Test 1
Basic Concepts of Logic

Answers are on final slide.

1. Which of the following provides the best definition of the term 'argument' as it is used in formal logic?

a. a debate between two or more people.

b. an absolute proof.

c. premises given in support of a conclusion.

d. any finite set of premises.

2. Which of the following provides the most obviously <u>incorrect</u> definition of a deductively valid argument?

a. If the premises are true the conclusion must also be true.

b. The premises are true and the conclusion is true.

c. It is impossible for the premises to be true when the conclusion is false.

d. The conclusion is true whenever the premises are true.

3. Is the following argument deductively valid =(a) or deductively invalid =(b)?

1. Bob loves pickles.
2. Bob loves onions.
3. <u>Bob loves sandwiches.</u>
4. Hence, Bob loves pickle and onion sandwiches.

4. Consider the following argument.

1. President Bush says Iran has nuclear weapons.
2. President Bush is an honest man.
3. Hence, Iran has nuclear weapons.

This argument:

a. logically implies its conclusion because it is valid.
b. is invalid because the premises might be true even though the conclusion is actually false.
c. is invalid because premise 2 is false.
d. is invalid because the conclusion may be false when the premises are true.

5. Consider the following sentences.

1. Most people are decent.
2. Most people are friendly.
3. Most people are both decent and friendly.
4. Some people are both indecent and unfriendly.
5. Norman is a bastard.

This <u>set</u> of sentences is:

a. satisfiable.
b. unsatisfiable.
c. contradictory.
d. contingent.

6. Consider the following two sentences.

1. Norman likes pie.
2. Some people like pie.
3. Most people like pie.
4. All people like pie.

This <u>set</u> of sentences is:

a. satisfiable.
b. unsatisfiable.
c. contradictory.
d. tautologous.

7. If you deny the conclusion of a valid argument you get:

a. a set of sentences that is unsatisfiable.

b. a set of sentences all of which are equivalent.

c. a set of false sentences.

d. all of the above.

8. A set consisting of all contingent sentences:

a. is necessarily satisfiable.

b. is necessarily unsatisfiable.

c. may be either satisfiable or unsatisfiable.

d. must contain at least one contradictory sentence.

9. Which of the following is most obviously <u>not</u> a valid sentence?

a. Obama is not running for president.

b. There are no square circles.

c. Whatever happens happens.

d. You can't predict the past.

e. Valid sentences are tautologous.

10. Which of the following sentence has no clear meaning in deductive logic?

a. The denial of a contradiction is a tautology.

b. No contingent sentence is true.

c. All contradictions are unsatisiable.

d. Invalid arguments are false.

e. The denial of a contingent sentence is a contradiction.

Answers

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