Assignment 1

Day 31: 09/06/11 08:30:02

**Problem Statement:**

1. Explain the following statement: 

   a. All men are mortal.
   b. All non-mortal things are mortal.

2. In a logical document, explain the nature of conclusions.

3. Explain the concept of logical reasoning and its role in problem-solving.

4. Define and explain the term "validity" in logical reasoning.

5. Explain the concept of deductive reasoning.

6. Explain the concept of inductive reasoning.

7. Define and explain the term "valid" in logical reasoning.

8. Define and explain the term "invalid" in logical reasoning.

9. Explain the concept of logical consistency.

10. Explain the concept of logical inconsistency.

**Questions and Answers:**

1. a. True
   
   b. False

2. All men are mortal.

3. Logical reasoning is the process of using valid arguments to derive conclusions from premises.

4. Validity refers to the property of an argument that ensures its conclusion is true if its premises are true.

5. Deductive reasoning is a form of logical reasoning that seeks to deduce specific conclusions from general premises.

6. Inductive reasoning is a form of logical reasoning that seeks to infer specific conclusions from general premises.

7. Valid arguments are those in which the conclusion necessarily follows from the premises.

8. Invalid arguments are those in which the conclusion does not necessarily follow from the premises.

9. Logical consistency requires that all premises and conclusions be mutually consistent.

10. Logical inconsistency exists when there is a contradiction within the set of premises or between premises and conclusions.