Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Biology Semester 2 Test

Matching: Match each term with the correct definition (1 pt)

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| 1. \_\_\_\_ pedigree | 1. A person who is heterozygous in a recessive genetic disorder |
| 1. \_\_\_\_ allele | 1. Chromosomes that determine the sex of an individual |
| 1. \_\_\_\_ genotype | 1. A diagram that follows a particular phenotype through several generations |
| 1. \_\_\_\_ genetic disease carrier | 1. One of a pair of genes that occupies the same position on homologous chromosomes |
| 1. \_\_\_\_ heterozygous genotype | 1. Chromosomes that do not determine the sex of an individual |
| 1. \_\_\_\_ autosomes | 1. A genotype with two different alleles |
| 1. \_\_\_\_ sex chromosome | 1. Two-letter set that represents the alleles an organism possesses for a certain trait |

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| 1. \_\_\_\_ ecology | 1. The process by which certain gases (principally water vapor, carbon dioxide, and methane) trap heat that would otherwise escape the earth and radiate into space |
| 1. \_\_\_\_ primary consumer | 1. Evaporation of water from the leaves of a plant |
| 1. \_\_\_\_ secondary consumer | 1. An organism that eats secondary consumers |
| 1. \_\_\_\_ greenhouse effect | 1. An organism that eats producers |
| 1. \_\_\_\_ transpiration | 1. The study of the interactions between living and nonliving things |
| 1. \_\_\_\_ population | 1. An organism that eats primary consumers |
| 1. \_\_\_\_ tertiary consumer | 1. A group of populations living and interacting in the same area |

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| 1. \_\_\_\_ invertebrates | 1. The end of an animal that contains its head |
| 1. \_\_\_\_ vertebrates | 1. Masses of nerve cell bodies |
| 1. \_\_\_\_ foot | 1. Animals that posses a backbone |
| 1. \_\_\_\_ anterior end | 1. The end of the animal that contains its tail |
| 1. \_\_\_\_ posterior end | 1. An outer layer of cells designed to provide protection |
| 1. \_\_\_\_ ganglia | 1. Animals that lack a backbone |
| 1. \_\_\_\_ epidermis | 1. A muscular organ that is used for locomotion and takes a variety of forms depending on the animal |

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| 1. \_\_\_\_ bone marrow | 1. Blood vessels that carry blood back to the heart |
| 1. \_\_\_\_ arteries | 1. The lobes of the brain that receive signals from the receptors in the nose |
| 1. \_\_\_\_ veins | 1. A soft tissue inside the bone that produces blood cells |
| 1. \_\_\_\_ olfactory lobes | 1. A skeleton on the inside of a creature’s body, typically composed of bone or cartilage |
| 1. \_\_\_\_ endoskeleton | 1. Blood vessels that carry blood away from the heart |

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| 1. \_\_\_\_ placenta | 1. The period of time during which an embryo develops before being born |
| 1. \_\_\_\_ gestation | 1. An organism that is internally warmed by a heat-generating metabolic process |
| 1. \_\_\_\_ parietal eye | 1. A third eye, located on the top of the head, which contains light-sensitive cells |
| 1. \_\_\_\_ endothermic | 1. A structure that allows an embryo to be nourished with the mother’s blood supply |
| 1. \_\_\_\_ neurotoxin | 1. A poison that attacks the nervous system, causing blindness, paralysis, or suffocation |

True or false: Determine whether each statement is true or false. (2 pts)

