

Part 1: Multiple-Choice Questions (3 points each).

Please circle the correct answer (3 points each). The real test will have 25 Multiple-Choice questions.

Try this sequence to answer questions like this:

1. Cover up the answer choices.
 2. Read the question carefully and decide on a likely answer BEFORE looking at the answer choices.
 3. Then, eliminate the answer choices that are definitely wrong.
 4. Select the answer choice that best-matches the likely answer you identified in Step 2.
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1) What is the main difference between an observation and a hypothesis?

- A. There is no difference - they are the same.
- B. A hypothesis is one possible explanation for an observation.
- C. A hypothesis is the only possible explanation for an observation.
- D. An observation is one possible explanation for a hypothesis.
- E. An observation is the only possible explanation for a hypothesis.

2) In science, the term "scientific theory" is:

- A) A first guess.
- B) An unsupported hunch.
- C) Revolution around Earth.
- D) Not relevant.
- E) The highest order of understanding.

3) Why would it be great to have a spare second Earth without humans?

- A) We could study the natural Earth without human influence.
- B) We could conduct experiments too dangerous for our Earth.
- C) We would have a 'lifeboat' in case we make a terrible mistake on our Earth.
- D) We are currently using the resources of over 1.5 Earths!
- E) All of the above.

4) Science can use supernatural explanations if necessary.

- A. Yes
 - B. No
 - C. Yes, but only for wicked problems
 - D. Maybe
 - E. I don't know
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6) Inductive reasoning starts with the _____ whereas deductive reasoning starts with the _____.

- A. hypothesis, theory
- B. theory, hypothesis
- C. observation, experiment
- D. law, hypothesis
- E. observations, theory

7) Most science & research in the US is performed by _____.

- A. Universities.
- B. Government research labs / centers
- C. Independent organizations such as the National Academies of Sciences
- D. Private for-profit companies.
- E. None of the above.

8) The main impact of ozone on life on the Earth's surface is to:

- A. provide oxygen for the atmosphere
- B. to initiate violent storms in the troposphere
- C. serve as nuclei for cloud formation
- D. act as a lid preventing gases from escape
- E. reduce ultraviolet solar radiation

9) In addition to their role in ozone depletion, CFCs play a role in global warming by:

- A. absorbing solar radiation
- B. acting as potent greenhouse gases
- C. blocking UVB radiation
- D. creating bad ozone, which warms the Earth
- E. reducing the albedo of the Earth

10) The 'bad' ozone in the lower atmosphere:

- A) contributes to the human greenhouse effect
- B) is a greenhouse gas because it has 3 atoms in its molecule
- C) is created by the photochemical reaction between car exhaust and sunlight
- D) is a public health hazard
- E) all of the above

11) Create *and* answer your own multiple-choice question using the material we have covered so far in-class.

Question: _____

A) _____

B) _____

C) _____

D) _____

E) _____

Type your question and 5 answer choices AND indicate the correct answer.

Part 2: One-Sentence Answer Questions (5 points each).

Please provide the correct answer in a few words to 1-2 sentences. The real test will have 5 One-Sentence Answer questions.

1a) One example of a wicked <u>scientific</u> problem.	1b) One example of a tame <u>scientific</u> problem.
2) What's 'bad' about bad ozone?	
3) What is the difference between a science and a pseudo-science?	
4) What does the acronym CONPTT stand for?	
5a) Does the ozone hole cause global warming? Answer in 1 word!	5b) Does global warming cause the ozone hole? Answer in 1 word!

Part 3: Learning Reflection (5 points).

Done - great! Please answer the following five questions after you have completed the practice test. Note: This will be part of the real test and counts towards the real test grade.

1) Predict your test score:	2) Rate your effort preparing for this test from 0 (no effort) to 10 (highest possible effort).
3) Please identify what you found easiest and most-difficult about this test.	
4) List the learning and studying strategies you used to prepare for this test (e.g. memorization/flashcards, rewrote/reviewed class notes, reviewed the review material(s), created summaries of the readings and videos, asked the instructor for clarification, etc.).	
5) What would you do differently in terms of preparing for the real test (or any test/exam that you may face in the future)?	