

Philosophy 134
Spring, 2005
Homework 6

Due: May 23, 2005, in class

1. Explain the difference between a universal relation and an equivalence relation, and why that difference is suppressed in the semantical system $S5I$.
2. Using a derivation, show that the following is a theorem in $S5D$:
 $\vdash_{S5D} \diamond(P \wedge \Box Q) \equiv (\diamond P \wedge \Box Q)$.
3. Show that the following is a semantical entailment in $S5I$: $\{\diamond\Box\diamond P\} \models_{S5I} \diamond P$.
4. Prove the following result: $\not\models_{S5I} \diamond\diamond\alpha$.
5. Show that $S4.2$ does not contain $S4.3$.