

PHIL. 225 - SYMBOLIC LOGIC

FINAL REVIEW

POSSIBLE ANSWERS - 6

1f)

1 $\forall x \forall y \exists z (Fzx \wedge Fzy)$

2 $\forall x \forall y \forall z [(Fxy \wedge Fzy) \rightarrow Fxz]$

3 $\forall x \forall y \forall z [(Fxy \wedge Fab) \vee \rightarrow Fyx]$

4 \boxed{cd}

5 $\exists z (Fzc \wedge Fzd)$ 1, \forall -elim²

6 $\boxed{Fec \wedge Fed}$

7 $(Fce \wedge Fab) \vee \rightarrow Fec$ 3, \forall -elim³

8 $(Fde \wedge Fab) \vee \rightarrow Fed$ 3, \forall -elim³

9 $Fce \wedge Fde$ 6, 7, 8 TC

10 $(Fce \wedge Fde) \rightarrow Fcd$ 2, \forall -elim²

11 Fcd 9, 10 TC

12 Fcd 5, 6-11 \exists -elim

13 $\forall x \forall y Fxy$ 4-12 \forall -intro²

$\forall x \forall y Fxy$