B20-02. First room.

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PHIL 1 – WEEK 3

EXERCISES

1.ANSWER THE FOLLOWING QUESTIONS (1/2 A4)

1. What is Categorical Logic and what is Stoic Logic? Introduce these two types of Logic and explain the difference/s between them
   Categorical Logic is logic, which divides statements into cathegories and studies relationships among those cathegories.

   Stoic Logic is based on Assertibles, it teaches us that there are mutualy exclusive proposotions. It is based on proposition rather than on terms.

2. What is an Assertible and how can it be expanded?
   Assertible is "proposition" which is mutualy exclusive, that means it is eather true or false. It is the content of a statement.

3. What are the major elements of Categorical Logic? Explain their function through an example (different from the one discussed in the lecture)
   Subject
   Predicat
   Quantifier - it specifies that at least one
   Copula - connects subject and predicat

   Some books are interesting.

4. Four types of reasoning can be used to build diagrams. List them and then explain the differences between them (use examples if needed)
   1) **Serial Reasoning.** (Occurs when a series of consecutive reasons are given for a conclusion)
   2) **Divergent Reasoning.** (Occurs when we have one premises and two different conclusion)
   3) **Linked Reasoning**. (Occurs when 2 or more reasons are offered as needing the others to support a conclusion)

4) **Convergent Reasoning** (Occurs when 2 or more reasons are offered as operating independently in supporting a conclusion)

5. What is a syllogism? Give a definition (in the standard form) of two valid syllogisms (modus ponens and of modus Tollens - Illustrate the definitions with examples) and of two invalid syllogisms (affirming the consequent, denying the antecedent)

Syllogism is an argument, which has only two premises and one conclusion.

Modus ponens is one of the hypothetical syllogisms, which is always an valid has the following diagram:

If P, then Q
P
Therefor, Q

Example: *If it is a car, then it has wheels. It is a car, therefore it has wheels*

Modus tollens is one of the hypothetical syllogisms, which is always an valid has the following diagram:

If P, then Q
Not Q
Therefor, Not P

Example: *If it is a car, then it has wheels. It has no wheels, therefore it is not a car.*

Denying the antecedent is a type of syllogism which is always false or invalid. It has the following structure:

if P, then Q
Not P
Therefore, not Q

Example: *If Horward passed the final, then he passed the course. Howard didn't pass the final. Therefore, Horward didn't pass the course.*

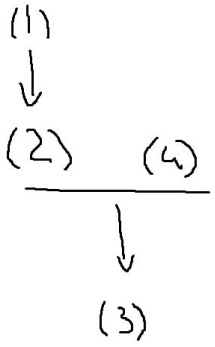
Affirming the consequent is a type of syllogism which is always false or invalid. It has the following structure:

if P, then Q
Q
Therefore, P

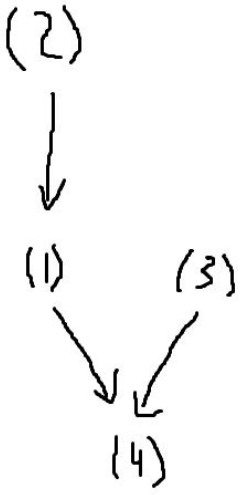
Example: If there is no gas in the car, then the car won't run. The car won't run. Therefore, there is no gas in the car.

2. DIAGRAM THE FOLLOWING PASSAGES

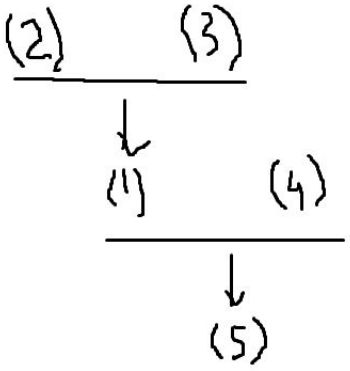
a. (1)All natural disasters are comforting because (2)they reaffirm our impotence.(3)At times it is strangely sedative to (4)know the extent of your own powerlessness.



