國立成功大學

113學年度碩士班招生考試試題

編　號：244

系　所：電信管理研究所

科　目：經濟學

日　期：0202

節　次：第 1 節

備　註：不可使用計算機

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※ 考生請注意：本試題不可使用計算機。　請於答案卷(卡)作答，於本試題紙上作答者，不予計分。

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

Question 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 business travelers _____ and vacationers? _____ (Use the midpoint method in your calculations.)

(b) Why might business travelers and vacationers have different elasticities?

_____

Question 2. (30 points)

A recent study found that the demand and supply schedule of Frisbees are as follows:

Price per Frisbee	Quantity Demanded	Quantity Supplied
$11	1 million Frisbees	15 million Frisbees
10	2	12
9	4	9
8	6	6
7	8	3
6	10	1

(a) What are the equilibrium price _____ and quantity _____of Frisbees?

(b) Frisbee manufacturers persuade the government that Frisbee production improves scientists' understanding of aerodynamics and is thus important for national security. A concerned Congress votes to impose a price floor $2 above the equilibrium price. What is the new market price? _____ How many Frisbees are sold? _____

(c) Irate college students march on Washington and demand a reduction in the price of Frisbees. An even more concerned Congress votes to repeal the price floor and impose a price ceiling below the equilibrium price in (a). What is the new market price? _____ How many Frisbees are sold? _____

Question 3. (30 points)

Below are some data from the land of milk and honey.

year	price of milk	quantity of milk	price of honey	quantity of honey
2020	$1	100 quarts	$2	50 quarts
2021	$1	200 quarts	$2	100 quarts
2022	$2	200 quarts	$4	100 quarts

(a) Compute nominal GDP, real GDP, and the GDP deflator for year 2022, using 2020 as the base year. _____, _____, _____

(b) Compute the percentage change in nominal GDP, real GDP, and the GDP deflator in 2022 from the preceding year. _____ For each year, identify the variable that does not change. Explain why your answer makes sense. _____

(c) Did economic well-being increase more in 2021 or 2022? Explain. _____

Question 4. (25 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, or (B) a gamble that pays $ 1 million with probability 0.6 and $ 9 million with probability 0.4.

(a) Graph Jamal's utility function. Is he risk averse? Explain. _____

(b) Does A or B offer Jamal a higher expected prize? Explain your reasoning with appropriate calculations. (Hint: The expected value of a random variable is the weighted average of the possible outcomes, where the probabilities are the weights.) _____

(c) Does A or B offer Jamal a higher expected utility? A's expected utility _____ B's expected utility _____? Again, show your calculations.

(d) Should Jamal pick A or B? Why? _____