

Surname: _____

First name: _____

Student number: _____

ECO 1104B INTRODUCTION TO MICROECONOMICS

First Midterm Examination

David Gray

Fall 2015

INSTRUCTIONS

- a) The allotted time is 60 minutes. This examination counts for 17.5 % of your course grade. It consists of short answer questions and problems, and you should answer all of them. There are a total of 50 points.
- b) You may not consult with any written materials whatsoever, including other students' papers, and no conversation is permitted while the examination is in progress. Furthermore, no palm pilots or programmable calculators are permitted. Any contravention of these rules will be treated as an infraction to the honour code of the university.
- c) You should not be pressed for time.
- d) All of the questions which follow are straightforward, and most can be answered in two sentences. The responses that I hope to elicit have been repeated by me several times in class. Please take a minute to concentrate on the question being asked, as opposed to writing down everything which immediately comes to your mind about a certain topic. I have tried to pose the questions in such a way that you focus correctly.
- e) Write only in the space provided. For most of the questions that follow, you should write in sentences.
- f) Turn off all cellular telephones

PART A: INTRODUCTORY MATERIAL (14 points)

1) For each of the following lists of items, identify the common theme that links them together. In other words, I brought up all three (or all four) of them in relation to what? In addition, write one sentence explaining the significance. The name of the game for this question is to explain the context. I went over all of this material in class. (10 points)

a) What goods and services should be produced, and in what quantities? How should these goods be produced? For whom should these goods and services be produced? (Do NOT answer these questions! Instead, explain the context in which they were raised.)

THESE ARE THE THREE ESSENTIAL COORDINATION TASKS THAT ANY ECONOMY FORMED SINCE THE BEGINNING OF THE HUMAN RACE MUST ADDRESS – FROM THE MOST PRIMITIVE TO THE MOST HIGHLY SOPHISTICATED, MODERN ECONOMIES. IN THIS COURSE WE SPEND ALMOST ALL OF OUR TIME STUDYING THE WORKINGS OF THE FREE MARKET ECONOMY, ALBEIT ONE WITH AN IMPORTANT PUBLIC SECTOR.

b) production activities, consumption activities, and exchange activities

THESE ARE THE THREE MAJOR TYPES OF ECONOMIC ACTIVITY, WHICH IN TURN ALWAYS INVOLVE MAKING CHOICES. THE FOUNDATION OF THE SUPPLY CURVE IS PRODUCTION ACTIVITIES, THE FOUNDATION OF THE DEMAND CURVE IS CONSUMPTION ACTIVITIES, AND THOSE TWO FORCES INTERACT IN THE MARKET BY CONDUCTING AND EXCHANGE ACTIVITIES.

c) land, labour, and capital

THESE ARE THE THREE PRIMARY FACTORS OF PRODUCTION, ALSO CALLED INPUTS OR RESOURCES. THEY ARE UTILISED (OR EXPLOITED) IN ORDER TO PRODUCE OUTPUT. THIS APPLIES TO ANY ECONOMY – NOT JUST A MARKET-BASED ONE.

d) decentralised allocation of resources, inequitable distribution of production, efficient allocation of resources, and dynamic adjustment mechanisms

THESE ARE THE ESSENTIAL FEATURES OF A MARKET-BASED, OR FREE-ENTERPRISE, OR CAPITALIST ECONOMY.

e) centralised allocation of resources, equitable distribution of production, inefficient allocation of resources, and static adjustment mechanisms

THESE ARE THE ESSENTIAL FEATURES OF A CENTRALLY-PLANNED, OR COMMAND, OR PURELY SOCIALIST ECONOMY. YOU SHOULD MENTION THAT THESE TWO ECONOMIC SYSTEMS ARE THE POLAR OPPOSITE OF EACH OTHER.

2) In class I spoke about the widespread phenomenon of politicians cutting ribbons and announcing new (and sometimes not so new) spending initiatives. In his/her speech, the politician typically says something like “Look at how much money the government is spending in your community! Canadians are going to benefit big-time!” I said that economists like me tend to be sceptical of these announcements. Explain why in about two sentences. (4 points)

THIS IS TOTAL ECONOMIC FRAUD BASED ON A COMBINATION OF THE FIRST TWO PRINCIPLES OF MICROECONOMICS. FIRST, PEOPLE FACE CHOICES, AND MORE IMPORTANT FOR THIS QUESTION, THESE CHOICES INVOLVE OPPORTUNITY COSTS. THE LAND, LABOUR, AND CAPITAL RESOURCES THAT WERE USED UP FOR THIS PARTICULAR GOVERNMENT FUNDED PROJECT COULD HAVE BEEN ALLOCATED TO ANOTHER USE, SUCH AS SUBSIDIZING POST-SECONDARY EDUCATION.

