國立成功大學

114學年度碩士班招生考試試題

編　　號：184

系　　所：電信管理研究所

科　　目：經濟學

日　　期：0211

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.

Question 1. (35 points)

A case study of the federal minimum-wage law.

a. Suppose the minimum wage is above the equilibrium wage in the market for unskilled labor. Using a supply-and-demand diagram of the market for unskilled labor, show the market wage, the number of workers who are employed, and the number of workers who are unemployed. Also, show the total wage payments to unskilled workers. _____

b. Now suppose the Secretary of Labor proposes an increase in the minimum wage. What effect would this increase have on employment? _____ Does the change in employment depend on the elasticity of demand, the elasticity of supply, both elasticities, or neither? _____

c. What effect would this increase in the minimum wage have on unemployment? _____ Does the change in unemployment depend on the elasticity of demand, the elasticity of supply, both elasticities, or neither? _____

d. If the demand for unskilled labor were inelastic, would the proposed increase in the minimum wage raise or lower the total wage payment to unskilled workers? _____ Would your answer change if the demand for unskilled labor were elastic? _____

Question 2. (25 points)

Ernie owns a water pump. Because pumping large amounts of water is harder than pumping small amounts, the cost of producing a bottle of water rises as he pumps more. Here is the cost he incurs to produce each bottle of water.

Cost of first bottle	$1
Cost of second bottle	$3
Cost of third bottle	$5
Cost of fourth bottle	$7

a. From this information, derive Bert's supply schedule. Graph Ernie's supply curve for bottled water. _____

b. If the price of a bottle of water is $4, how many bottles does Ernie produce and sell? _____ How much producer surplus does Ernie get from these sales? Show Ernie's producer surplus in your graph. _____

c. If the price rises to $6, how does the quantity supplied change? _____ How does Ernie's producer surplus change? Show these changes in your graph. _____

Question 3. (20 points)
There are three industrial firms in Happy Valley.

Firm	Initial Pollution Level	Cost of Reducing Pollution by 1 Unit
A	20 units	$20
B	40 units	$30
C	20 units	$10

The government wants to reduce pollution to 60 units, so it gives each firm 20 tradable pollution permits.

a. Who sells permits, and how many do they sell? _____ Who buys permits, and how many do they buy? _____ Briefly explain why the sellers and buyers are each willing to do so. What is the total cost of pollution reduction in this situation? _____

b. How much higher would the costs of pollution reduction be if the permits could not be traded? _____

Question 4. (20 points)
Suppose that people consume only three goods, as shown in this table.

	Tennis Balls	Golf Balls	Bottles 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 rate? If so, how? _____

d. If you were to learn that Gatorade introduced new flavors in 2024, should that information affect your calculation of the inflation rate? If so, how? _____