Biology 115c Schulze 2020

Evolution, Behavior, & Ecology Quiz #1

Name (printed) ____Breana Wooten_____
This work was completed in accordance with the Austin College academic integrity policy.

____I have not cheated_____ (signature)
(If submitting an electronic version by email, simply indicate whether you have cheated on this exam. You don't need to find a way to add your signature.)

- Read each question carefully.
- If a question appears ambiguous, ask for clarification.
- Keep an eye on the clock. Do not get bogged down on difficult questions when relatively easy questions remain to be answered.
- Write legibly and try to confine your answers to the space provided. If you must have more space, continue elsewhere on the exam – but indicate that you have done so.
- Written answers should explain reasoning or evidence, not simply make unsubstantiated claims.

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1. Support or refute the following claim. "Scientists can prove general relationships when they test hypotheses." (6 points). (Think about these things before you begin to write. Does your answer say what you mean? Is it clear? Is it complete? After you write your answer, read it over to make sure it is as intended.)

I refute the claim. Hypotheses can either be supported or not supported, they cannot be proven or disproven.

Multiple Choice Questions. Choose the <u>single</u> best answer. *Do not select 2 or more answers. 2 points each.*

2. Which of the following is an example of inductive reasoning?

___ The first few students learned more when using my note taking method, so others probably will as well.
___ All students learn more when using this method, so this student will too.
___ When students practice explaining concepts prior to a test, they are alerted to things they do not yet understand, and that helps them concentrate and study more effectively.
_x__ all of the above.
___ none of the above.

3. Evolution occurs <u>so</u> <u>that</u>

___ species become better adapted to their environments.
___ species do not go extinct.
___ individuals survive and reproduce.
___ more advanced species arise.
___ organisms become perfect.
___ all of the above.
__x_ none of the above.

4. Recall the *New York Times* puzzle with the sequence of numbers 2, 4, 8. What was the key to determining the rule the sequence follows?

___ Try many different numerical sequences to see if they comply with the rule.
___ Test every possible sequence of numbers ranging from 2 to 8.
___ Imagine a rule and then test sequences that follow that rule.
__**x**_ Imagine a rule and then test sequences that do not follow that rule.
___ All of the above.
___ None of the above.

5. I ran experiments in Lake Texoma that involved incubating a species of zooplankton (shrimp-like crustaceans about 1mm long) in special mesh containers upstream (near where the Red River enters) and downstream (near the dam). I measured how fast the zooplankton reproduced when incubated in the water from either of the two locations. Select the correct answer.

___ The independent variable was how fast the zooplankton reproduced.
___ The dependent variable was the species of zooplankton.
___ The replicates were the locations in the reservoir.
_**x**__ The dependent variable was how fast the zooplankton reproduced.
___ The independent variable was the species of zooplankton.
___ Why would anyone run that experiment?
___ All of the above (except the previous answer choice).
___ None of the above.

6. You should finish an antibiotic prescription even if you feel better because…

___ if lots of people fail to finish antibiotics, resistant bacteria are more likely to become abundant.
___ some bacteria may be less vulnerable to the antibiotic than others.
___ even though you may feel better after a few days, some bacteria may still survive and have the potential to grow a large population that will make you (and potentially others) sick if you stop taking the antibiotic.
__**x**_ all of the above.
___ none of the above.

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7. The process of _____ helps to ensure that a scientist's research is original, significant, logical, and thorough.

___ publication.
___ public speaking.
___ peer review.
__**x**_ the scientific method.
___ all of the above.
___ none of the above.

8. Which of the following are products of artificial selection?
___ Broccoli
___ German Shepherds
___ Angus cattle
___ Roses
___ Calico cats
_**x**__ All of the above
___ None of the above