AP/ECON 2300 C Mid–term Exam October 30 2017

time : 60 minutes

Do all 4 questions. All count equally.

1. What would a person's indifference curves look like if her preferences had **all** of the following properties (simultaneously)? : (*i*) she regards good #1 as a good, so that a higher quantity consumed of good #1 makes her better off ; (*ii*) she regards good #2 as a bad, so that a higher quantity consumed of good #2 makes her worse off, and (*iii*) her preferences are convex.

2. What is a person's demand function for good #1, if she regards good #1 and good #2 as *perfect complements*, so that her preferences can be represented by the utility function

$$U(X_1, X_2) = \min(X_1, X_2)$$

where X_1 and X_2 are the quantities consumed of goods #1 and #2?

3. Write down the Slutsky equation [in a "simple" one–period model, in which a person's income is exogenous]. (You do not need to derive it.)

What does this equation say about the slope of a person's demand curve?

4. How would a person's preferred level of savings vary with the interest rate r if her preferences could be represented by the utility function

$$U(C_1, C_2) = \log(C_1) + C_2$$

where C_1 is her consumption in period 1 and C_2 is her consumption in period 2? The person receives exogenous income of M_1 in period 1 (and no exogenous income in period 2).