MA EXAMINATION FOR INTERNAL STUDENTS

SCHOOL OF PHILOSOPHY

**Introduction to Philosophical Argument**

SSPL076S6

Credits: 30

Date: MONDAY 11 May 2015

Time: 2.30PM - 4.30PM

Answer **ALL QUESTIONS** in **ALL FIVE** parts
Part I. Arguments (12 points)
1. What is a sound argument?
2. When is an argument valid?
3. What is a consistent set?
4. Give two significant connections between inconsistent sets and arguments.

Part II. Logical Laws and Fallacies (18 points)
1. What is a tautology?
2. a) State the laws of non-contradiction, excluded middle and double negation.
   b) Do these laws tell you anything interesting?
3. Explain the inferences modus ponens and modus tollens.
4. a) Give an example of a logical fallacy and one of a rhetorical fallacy.
   b) What's the difference between fallacies of the two kinds?

Part III. Syllogisms (25 points)
1. Are the following syllogisms valid? Justify your answer.
   a) 1. All babies are illogical.
       2. No one who can handle a crocodile is illogical.
       3. No baby can handle a crocodile.
   b) 1. All angels are immortal.
       2. All immortals are immaterial.
       3. All angels are immaterial.
   c) 1. Some fish are whales.
       2. All whales are mammals.
       3. Some fish are mammals.
   d) 1. All unicorns are equine animals.
       2. Some unicorns are tame.
       3. Some equine animals are tame.
2. Translate the syllogisms into the formal language.

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Part IV. Translations (25 points)

Translate into the formal language, using the interpretation of the symbols provided.

$UD$: all things
$Px$: $x$ is a person
$Ax$: $x$ is awesome
$Dx$: $x$ is disappointing
$Kxy$: $x$ knows $y$
$Lxy$: $x$ loves $y$
$I$: Logic

1. If everyone is awesome, then nothing is disappointing.
2. No one who is awesome is disappointing.
3. People are disappointing.
4. Logic is awesome.
5. Everyone who knows logic is awesome.
6. Everyone loves someone who is awesome.
7. We all know what’s disappointing.
8. Only people are disappointing.
9. Someone who knows logic is loved by everyone.
10. If you know only disappointing stuff, you won’t be loved by anyone, even if they are awesome logicians.

Part V. Truth-Tables (20 points)

1. Write down the truth-tables for conjunction, disjunction, implication and negation.
2. Are all these truth-tables straightforward?
3. Formalise the argument contained in the following passage:

If the causative pathogen was Yersinia pestis, then it was carried by the black rat, which was to be found primarily in large cities, especially ports, and which thrives in dry surroundings such as grain depots and in the holds of ships. Because the black rat itself is very sedentary and rarely travels outside a limited radius, the bacillus is usually transmitted over wide areas by the passive transport of the rat and flea. Ships carrying grain or cloth brought infected rats into the ports of Europe, and infected fleas most likely travelled in the merchandise of merchants and mariners. Alternatively, if the epidemic was caused by some other pathogen, then it was most likely carried by merchants and travellers and transmitted by direct contact. (Maria Kelly: The Great Dying: A History of the Black Death in Dublin, 2002)

You are allowed to make some plausible assumptions about travel in the fourteenth century. You can use the following interpretation for your formalisation:

A: The causative pathogen was Yersinia pestis.
B: The causative pathogen was carried by the black rat.
C: The causative pathogen was transmitted through transport by ship.

4. Is the argument valid?

END OF PAPER

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