

Name: _____

Student id: _____



College of Business Administration
Department of Economics
Aggregate Economic Conditions & Analysis
Lecturer: O. Mikhail
ECO 6206-0001
Spring 2001

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Mid-Term Exam

- This closed book exam is worth 100 points.
- Questions I and III are worth 30 points each.
Questions II and IV are worth 20 points each.
Allocate your time accordingly.
- Including the cover page, the exam totals 6 pages.
- Answer all questions.
- You are allowed an 8.5 x 11" sheet for derivatives rules only.
- Non-Programmable calculators and language dictionaries are allowed.
- DO NOT forget to write your name, your student id on the exam booklet.

6:00 p.m. – 8:00 p.m.

Exam moved from BA 121 to BA 212

February 28, 2001

Question I (20 points):

Suppose the production function has the form: $y = A\sqrt{l} + B$ where y is output, l is labor input, A is a positive constant, and B is another constant, which maybe positive, negative, or zero.

- a) Describe the wealth and substitution effects from an increase in the coefficient A . (answer using a graph).

- b) Describe the wealth and substitution effects from an increase in the coefficient B . (answer using a graph).

c) What are the effects on household's work effort l , output y , and consumption c , from an increase in the coefficient A ?

d) What are the effects on household's work effort l , output y , and consumption c , from an increase in the coefficient B ?

True/False Continue:

- e) An unexpected increase in future wages relative to current wages will increase current leisure relative to future leisure.

Question III: (20 points)

If yearly real consumption equals \$ 18,000 and the interval between exchanges of interest-bearing assets and money is $1/12$ year. Compute the,

- a) Initial amount of money withdrawn.

- b) Average amount of money held.

Question IV: (30 points)

Consider the Robinson Crusoe (RC) economy. There is a single good (coconuts) which can be produced with labor. RC's production function is

$$y = f(n) = \alpha + \beta n^\gamma$$

where n denotes labor and y denotes output. α and β are positive constant and γ is a parameter with a value in the open interval $(0,1)$.

RC's preferences over leisure (l) and the consumption of coconuts (c) are presented by the utility function

$$U(c,l) = c^\delta l$$

where δ is a positive constant in $(0,1)$.

Finally, RC has a limited amount of time per period, normalized to 1, so that

$$n + l = 1$$

- a) What is the economic interpretation of α and β ? Graph the production function in (y,n) space. Does this production display a falling marginal product of labor? How is it affected by the value of γ ?
- b) Give an expression for the marginal rate of substitution (MRS) between consumption and leisure. Are RC's preferences over c and l convex? What is the meaning of δ ? Explain the intuition of why changes in δ affect the MRS.