Review Questions Exercise

Multiple Choice

1. Which one of the following is a correct sequence in biological method?

a) Observations, Hypothesis, Law, Theory
b) Hypothesis, Observations, Deduction, Experimentation
c) Observations, Hypothesis, Deduction, Experimentation
d) Law, Theory, Deduction, Observations

2. Which one of these is NOT a characteristic of a hypothesis?

a) Must be consistent with all available data
b) Must be testable
c) Must be correct
d) Must make predictions

3. At which point is a biologist most likely to use deductive reasoning?

a) White taking observations
b) During hypothesis formulation
c) During data organization
d) None of the above

4. A hypothesis must be testable to be scientifically valid. Being testable means that.

a) Some observation could prove the hypothesis incorrect
b) Only a controlled experiment can indicate whether the hypothesis is correct or incorrect
c) The hypothesis has been proven wrong
d) There must be several options in the hypothesis to choose from, one of which is correct

5. What would be the best experimental design for testing a hypothesis that bean plants require sodium?

a) Measure the amount of sodium in a few bean plants
b) Grow bean plants with and without sodium
c) Look for sodium in leaf tissues
d) Analyze root contents for sodium

6. A gardener sees a large snake nearby. He knows that generally snakes sting, so the gardener ran away. The gardener did which of the following?

a) Used inductive reasoning
b) Used deductive reasoning
c) Constructed a theory
d) Tested a hypothesis

7. A scientific theory has which of the following properties?

a) It agrees with available evidence
b) It cannot be rejected
c) It has been absolutely proven
d) It does not need to be altered in the light of new evidence

8. Experimentation is only a step of the scientific process, but it is a very important step because it always

a) Gives the biologist a correct result
b) Allows rejection of some alternative hypotheses
c) Ensures that hypotheses can be confirmed with certainty

d) Gives scientists a chance to work in the laboratory

9. Deductive reasoning;

a) Is always correct

b) Uses specific observations to draw more general conclusions

c) Is not applied in biological method

d) Uses general observations to predict specific conclusions

10. You are testing a hypothesis; "students learn more if a They drink tea before sitting for study". Your 20 experimental students drink tea before study; you test their learning by giving

a) They should take tea with more milk and sugar

b) They should take tea before as well as during study

c) They should not take tea before studying

d) They should not sit for studying

Answers MCQs

1. c	2. c	3. b	4. c	5. b
6. b	7. c	8. b	9. d	10. c