PART B: PRODUCTION AND EXCHANGE (20 points)

3. These two questions concern the production possibility frontier, also known as the transformation curve (6 points). I consider them to be easy.

a) Explain why the production possibilities frontier has a negative slope. Which basic economic principle is at work in this instance? Do not worry about the number that the textbook authors assigned to it.

THIS REFLECTS THE CONCEPT OF SCARCITY. PRINCIPLE # 1 IS THAT PEOPLE FACE TRADEOFFS. IF SOCIETY WANTS TO PRODUCE MORE OF ONE GOOD, SUCH AS CONSUMER GOODS, IT MUST ACCEPT THAT IT WILL PRODUCE LESS OF ANOTHER GOOD, SUCH AS CAPITAL GOODS.

b) Explain why the production possibilities frontier has a concave shape. What is the significance of that characteristic?

BECAUSE THE ECONOMY’S RESOURCES ARE NOT EQUALLY WELL-SUITED TO THE PRODUCTION OF BOTH GOODS. IN ORDER TO OBTAIN INCREASING INCREMENTS OF ONE GOOD, ONE MUST SACRIFICE MORE AND MORE UNITS OF THE OTHER GOOD. THIS IS A DECREASING TRADEOFF, WHICH IMPLIES THE EXISTENCE OF INCREASING OPPORTUNITY COSTS.

4) This problem is similar to one that is in the study guide (only the numbers have been changed). The following table shows the units of farm output per acre that can be produced per year in two counties, Kern county and Taft county. (10 points)

	<u>corn</u>	<u>wheat</u>
Kern county	400	300
Taft county	250	100

- a) Taft county has the comparative advantage in the production of corn. Demonstrate why that is the case. It necessarily follows that Kern county has the comparative advantage in the production of wheat. You must explain your work; merely doing the calculations will not suffice.

BASED ON THE APPROACH OF RELATIVE EFFICIENCIES, FOR KERN COUNTY, THE RATIO IS $400 / 300 = 1.33$. FOR TAFT COUNTY, THE RATIO IS $250 / 100 = 2.5$. TAFT COUNTY HAS THE COMPARATIVE ADVANTAGE IN THE PRODUCTION OF CORN BECAUSE IT IS 150 % MORE EFFICIENT IN THE PRODUCTION OF CORN THAN IT IS IN THE PRODUCTION OF WHEAT. FOR KERN COUNTY THE SAME RATIO IS LOWER AT 1.33, SO KERN COUNTY PRODUCES CORN 33 % MORE EFFICIENTLY THAN IT PRODUCES WHEAT.

THE OPPORTUNITY COST OF PRODUCING ONE MORE UNIT OF CORN IN TERMS OF WHEAT FORGONE IS 0.75 ($300/400$) FOR KERN COUNTY AND 0.4 ($100 / 250$) FOR TAFT COUNTY. TAFT COUNTY THUS HAS THE COMPARATIVE ADVANTAGE IN THE PRODUCTION OF CORN SINCE $0.4 < 0.75$.

THE OPPORTUNITY COST OF PRODUCING ONE MORE UNIT OF WHEAT IN TERMS OF CORN FORGONE IS 1.33 ($400/300$) FOR KERN COUNTY AND 2.5 ($250/100$) FOR TAFT COUNTY. KERN COUNTY THUS HAS THE COMPARATIVE ADVANTAGE IN THE PRODUCTION OF WHEAT SINCE $1.33 < 2.5$. NOTE THE RECIPROCALLS IN THESE TWO CALCULATIONS OF OPPORTUNITY COSTS, WHICH OUGHT TO MAKE SENSE.

- b) Whether or not you have demonstrated that result above, explain what the countries should do next.

TAFT COUNTY SHOULD EXPORT CORN AND IMPORT WHEAT, AND KERN COUNTY SHOULD DO THE REVERSE. THIS QUESTION IS A GIVE-AWAY.

