

NATS 1820
Molecules and the Mind
Fall, 2013
Dr. W. J. Pietro

Name: _____

Student Number: _____

TEST 1

*Wednesday, September 25, 2013
4:00 – 4:45 PM
Vari Hall B*

Instructions

1. This test consists of 10 multiple choice questions and a periodic table in 4 pages. Please make sure you have all of them before starting. Each question is worth 10 points for a total of 100 points.
2. For each question only one answer is correct. Please circle the correct answer. Indicating more than one answer will be marked incorrect, even if one of the choices is the correct answer.
3. Use only the materials included in this test, in addition to pencil, pen, and working brain (yours). Use of any other materials or any collaborative efforts with others will be dealt with in a most unpleasant manner. You MAY NOT use any calculators, cell phones, or other technology during this test.
4. You will have 45 minutes to complete this test. Please do not begin until the invigilator instructs you to do so.
5. Good luck.

1. A scientific statement is considered valid if and only if it contains
 - a. absolute truth
 - b. a proposed theory
 - c. mathematics
 - d. evidence to show it is correct
 - e. a way to prove it false by observation**

2. A statement that summarizes a series of observations is called
 - a. a scientific law**
 - b. a scientific theory
 - c. a postulate
 - d. a hypothesis
 - e. a counterexample

3. A statement that attempts to explain an observed phenomenon is called
 - a. a scientific law
 - b. a scientific theory**
 - c. a postulate
 - d. a hypothesis
 - e. a counterexample

4. Two theories that cannot be simultaneously true are said to be
 - a. wrong
 - b. counterintuitive
 - c. mutually exclusive**
 - d. non fallable
 - e. inconsistent

5. Galileo was imprisoned and threatened with torture for his discovery
 - a. of Boyle's Law
 - b. that Earth is the center of the universe
 - c. of the scientific method
 - d. of a mathematical universe
 - e. that Earth is a planet**

6. The “scientific method” as practiced today was first introduced by
- a. Robert Boyle
 - b. John Dalton
 - c. Aristotle
 - d. Galileo**
 - e. Karl Popper
7. Which of the following questions is NOT scientifically addressable
- a. Is the moon made of blue cheese?
 - b. Can a person be allergic to a sound?
 - c. Can a dead person’s spirit dance on the head of a pin?**
 - d. If a tree falls in the forest and no one is there, does it make a sound?
 - e. Can I read someone else’s thoughts?
8. A statement on which a scientific theory is based, and assumed to be true without proof, is called
- a. a scientific law
 - b. a theorem
 - c. a postulate**
 - d. a hypothesis
 - e. a counterexample
9. In a clinical drug trial, some subjects get a “sugar pill” instead of the drug. These subjects are said to belong to
- a. the control group**
 - b. the test group
 - c. the placebo
 - d. the double-blind group
 - e. none of the above
10. The scientist who first proposed quantum theory was
- a. Neils Bohr
 - b. Albert Einstein
 - c. Antoine Lavoisier
 - d. Max Planck**
 - e. John Dalton