

Description of a previous exam

Philosophy 315, Intermediate logic, EXAM 2

Propositional modal logic

Note: Instead of actually listing the exam questions, I will describe what the exam was like. (There may be some differences in this year's exam, since we covered slightly different things, but this can be a rough guide to the kind of exam I'll give.)

TRANSLATIONS (3 points each)

For each sentence, i) translate into the language of propositional modal logic, and ii) indicate what strength of necessity/possibility seems to be expressed by the modal words in the sentence.

[Here were three translations for propositional modal logic. In the new exam I might include counterfactuals as well, or even something in tense logic.]

TRUE/FALSE (1 point each)

[Here were 7 true false questions, testing knowledge of the concepts of modal logic, counterfactuals, etc. for instance, one might be "every K model is a D model".]

SHORT ANSWER (6 points each)

[Here were 3 short answer questions, again testing knowledge of concepts. To be able to answer these questions, know what the axioms and rules of inference are for the different modal systems, what the models look like for the different systems, what a transitive relation is, what an equivalence relation is; what soundness and completeness are; what counterfactual conditionals are, etc.]

AXIOMATIC PROOFS (12 points each)

[Here were three axiomatic proofs in modal logic]

VALIDITY AND INVALIDITY PROOFS (15 points each)

For each of the following formulas, determine which systems the formula is valid in and which systems the formula is invalid in, using countermodels and validity proofs. Be sure to explain your answers.

[I gave two problems of this sort. In this year's I might also add something about counterfactuals here.]