國立成功大學

115學年度碩士班招生考試試題

編　號：171

系　所：交通管理科學系

科　目：經濟學

日　期：0204

節　次：第 1 節

注　意：1.不可使用計算機
2.請於答案卷(卡)作答，於試題上作答，不予計分。

The exam has 20 questions in blank and each question is 5 points. There are 100 points in total.

Problem 1. (15 points)

Suppose that business travelers and vacationers have the following demand for airline tickets from Chicago to Miami:

Price	Quantity Demanded (business travelers)	Quantity Demanded (vacationers)
$150	2,100 tickets	1,000 tickets
200	2,000	800
250	1,900	600
300	1,800	400

a. At the price of tickets rises from $200 to $250, what is the price elasticity of the demand for (i) business travelers _____ and (ii) vacationers _____? (Use the midpoint method in your calculations.)

b. Why might business travelers and vacationers have different elasticities? _____

Problem 2. (35 points)

The market for pizza is characterized by a downward-sloping demand curve and an upward-sloping supply curve.

a. Draw the competitive market equilibrium. Label the price, quantity, consumer surplus, and producer surplus. _____ _____ Is there any deadweight loss? Explain. _____

b. Suppose that the government requires each pizzeria to pay a $1 tax on each pizza sold. Illustrate the effect of this tax on the pizza market, being sure to consumer surplus, producer surplus, government revenue, and deadweight loss. _____ _____ How does each area compare to the pre-tax case? _____ _____

Problem 3. (20 points)

Suppose that people consume only three goods, as shown in the table.

	Tennis balls	Golf balls	Bottle of Gatorade
2023 price	$2	$4	$1
2023 quantity	100	100	200
2024 price	$2	$6	$2
2024 quantity	100	100	200

a. What is the percentage change in the price of each of the three goods? _____
b. Using a method similar to the CPI, compute the percentage change in the overall price level. _____
c. If you were to learn that a bottle of Gatorade increased in size from 2023 to 2024, should that information affect your calculation of the inflation? _____
d. If you were to learn that Gatorade introduced a new flavor in 2024, should that information affect your calculation of the inflation? _____

Problem 4. (30 points)

Jamal has a utility function $U = W^{1/2}$, where W is his wealth in millions of dollars, and U is the utility he obtains from that wealth. In the final stage of a game show, the host offers Jamal a choice between (A) \$4 million for sure and (B) a gamble that pays \$1 million with a probability of 0.6 and \$9 million with a probability of 0.4.

a. Graph Jamal's utility function. Is he risk-averse? Explain._____
b. Does A or B offer Jamal the higher expected prize? Explain your reasoning with appropriate calculations. _____ _____
c. Does A or B offer Jamal the higher expected utility? Again, show your calculations.

_____ _____
d. Should Jamal pick A or B? Why? _____