Chapter 2 Biology Practice Test

____ 1. Measurements of a plant's growth over a two-week period represent
   a. inferences
   b. variables
   c. hypothesis
   d. data
   An inference is a logical conclusion based on observations.
   A variable is a condition that can differ within the experiment.
   A hypothesis is a suggested answer to a well-defined scientific question.
   Data are recorded observations.

____ 2. A logical conclusion based on observations is called a(an)
   a. generalization
   b. hypothesis
   c. inference
   d. theory
   A generalization is a general conclusion.
   A hypothesis is a suggested answer to a well-defined scientific question.
   An inference is a logical conclusion based on observations.
   A theory is a well-tested explanation that makes sense of a great variety of scientific observations.

____ 3. You suggest that the presence of water could accelerate the growth of bread mold. This is a(an)
   a. conclusion
   b. hypothesis
   c. experiment
   d. analysis
   A conclusion is the result or outcome of an experiment.
   A hypothesis is an educated guess.
   An experiment is a method of investigating relationships among variables.
   Analysis is the process of breaking a complex topic into smaller parts to gain understanding.

____ 4. A controlled experiment allows the scientist to isolate and test
   a. a conclusion
   b. a mass of information
   c. several variables
   d. a single variable
   A variable is a condition that can differ within an experiment.

____ 5. When enough experimental data support a hypothesis, the hypothesis becomes a(an)
        a. fact
        b. theory
        c. inference
        d. conclusion

____ 6. Thinking that someone is at the door when you hear the doorbell ring is an example of a(an)
        a. inference
        b. observation
        c. theory
        d. conclusion

____ 7. In science, a hypothesis is useful only if
        a. it is proven correct
        b. it can be proven incorrect
        c. it can be tested
        d. the explanation is already known

____ 8. The ability to reproduce results is an important part of any
        a. hypothesis
        b. theory
        c. law
        d. experiment

____ 9. A falsified hypothesis is one that
        a. can be controlled
        b. is untrue
        c. is true
        d. can be proven incorrect

____ 10. A model is useful if it
        a. explains new observations
        b. predicts new observations
        c. matches new observations
        d. all of the above
        Models are physical, mental, or mathematical representations of how people understand a process or an idea.

Completion

11. "The plant in container A has five offshoot" is an example of **quantitative** data. *(Data that can be measured.)*

12. The information you record during an experiment is called your **data.**

13. If your flashlight stops working, a reasonable **hypothesis** might be that batteries are dead.

14. In science, a **theory** is a well-tested explanation that makes sense of a great variety of observations.