PHIL 120 **Assignment 1** **Winter 2025**

Guidelines:

There are **10 questions** in this assignment, and each is worth 0.5 points. Together they amount to 5 points. In Question II the points are broken down into two 0.25 points parts: 0.25 points assigned for the correct answer and 0.25 points for a proper explanation. Type your answers in the designated place in Canvas, and then submit them. You can re-write your answers as many times as you like, but once you have submitted your answers, *you cannot change them anymore*. This assignment is worth **5% of the final grade**.

Please keep in mind:

1. You should *type* your answers in the designated place in Canvas.
2. You should type down your answers *directly* in Canvas. If you type them down in another software and then copy-paste them in Canvas, the symbols and some other items might change. It is your responsibility to make sure that your answers are readable in Canvas.
3. Regarding the five connectives of TFL: All the symbols are available in Canvas. You should click on "Insert", and then "equation". You can find all the characters you need over there. Again: Do not copy-paste symbols from another document.
4. Do not forget to submit your assignment after you are done with typing down your answers. If you do not submit your assignment, it remains as a draft. Drafts are not marked.
5. Please number your answers so we can recognize which answer belongs to which question.

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Questions:

I. Symbolize 1-5 English sentences into TFL, using the following symbolization key. (0.5 point each)

A: Adam goes\will go to the hockey game.

B: Betty goes\will go to the hockey game.

C: Carol goes\will go to the hockey game.

D: Daniel goes\will go to the hockey game.

1. Adam and Carol will go to the hockey game

2. Not both Adam and Betty are going to the hockey game if Carol is going to the hockey game

3. Adam goes to the hockey game if and only if Carol goes to the hockey game

4. Either Carol goes to the hockey game or Daniel goes to the hockey game, but both Adam and Betty go to the hockey game only if Carol goes to the hockey game

5. Someone between Adam, Betty, Carol, and Daniel will go to the hockey game, but not all of them

II. In each of the following three expressions, determine whether it is a **sentence** of TFL or not. (0.25 point each) Explain why it is or it is not. (0.25 point each)

6. $[G \rightarrow (\neg\neg L \vee (D \vee \neg C))] \leftrightarrow [(C \leftrightarrow (H \wedge \neg D)) \leftrightarrow R]$

7. $[(G \rightarrow (\neg\neg L \vee (D \vee \neg C))) \leftrightarrow C] \leftrightarrow [(C \wedge \neg D) \leftrightarrow R]$

8. $(G \rightarrow \neg(\neg L \vee (D \vee \neg C))) \leftrightarrow ((C \leftrightarrow (H \wedge \neg D)) \leftrightarrow R))$

III. In each of the following two sentences, find the **main connective**. (0.5 point each)

9. $[((E \leftrightarrow (\neg B \vee (D \rightarrow \neg C))) \vee C) \rightarrow ((C \wedge \neg D) \leftrightarrow A)]$

10. $\neg((E \leftrightarrow \neg(\neg\neg B \vee D)) \wedge (\neg(\neg C \rightarrow C) \rightarrow ((C \wedge \neg D) \leftrightarrow A)))$

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End of Assignment 1