



MANICALAND STATE UNIVERSITY OF APPLIED SCIENCES

FACULTY OF AGRIBUSINESS AND COMMERCE

Agricultural Economics and Development

PRINCIPLES OF ECONOMICS

CODE: ECON 102

SESSIONAL EXAMINATIONS

AUGUST 2022

DURATION: 3 HOURS

EXAMINER: MR N. CHIPUNZA

INSTRUCTIONS

- 1. Answer All questions in section A*
- 2. Answer any Three (3) questions in section B.*
- 3. Start a new question on a fresh page*
- 4. Total marks 100*

Additional material(s): Calculator

SECTION A ANSWER ALL

Questions 1

a. Interpret the following production function [2]

$$Q = f (X_1 | X_2, X_3 \dots \dots \dots X_n)$$

b. Define the following terms. Use diagrams and examples where possible

- i. Least cost combination [4]
- ii. Opportunity cost [4]
- iii. Principle of equi- marginal returns [4]
- iv. The law of diminishing marginal returns [4]
- v. Derived demand for inputs [2]

Question 2

When we are told that brand Y will make us more beautiful, enrich our lives, wash our clothes whiter, give us get-up and go, gives us a new taste sensation or make us the envy of our friends, just what are the advertisers up to? Trying to sell the product you may reply, in fact there is a bit more to it than this.

- a. What are the two things advertisers trying to do? [5]
- a. How will this affect the revenue for their company? [5]

Question 3 [10 marks]

Does scarcity only affect those with more limited incomes and lower net worth?

SECTION B ANSWER ANY 3 QUESTIONS

Question 4

- (a) In equilibrium, the market price for a good is equal to the amount consumers are willing to pay for it. Therefore, in equilibrium consumer surplus is always zero. Do you agree or disagree, explain your answer? [10]
- (b) Fill in the missing amounts in the following table. [10]

Description	% Change in Price	% Change in Quantity	Elasticity
Demand for Ben & Jerry’s Ice cream	+5%	-7%	a
Demand for beer at San Francisco 49ers football games	-15%	b	-0.4
Demand for Broadway theatre tickets in New York	c	-10%	-1.1
Supply of chickens	+5%	d	+1.0
Supply of beef cattle	-10%	-8%	e

Question 5

Where the Buses: Run on Time BY AUSTAN GOOLSBEE

On a summer afternoon, the drive home from the University of Chicago to the north side of the city must be one of the most beautiful commutes in the world. On the left on Lake Shore Drive you pass Grant Park, some of the world’s first skyscrapers, and the Sears Tower. On the right is the intense blue of Lake Michigan. But for all the beauty, the traffic can be hell. So, if you drive the route every day, you learn the shortcuts. You know that if it backs up from the Buckingham Fountain all the way to McCormick Place, you’re better off taking the surface streets and getting back onto Lake Shore Drive a few miles north.

A lot of buses, however, wait in the traffic jams. I have always wondered about that: Why don’t the bus drivers use the shortcuts? Surely, they know about them—they drive the same route every day, and they probably

avoid the traffic when they drive their own cars. Buses don't stop on Lake Shore Drive, so they wouldn't strand anyone by detouring around the congestion. And when buses get delayed in heavy traffic, it wreaks havoc on the scheduled service. Instead of arriving once every 10 minutes, three buses come in at the same time after half an hour. That sort of bunching is the least efficient way to run a public transportation system. So, why not take the surface streets if that would keep the schedule properly spaced and on time?

You might think at first that the problem is that the drivers aren't paid enough to strategize. But Chicago bus drivers are the seventh-highest paid in the nation; full-timers earned more than \$23 an hour, according to a November 2004 survey. The problem may have to do not with how much they are paid, but how they are paid. At least, that's the implication of a new study of Chilean bus drivers by Ryan Johnson and David Reiley of the University of Arizona and Juan Carlos Muñoz of Pontificia Universidad Católica de Chile.

Companies in Chile pay bus drivers one of two ways: either by the hour or by the passenger. Paying by the passenger leads to significantly shorter delays. Give them incentives, and drivers start acting like regular people do. They take shortcuts when the traffic is bad. They take shorter meal breaks and bathroom breaks. They want to get on the road and pick up more passengers as quickly as they can. In short, their productivity increases....

Not everything about incentive pay is perfect, of course. When bus drivers start moving from place to place more quickly, they get in more accidents (just like the rest of us). Some passengers also complain that the rides make them nauseated because the drivers stomp on the gas as soon as the last passenger gets on the bus. Yet when given the choice, people overwhelmingly choose the bus companies that get them where they're going on time. More than 95 percent of the routes in Santiago use incentive pay.

Perhaps we should have known that incentive pay could increase bus driver productivity. After all, the taxis in Chicago take the shortcuts on Lake Shore Drive to avoid the traffic that buses just sit in. Since taxi drivers earn money for every trip they make, they want to get you home as quickly as possible so they can pick up somebody else.

Discuss the economic principle illustrated and how it affects decision making.

Question 6

You are an intern to the editor of a small-town newspaper. Your boss, the Editor, ask you to write the first draft of an editorial for this week's paper. Your assignment is to describe the costs and the benefits of building a new bridge across the railroad trucks in the centre of town. Currently, most people who live in this town must drive 2 miles through thick congested traffic to existing bridge to get to the main shopping and employment centre. The bridge will cost the citizens USD25 million, which will be paid for with tax on their incomes over the next 20 years.

- i. What are the opportunity costs of building this bridge? [8]
- i. What are the benefits that citizens will likely receive of the bridge is built? [8]
- ii. What other factors might you consider in writing this editorial? [4]

Question 7

Imagine a society that produces military goods and consumer goods, which we'll call "guns" and "butter."

- i. Draw a production possibilities frontier for guns and butter. Using the concept of opportunity cost, explain why it most likely has a bowed-out shape. [5]
- i. Show a point that is impossible for the economy to achieve. Show a point that is feasible but inefficient. [5]
- ii. Imagine that the society has two political parties, called the Hawks (who want a strong military) and the Doves (who want a smaller military). Show a point on your production possibilities frontier that the Hawks might choose and a point the Doves might choose. [5]
- iii. Imagine that an aggressive neighbouring country reduces the size of its military. As a result, both the Hawks and the Doves reduce their desired production of guns by the same amount. Which party would get the bigger "peace dividend," measured by the increase in butter production? Explain. [5]

Question 8

Assume an open economy with a public sector.

(a) Identify two methods of calculating gross domestic product for this economy.

[4]

(b) Explain why the two methods you identified in part (a) must yield the same value of gross domestic product.

[4]

(c) Identify and explain six (6) shortcomings of using gross domestic product as an indicator of the actual level of national output and measure of standard of living.

[8]

(d) If nominal gross domestic product increased by 4 percent in 2016, identify two additional pieces of information you need before you can conclude that the living standard of the typical person increased by 4 percent during that year.

[5]

END OF EXAMINATION