**MCA Prep Test**

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

**Multiple Choice:** Circle the best answer

1. What are the three variables in a controlled experiment?
   1. Volume, mass, weight c. Changed, Measured, and Controlled
   2. Regular, Irregular, Observed d. Time, Light, Repetition
2. What allows for growth and repair within an organism?
   1. DNA c. Bacteria
   2. Cell division d. growth
3. What is a trait that is determined by one or more genes passed down from parent to offspring?
   1. Genetic Trait c. Phenotypic trait
   2. Por Trait d. Heredity
4. What consists of all the populations living together (biotic) and the physical factors (abiotic) in the environment?
   1. Biome c. Climate Zone
   2. Rainforest d Ecosystem

**Short Answer:** Provide a short answer for the questions below.

1. What is Natural Selection?
2. Name two important scientists and describe their accomplishments
3. How is energy transferred through a food web?

**Matching:** Write down the letter of the correct response before each question

1. Density
2. Velocity
3. Conduction, Convection, & Radiation
4. Igneous, Sedimentary, & Metamorphic
5. Fronts
6. Rocks
7. Magnetism
8. Law of Superposition
9. Plate Tectonics
10. Earthquakes
11. Low and High Pressure
12. Earth Science

m. Gravity

\_\_\_\_\_\_\_\_ 8. The idea that Earth’s crust is broken into pieces that move.

\_\_\_\_\_\_\_\_ 9. These form where two or more air masses meet.

\_\_\_\_\_\_\_\_ 10. Three ways in which energy is transferred.

\_\_\_\_\_\_\_\_ 11. Mass divided by Volume.

\_\_\_\_\_\_\_\_ 12. These are combinations of Minerals.

\_\_\_\_\_\_\_\_ 13. This holds the planets in motion around the Sun.  
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**True / False**:   
If the answer is true, circle true. If it is false, circle false AND correct the underlined words to make it correct.

14. True / False : A **Conclusion** is any use of the senses to gather information and may include the use of equipment.

15. True / False : A **Hypothesis** is a possible explanation or answer to a question that is testable.

16. True / False : **Elements** are the smallest unit of matter that maintains the characteristics of that matter.

17. True / False : A **Chemical Change** produces a new substance with different characteristic properties; a **Physical Change** does not produce a new substance.

18. True / False : A **Variable** is a single factor that is different and can affect the results of your experiment.

**Short Answer:** Write a short answer to each question.

19. Name the three particles that make up an atom.

20. Draw a wave and label the crest, trough, and wavelength.