- c) Explain the intuition that underlies the gains from trade. In other words, explain what gives rise to them.

WHETHER THE ECONOMY IS IN AUTARKY OR IN THE FREE-TRADE REGIME, IT MUST NECESSARILY TRADE OFF PRODUCTION OF ONE GOOD VERSUS PRODUCTION OF THE OTHER GOOD. THAT IS BASIC PRINCIPLE # 1: PEOPLE FACE TRADEOFFS. THIS RATE OF TRADEOFF IS MORE FAVOURABLE, WHICH MEANS THAT THE OPPORTUNITY COST IS LOWER, IN FREE TRADE. BOTH PARTIES BENEFIT, EVEN WHEN ONE IS RICHER THAN THE OTHER. IN THIS INSTANCE, KERN COUNTY HAS THE ABSOLUTE ADVANTAGE IN THE PRODUCTION OF BOTH CROPS, SO OVERALL IT MORE PRODUCTIVE AND RICHER.

5) The free trade debate is in full force these days as the federal government of Canada is engaged in the final stages of negotiating the Trans Pacific Partnership (TPP). Based on the document that I requested that you read called “notes on trade and globalisation”, explain some of EITHER the pros OR the cons for globalisation and free trade. In other words, summarize the positions of EITHER the supporters OR the detractors of globalisation and free trade. Four points or sentences will suffice. (4 points)

READ THE ARTICLE THAT I POSTED. I NOTIFIED YOU OF THIS VERY BRIEF READING ASSIGNMENT A FEW TIMES. I ALSO WENT OVER THIS DURING THE REVIEW SESSIONS. I HAVE INSTUCTED THE GRADERS TO BE PRETTY GENEROUS IF IT APPEARS THAT YOU READ THE ARTICLE AND DID NOT WRITE DOWN TOTAL NONSENSE OR TOTALLY IRRELEVANT POINTS.

PART C Supply and Demand Analysis (16 points)

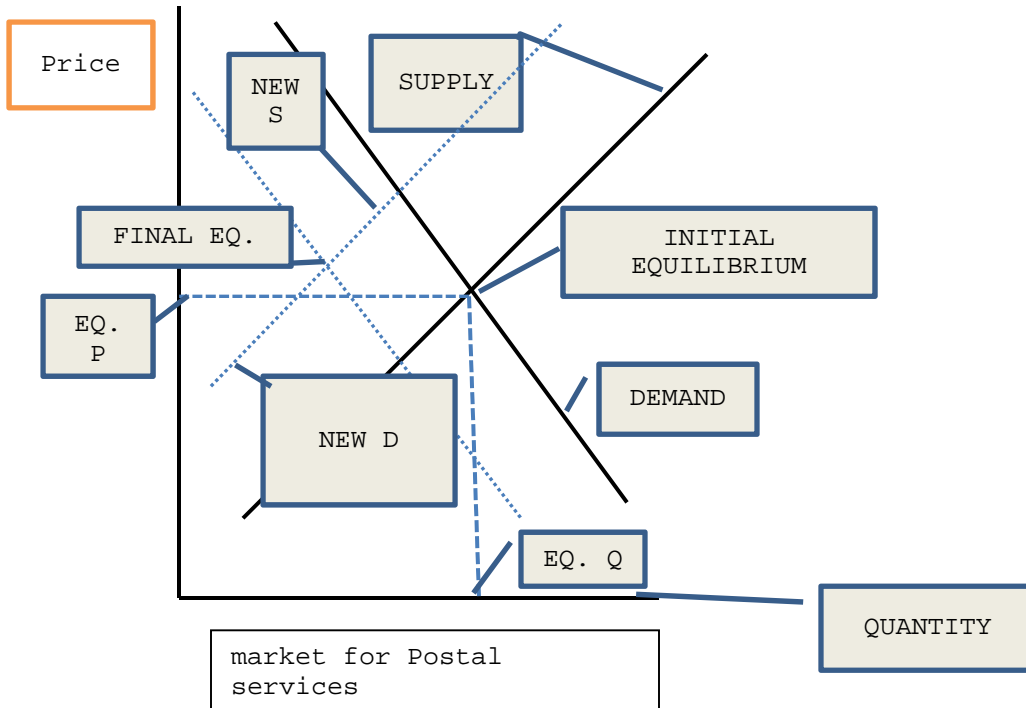
6) The Canada Post Corporation has been losing a lot of money in recent years, as the volume (or the quantity) of mail being processed is in a state of long-term decline. This decline can be attributed primarily to two sources. First, Canadians are now sending much of the correspondence that they used to send by conventional mail by electronic channels, such as E-mail with attachments, social media and texting, or by fax. Second, the costs of operation have increased, as more and more units of housing and more and more businesses must be served. As a result, operating costs per address have risen. (10 points)

