Name:_____

Diversity of Life Forms TEST – SCI 104

Question 1 (9 points):

Golden Retrievers and Labradors are two different breeds of dog. However, they share the same Taxonomical name: *Canis lupus-familiris*.

Indicate if the following statements are true or false AND give your reasoning:

a) Golden Retrievers and Labradors can reproduce with each other; their puppies will also be able to reproduce new puppies.

_____

b) Golden Retrievers and Labradors are not the same species. One way we know this is that their furs are different colors from each other.

_____

c) The genus of the Golden Retrievers and Labradors are *lupus-familiris*.

_____

Question 2 (2points): Why is it useful to have a different name for each species?

_____

_____

_____

Name:_____

Diversity of Life Forms TEST – SCI 104

Question 3 (3 points): Name three of the six kingdoms of life.

1. _____

2. _____

3. _____

Question 4 (1 point): One of the defining characteristics of the plant kingdom is the limited ability for plants to move on their own. What is one other defining characteristic of plants? (Hint: it's not that they're green)

_____

Question 5 (5 points): Name the five classes of plants.

1. _____

2. _____

3. _____

4. _____

5. _____

Name:_____

Diversity of Life Forms TEST – SCI 104

Question 6 (9 points):
Label the following classes of animals as either Vertebrates (V) or Invertebrates (I):

Sponges: V or I   Mammals: V or I

Fish: V or I   Worms: V or I

Reptiles: V or I   Birds: V or I

Anthropods: V or I   Amphibians: V or I

Mollusks: V or I

Question 7 (2 points):
What is the difference between a Vertebrate animal and an Invertabrate animal?

_____

Question 8 (3 points): Name three needs an animal must fulfill with their habitat.

1. _____

2. _____

3. _____

Name:_____

Diversity of Life Forms TEST – SCI 104

Question 9 (9 points): Name three types of adaptations with examples.

1. _____

   _____

2. _____

   _____

3. _____

   _____

Question 10 (2 points):
Give an example where two living things may get into a conflict by occupying the same niche.

_____

_____

_____

Name:_____

Diversity of Life Forms TEST – SCI 104

Question 11 (8 points):

Create a food chain below with at least three organisms (3 points). Label each organism as either a producer, consumer, or decomposer (3 points). Explain the role of the decomposer in a food chain (2 points).

_____

_____

_____

Question 12 (3 points):

A student surveys a forest. They find there are 10,000 Sugar Maples and 7,500 Black Maples. They conclude the population of Maple trees is 17,500. Has the student made an error in their conclusion? If so, what?

_____

_____

_____

What would be the appropriate term to describe the Sugar Maples and Black Maples sharing the same habitat?

_____

Name:_____

Diversity of Life Forms TEST – SCI 104

Question 13 (6 points):

A species of seal is introduced to northern Quebec. Most of the year, the area is covered in snow. About half of the seals have a light grey fur and the other half have darker grey fur.

a) (2 points) Use the Theory of Natural Selection to predict what may happen after several generations of seals. You must justify your answer with the Theory of Natural Selection.

_____

_____

_____

b) (4 points) Over time, some seals may be born with a genetic mutation. Give an example of a favorable and unfavorable genetic mutation. You must be specific about why each mutation would be favorable/unfavorable.

1. _____

_____

2. _____

_____

Diversity of Life Forms TEST – SCI 104

Question 14 (1 point): What is the name of the genetic material where genes are stored?

_____

Question 15 (2 points): Give two examples each of a dominant and recessive gene pair.

1. Dominant: _____, Recessive: _____

2. Dominant: _____, Recessive: _____

Bonus question (2 points):

Calculate the mass of a 250mL sample of gold if the density of gold is 19.3g/mL

$$d = \frac{m}{v}$$

/65