

YORK UNIVERSITY

Faculty of Arts

Final Examination

April 28, 2004

Economics 2300 3.0GW : Intermediate Microeconomic Theory I

S. Bucovetsky

time=2 hours

This exam consists of two sections. Part A counts for 40 percent of the grade, part B for 60.

Part A : Define any **8** of the following 10 terms. (40 % : 5 % per question)

1. convex preferences
2. indifference curves
3. inferior good
4. Laspeyres quantity index
5. income effect
6. demand for leisure
7. present value
8. equivalent variation
9. own price elasticity of demand
10. competitive market

Part B: Do any **6** of the following 10 questions. Answers should be brief and specific.
(60 % : 10 % per question)

1. Sketch the budget set of a person who faces the following constraints. She is visiting a city for 24 days. There are two hotels in the city : the Harriott charges \$200 per day to stay, and the Myatt charges \$300 a day. She must choose how many days to spend at each hotel. She has \$6000 which she can spend on accommodation during the visit.

2. If a person's preferences over food (F) and smoke (S) could be represented by the utility function

$$U(F, S) = \sqrt{F} - S^2$$

are her preferences monotonic? Convex? In each case explain briefly.

3. What is a person's demand function for clothing, if her preferences over travel (T) and clothing (C) can be represented by the utility function

$$U(T, C) = T + 2\sqrt{C} \quad ?$$

4. The following table contains data on a person's consumption of two goods (x and y), and the prices of the two goods (p_x and p_y) in two different years. Can we tell in which year the person was better off? Explain briefly.

year	x	y	p_x	p_y
1994	10	10	5	1
2004	12	3	6	2

5. Is the compensated demand curve for a good always more steeply sloped than the ordinary ("standard": holding income constant) demand curve? Explain briefly.

6. If a person regards consumption and leisure as strongly complementary, what would the shape be of her supply curve for labour? Explain briefly.

7. A person has a choice of three salary options, described in the table below, where M_1 is what she would be paid this year (in thousands of dollars), and M_2 what she would be paid next year. If the interest rate at which she can borrow or lend is 20 percent, which option should she choose?

option#	M_1	M_2
<i>i</i>	30	120
<i>ii</i>	120	0
<i>iii</i>	90	60

8. If a person's quantity demanded of orange juice (in litres per year) had the equation

$$X = 300 - 50p_x$$

where p_x is the price per litre of orange juice, and if the person's quantity demanded of orange juice did not depend on her income, what would she be willing to pay to prevent the price of orange juice from going from \$2 per litre to \$3 per litre?

9. A market consists of 2000 identical consumers, each of whom has an inverse demand function for coffee of the form $p = 200 - 10q$, where p is the price per kilogramme of coffee, in dollars, and q is each person's consumption of coffee in kilogrammes per year. What is the *market* inverse demand curve for coffee?

10. Calculate the own-price elasticity of demand for video games, if the equation of the market demand curve for video games was

$$Q = 900 - p^2$$

(where Q is the quantity demanded per year and p the price), at $p = 10$.

the end