Exam 1 – Econ 304 – Chuderewicz – Spring 2014

Name _____ Last 4 (PSU ID) _____

PLEASE PUT THE FIRST TWO LETTERS OF YOUR LAST NAME ON TOP RIGHT HAND CORNER OF THIS COVER SHEET – THANKS AND GOOD LUCK!!!

Total Points for exam = 235

Test time = 120 minutes

Approximately one minute for every two points

To help with time management if spreading time evenly

Question #1 = 50 points..... 25 minutes

Question #2 = 50 points .....25 minutes

Question #3.1 = 35 points.... 17 minutes

Question #3.2 = 45 points ....22 minutes

Question #4 = 55 points..... 27 minutes

Please answer **all** questions. You must show all work or points will be taken off.

1. (50 points total) Suppose we have Dagwood, who has a current income of $400K and expected future income of $200K. He has zero in current wealth and zero in expected wealth.

Dagwood's behavior is consistent with the life-cycle theory of consumption. For one, he perfectly smoothes consumption and two, since he is in his peak earning years, he is saving now so that he can maintain his current level of consumption in the future. Given that Dagwood faces a real interest rate of negative 3% (- 0. 03). Please answer the following questions.

a) (5 points) Calculate Dagwood's optimal consumption bundle showing all work. Then draw a **completely labeled** graph (the two period consumption model) depicting this initial optimal consumption bundle as point C^*_A

(10 points for a completely labeled graph – be sure to label the no lending / no borrowing point(s) = NL/NB and the slope of the budget constraint(s))

b) (5 points) Now Dagwood goes to the doctor and finds out that he is not as healthy as he thought (too many eating binges!). The doctor tells him that he is fine now but next period he is likely to be ill and that if you had anything in life that you really wanted to do (as in leisure), you should do it now. As a result, Dagwood's preferences change so that he prefers to consume like our friend Homer, that is, Dagwood prefers to consume twice as much today relative to next period. Resolve for Dagwood's optimal consumption bundle, given these new preferences, and label as point C^*_B.

c) (5 poiints) Ben Bernanke and the Fed are finally happy with the way the economy is headed and to be honest, is now fearful of overheating. As such, the Fed tightens and the real rate of interest rises to 7% (0.07). Given his change in preferences as above in part b), recalculate the optimal bundle for Dagwood and add this point to your graph and label as point C^*_C.