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

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Score: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Biology Semester 2 Test

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

|  |  |
| --- | --- |
| 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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|  | **T** | **t** |
| **T** |  |  |
|  **T** |  |  |

|  |  |  |
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|  | **B** | **B** |
| **b** |  |  |
| **b** |  |  |

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