1. \_\_\_\_ Humans have 23 pairs of chromosomes.
2. \_\_\_\_ Hemophilia is a sex-linked trait.
3. \_\_\_\_ It is impossible for two traits to express codominance.
4. \_\_\_\_ Gregor Mendel is known as the “father of genetics.”
5. \_\_\_\_ Mendel performed his experiments with bean plants.
6. \_\_\_ For an ecosystem to continue surviving, it must have a constant source of energy.
7. \_\_\_ The carrying capacity is limited by the available resources.
8. \_\_\_ An autotroph is not able to make its own food.
9. \_\_\_ A herbivore is a plant eating animal.
10. \_\_\_ Each consumer level of the food pyramid utilizes approximately 10% of its ingested nutrients to build new tissue.
11. \_\_\_\_ All animals in Kingdom Animalia can be split into two groups: Vertebrates and Invertebrates
12. \_\_\_\_ There are close to 1,000,000 types of invertebrates.
13. \_\_\_\_An ant would be an example of spherical symmetry.
14. \_\_\_\_ The term “asymetrical” means that an organism has no symmetry.
15. \_\_\_\_ Sponges feed by acting like a filter.
16. \_\_\_\_ Phylum Chordata has a spinal cord or a notochord.
17. \_\_\_\_ In humans, the muscular tail disappears.
18. \_\_\_\_ 45% of chordates are vertebrates.
19. \_\_\_\_ Arteries carry oxygen poor blood back to our heart.
20. \_\_\_\_ Hemoglobin carries the oxygen atoms in our blood.
21. \_\_\_\_ The brain is part of the central nervous system.
22. \_\_\_\_ Fish use a swim bladder to rise and fall in the water.
23. \_\_\_\_ Most sharks actually have very few teeth.
24. \_\_\_\_ Reptiles are invertebrates.
25. \_\_\_\_ Some mammals lay eggs that have leathery shells.
26. \_\_\_\_ A reptiles has smooth skin.
27. \_\_\_\_ A chameleon is able to change color to match its surroundings.
28. \_\_\_\_ Snakes smell with their tongue.
29. \_\_\_\_ Birds have small teeth in their bill.
30. \_\_\_\_ ALL birds have feathers.
31. \_\_\_\_ Mammals have hair.
32. \_\_\_\_ Mammals usually have two pairs of teeth: pre-adolescent teeth and adolescent teeth
33. \_\_\_\_ A duckbilled platypus is an example of a monotreme.

Punnet Squares: Complete each Punnet Square (4 pts)

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Multiple choice: Determine which option is the best answer. (3 pts)

1. \_\_\_\_ What kind of plant did where the first genetic experiments done on?
   1. Bean plants
   2. Potato plants
   3. Pea plants
   4. Tomato plant
2. \_\_\_\_ If you would breed a purebred short pea plant (pp) with a purebred tall pea plant (TT) what would be the percentage of having a purebred short pea plant?
   1. 25%
   2. 75%
   3. 50%
   4. 0%
3. \_\_\_\_ If you would have brown eyed father (Bb) and a blue eyed mother (bb) what would be the percentage of having a blue eyed child?
   1. 25%
   2. 50%
   3. 75%
   4. 0%
4. \_\_\_\_ Which phylum are “segmented” worms?
   1. Cnideria
   2. Annelida
   3. Mollusca
   4. Nematode
5. \_\_\_\_ Which of the following is not in the same phylum as ticks?
   1. Spiders
   2. Crustaceans
   3. Salamanders
   4. Insects
6. \_\_\_\_ What animal, if it were to brush up against a hydra, would not be affected?
   1. Puff-fish
   2. Blue marlin
   3. Shrimp
   4. Barnacle
7. \_\_\_\_ If you were to observe a sidewalk that a snail had just traveled across, what would you expect to find?
   1. A penny
   2. A trail of slime
   3. More snails following
   4. Nothing
8. \_\_\_\_ What organism is also called a “tireless, natural pump?”
   1. Ticks
   2. Octopus
   3. Squid
   4. Sponge
9. \_\_\_\_ Which of the following is NOT produced in bone marrow?
   1. Red blood cells
   2. Platelets
   3. Hemoglobin
   4. White blood cells
10. \_\_\_\_ Which of the following is NOT a form of reproduction in fish?
    1. Oviparous
    2. Ovoviviparous
    3. External fertilization
    4. Viviparous
11. \_\_\_\_ Which of the following is NOT a charactization of fish?
    1. Gills
    2. Tails
    3. Fins
    4. Scales
12. \_\_\_\_ Which of the following is NOT a part of our system of blood vessels?
    1. Bronchials
    2. Veins
    3. Arteries
    4. Capillaries
13. \_\_\_\_ Which of the following is not a function/characteristic of reptiles scaly skin?
    1. Dry and leathery
    2. Insulates
    3. Must be molted
    4. Needs sunshine
14. \_\_\_\_ How many chambers does a bird’s heart have?
    1. 1
    2. 4
    3. 2
    4. 3
15. \_\_\_\_ Which of the following does a young mammal NOT need its mother for?
    1. Milk
    2. Migration
    3. Protection
    4. Shelter
16. \_\_\_\_ What method do bats and dolphins use for finding objects?
    1. Sight
    2. Sonar
    3. Radar
    4. Echolocation