

國立成功大學

113學年度碩士班招生考試試題

編 號：241

系 所：交通管理科學系

科 目：經濟學

日 期：0202

節 次：第 1 節

備 註：不可使用計算機

※ 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. (20 points)

Suppose that your demand schedule for pizza is as follows:

Price	Quantity Demanded (income = \$20,000)	Quantity Demanded (income = \$24,000)
\$8	40 pizzas	50 pizzas
10	32	45
12	24	30
14	16	20
16	8	12

- (a) Use the midpoint method to calculate your price elasticity of demand as the price of pizza increases from \$8 to \$10 if your income is \$20,000 _____, and if your income is \$24,000. _____
- (b) Calculate your income elasticity of demand as your income increases from \$20,000 to \$24,000 if the price is \$12 _____, and if the price is \$16? _____

Question 2. (25 points)

A market is described by the following supply and demand curves:

$$Q^S = 2P$$

$$Q^D = 300 - P$$

- (a) Solve for the equilibrium price and quantity. _____
- (b) If the government imposes a price ceiling of \$90, does a shortage or surplus (or neither) develop? _____ What are the market price, quantity supplied, quantity demanded, and size of the shortage or surplus?

- (c) If the government imposes a price floor of \$90, does a shortage or surplus (or neither) develop? _____ What are the market price, quantity supplied, quantity demanded, and size of the shortage or surplus?

Question 3. (25 points)

One day, Barry the Barber, Inc., collects \$400 for hair cuts. Over this day, his equipment depreciates in value by \$50. Of the remaining \$350, Barry sends \$30 to the government in sales taxes, takes home \$220 in wages, and retains \$100 in his business to add new equipment in the future. From the \$220 that Barry takes home, he pays \$70 in income taxes. Based on this information, compute Barry's contribution to the following measures of income.

- (a) gross domestic product _____
 (b) net national product _____
 (c) national income _____
 (d) personal income _____
 (e) disposable personal income _____

Question 4. (30 points)

Deposit \$1,000 in bank for one year. Consider the following two cases. Case 1: inflation rate $\dot{P} = 0\%$, interest rate $R = 10\%$; Case 2: inflation rate $\dot{P} = 10\%$, interest rate $R = 20\%$.

- (a) In which case, how does the real value of your deposit grow? Case 1: _____
 Case 2: _____

Now, assume the tax rate $t = 25\%$.

- (b) In which case, how do you pay the tax? Case 1: _____ Case 2: _____

- (c) Compute the after-tax real interest rates for both cases? Case 1: _____
 Case 2: _____