, bacteria, etc.
94. Ecosystem- composed of all the living and nonliving things within an area, and is a complex system made up of interacting organisms and their environment
95. Hydropower- uses the flow of water to produce electricity depends on rivers and streams (#Hoover Dam)
96. Resources- something in an ecosystem that is required by an organism
97. Photosynthesis- chemical process in which plants use light, water, and carbon dioxide to make glucose (food) and oxygen
98. Transpiration- process by which plants take in water and release it into the environment
99. Pollination- transfer of pollen grains between flower structures that results in fertilization and the production of fruits and seeds
100. Runoff- when precipitation washes chemicals such as fertilizer from a nearby farm into a water system, like a pond.
101. Water hardness- refers to the measure of concentration of dissolved minerals, like calcium or magnesium, found in water
102. Turbidity- refers to the clarity (how clear it is) of the water