

Assignment Week 13

Philosophy 305

Due April 16, 2021

Questions 1-4

Which of the following are theorems of KT?

1. $\Box A \rightarrow (A \wedge \Diamond A)$
2. $\Box(A \rightarrow B) \rightarrow (A \rightarrow B)$
3. $A \rightarrow \Box \Diamond A$
4. $A \rightarrow \Diamond \Box A$

Questions 5-7

Which of the following are theorems of S4?

5. $\Box \Diamond A \rightarrow \Box \Box \Diamond A$
6. $\Box \Diamond A \rightarrow \Box \Diamond \Diamond A$
7. $\Diamond \Box A \rightarrow \Box \Diamond A$

Questions 8-10

Which of the following are theorems of S5?

8. $\Diamond A \rightarrow \Box \Box \Diamond A$
9. $\Box A \vee \neg A$
10. $\neg \Diamond((A \wedge \neg \Box A) \wedge \Diamond \Box(A \wedge \neg \Box A))$