

Phil. 110: Intro to Logic & Crit. Thinking Pretest 2 Spring 06

I. (10 points). Fill in the blank with the appropriate term or short phrase.

1. An argument that is missing either a premise or a conclusion is called an _____.

2. In a standard form conditional statement, the first statement is called the _____ and the second statement is called the _____.

3. A truth-functional statement that is true on all truth-value assignments to its component statements is called a _____.

4. The fallacy of _____ occurs when a word is given two meanings (i.e., expresses two different concepts) in the course of an argument.

5. One form of the fallacy of ad hominem is _____.

II. (15 points). Give a Beardsley diagram for each of the following arguments. (Be sure to make clear what statements your numbers refer to).

1. A survey of your grades has shown a 2% rise in your GPA. If this was anything more than luck, there would be a rise in your grades in mathematics and science courses. But there isn't any such rise. So the 2% rise in GPA is nothing more than luck.

2. The Tao cannot exist. For if Tao exists, it is either present or absent. But Tao cannot be absent since the absent cannot govern actions. But it's also the case that Tao cannot be present, since the present is subject to change and perishing. Thus, Tao cannot exist.

3. The influence of faith on our culture has resulted in irrational laws concerning marijuana. Anyone who believes that God is watching us from beyond the stars will feel that punishing peaceful men and women for their private pleasure is perfectly reasonable.

This is why although nearly everything that human beings do -- driving cars, flying planes, hitting golf balls -- is more dangerous than smoking marijuana in one's own home, people are still receiving life sentences without the possibility of parole for growing and using marijuana.

III. (15 points). For each of the following arguments, identify the premise and conclusion and then provide the implicit/assumed premise.

1. Since African people have more mitochondrial variations than non-African people, it follows that African people have the longest evolutionary history.

2. Because anyone who seeks enjoyment at the expense of others is heartless and exploitive, the producers of reality TV shows are heartless and exploitive.

3. Consciousness cannot be explained by the laws of physics, so it is not a physical phenomenon.

IV. (25 points) For each of the following arguments, determine whether the argument form is valid. If it is not valid, provide a set of truth-values for its component statements that show this.

1. not p only if q

2. q unless p

3. p if q

4. p unless not q

5. p only if q

not q

not p

not p

p

p if r

thus p

thus q

thus q

thus, not q

thus, If r then q

V. (15 points). Determine for each of the following whether it is a tautology, contradiction or contingent. If it is contingent, provide a set of truth-values for p, q, r, or s that make it true, as well as a set of truth-values that make it false.

1. If p then (q and not q)
2. (p or not p) and q
3. not (q and p) or (If p then not q)

VI. (20 points) Identify the fallacies in the following passages.

1. Going to college is no way to get ahead in this world since spending time in college classrooms and on college campuses will not pay off in any way.
2. The student committee has argued for allowing alcohol on campus. But such an idea is ridiculous and should be rejected. How could anyone support the idea of allowing students to stay boozed up all day? We'll probably have to build chains of bars all over campus before too long.
3. People either have a natural talent for logic, or they are completely unable to do it, no matter what. Those with natural talent obviously have no need of instruction. Equally obvious though is that those completely unable to do logic will not gain from instruction. Thus instruction in logic is a waste of time.
4. Bob's car wreck occurred just one day after Madame Seer put a curse on him. That's proof enough that Madame Seer's curse worked.
5. Jones can run the half mile in just over 2 minutes, the mile in just over 4 minutes, therefore Jones can run 20 miles in just over 80 minutes.
6. The Free Press says it is going to carry a series of stories about this year's tornado starting on Thursday. We should clear out our cellar and put our valuables down there as well so as to be prepared for the tornado on Thursday.
7. Al: Clarence Thomas did not sexually harass Anita Hill.

Bob: How do you know that?

Al: No one has proved that he did so.

8. Charlie's argument against raising taxes ought not be taken seriously. After all, he was a miserable failure as a businessman and couldn't earn enough money to support his family.

9. Man is the only animal that speaks a language. No woman is a man. Thus, no woman speaks a language.

10. Mary is a member of one of the richest sororities on campus, and so she must be one of the richest young women on campus.

VII. (9points). Translate each of the following sentences into categorical form and then identify your statement as A, E , I or O. (Be sure to say what your term letters stand for in each case).

1. No one has been here all day.
2. Kurt Goedel is not a logical positivist.
3. A few cars of mine are currently at the shop.

VIII. (20 points). If 'All roads lead to Rome' is true, what may we validly deduce about the truth values of each of the following statements?

Make your verdicts explicit.

1. No roads lead to Rome.
2. Only roads lead to Rome.
3. Some roads lead to Rome.
4. Anything that doesn't lead to Rome is no road.