- a) The graph above consists of the supply and demand model applied to this market. Label both curves, both axes, and the equilibrium point.
- b) Show what happens to equilibrium price and quantity in response to the first change. Explain your response.

AT EACH POSSIBLE PRICE, CONSUMERS ARE WILLING TO SPEND LESS THAN THEY WERE BEFORE ON POSTAL SERVICES, SO THE DEMAND CURVE SHIFTS TO THE LEFT. BOTH EQUILBRIUM PRICE AND QUANTITY FALL. THE INTERMEDIATE EQUILIBRIUM OCCURS AT THE INTERSECTION OF S AND D' (THE NEW DEMAND CURVE)

- d) On the same graph, show what happens to equilibrium price and quantity in response to the second change. Explain your response.

AT EACH POSSIBLE PRICE, CANADA POST IS WILLING TO PROCESS AND DELIVER LESS MAIL, SO THE SUPPLY CURVE SHIFTS TO THE LEFT. RELATIVE TO PART B, EQUILIBRIUM PRICE RISES, AND QUANTITY FALLS. THE NET EFFECT, AND I DID NOT ASK YOU ABOUT THIS, IS THAT THE EQUILIBRIUM QUANTITY FALLS BY A LOT, BUT WITHOUT FURTHER INFORMATION REGARDING THE MAGNITUDES OF THE TWO SHIFTS, IT IS UNCERTAIN WHAT HAPPENS TO EQUILIBRIUM PRICE.



- e) Every single January without fail Canada Post raises its rates – especially for overseas mail. The most recent increase was on the order of 20 %. Without drawing anything on the graph, explain what impact this event has on the supply and demand curves in this market.

THERE IS NO EFFECT ON EITHER CURVE. INSTEAD, WE MOVE DOWN THE DEMAND CURVE AND SIMULTANEOUSLY UP THE SUPPLY CURVE. THIS WILL CAUSE A DISEQUILIBRIUM SITUATION TO ARISE.

6. Consider the world market for a particular quality of coffee beans. The following table shows the demand and the supply schedules for this market (6 points)

Price per kilo	Quantity demanded Millions of kg per year	Quantity supplied Millions of kg per year
\$ 2.00	28	10
2.40	26	12
3.10	22	13.5
3.50	19.5	19.5
3.90	17	22
4.30	14.5	23.5

- a. Determine the equilibrium quantity and price, and explain your answer in decent economics terminology. This involves writing down words, and preferably in complete sentences.

AT A PRICE OF \$ 3.50, QUANTITY SUPPLIED = QUANTITY DEMANDED = 19.5, AND THUS THE MARKET IS IN BALANCE. THIS IS THE DEFINITION OF AN EQUILIBRIUM. UNTIL IT IS DISTURBED, THERE IS NO FORCE FOR CHANGE.

- b. Suppose that a collection of national governments whose economies have important coffee industries were somehow able to set a minimum price for coffee equal to \$ 3.90 per kilo. Explain the likely outcome in the world coffee market:

- i. in the immediate term

AT PRICE = \$ 3.90, QUANTITY SUPPLIED = 22 WHILE QUANTITY DEMANDED = 17. THIS CONSTITUTES A SITUATION OF EXCESS QUANTITY SUPPLIED OF MAGNITUDE 5. A SURPLUS HAS DEVELOPED.

- ii. in the longer term

THERE IS DOWNWARD PRESSURE ON THIS TRANSACTIONS PRICE OF \$ 3.90. AS IT FALLS, QUANTITY DEMANDED RISES DUE TO THE LAW OF DEMAND, AND QUANTITY SUPPLIED FALLS DUE TO THE LAW OF SUPPLY. EVENTUALLY THE EQUILIBRIUM PRICE OF \$ 3.50 SHOULD BE RESTORED.