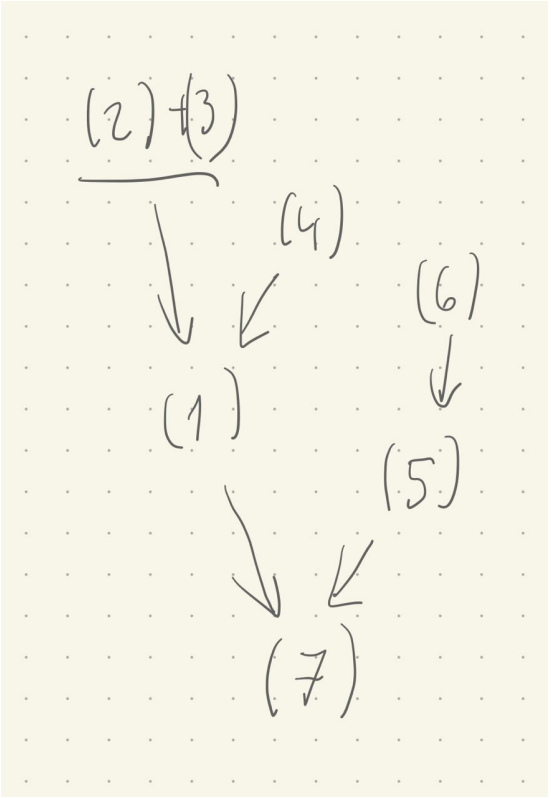
b. (1)Democratic laws generally tend to promote the welfare of the greatest possible number,(2) because they emanate from the majority of the citizens, who are subject to error, but who cannot have an interest opposed to their own advantage. (3)The laws of an aristocracy tend, on the contrary, to concentrate wealth and power in the hands of a minority.(4) It may therefore be asserted that a democracy is more useful to humanity as a whole than an aristocracy.



c. (1)The claim that men don't know how to search for anything is supported by two reasons.(2) They always ask where things are even if they're supposed to know where these things are. (3)And they consistently forget about the most obvious places to look. (4)Not being able to search properly makes one rather silly. (5)All in all, men are just silly creatures.



d. (1)Starting your own business is not as easy as it seems. (2)First of all you have to have enough capital (3) or you'll be faced with huge loans . (4)Then, finding a niche in the market where you can survive is really difficult.(5) And you'll never have a day off again as you'll always be working (6) since it is your own business.(7) So think again before you decide to go for it.



3. DETERMINE VALIDITY AND TRUTHFULNESS OF THE FOLLOWING ARGUMENTS

a. If you buy the jumbo popcorn, then you will need a large drink. You bought the jumbo popcorn. You will need a large drink.

This argument is valid/invalid? Is this true or false? Explain why:

VALIDITY: This argument IS VALID. Because it is a Modus Ponens, a type of syllogism which is always valid.

TRUTHFULNESS: It is a disputable question, but we tend to think that this argument is NOT TRUTHFUL, because we can not know for sure for all people, that if they buy the jumbo popcorn then they will need a large drink.

b. If you get the bon bons, you won't need popcorn. Ruslan needed popcorn. So, he did not get the bon bons.

This argument is valid/invalid?Is this true or false? Write your answer here and explain why:

VALIDITY: This argument IS VALID. Because it is a Modus Tollens, a type of syllogism which is always valid.

TRUTHFULNESS: It is a disputable question, but we tend to think that this argument is NOT TRUTHFUL, because we can not know for sure for all people, that if they have bon bons then they don't need popcorn.

c. Anyone who plays the piano well must have done a lot of practice. Yuja has done a lot of practice. Therefore, she plays the piano well.

This argument is valid/invalid? Is this true or false? Explain why:

VALIDITY: This argument IS NOT VALID. Because it is the fallacy of Affirming the Consequent, type of syllogism which is always invalid.

TRUTHFULNESS:This argument is NOT TRUTHFUL, because it is not valid, but one of conditions for arguments to be truthful is being valid.