

Surname: **KEY**

First name: \_\_\_\_\_

Student number: \_\_\_\_\_

## **ECO 1104B INTRODUCTION TO MICROECONOMICS**

### **First Midterm Examination**

David Gray

Fall 2013

### **INSTRUCTIONS**

- a) The allotted time is 40 minutes. This examination counts for 20 % of your course grade. It consists of short answer questions and problems, and you should answer all of them. There are a total of 40 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 might be pressed for time. I anticipate that some of you will be pressed for time, so please pace yourself according to the point totals that are given for each item.
- 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 IMPOTANT PUBLIC SECTOR.**

b) production activities, consumption activities, and exchange activities

**THESE ARE THE THREE MAJOR TYPES OF ECONOMIC ACTIVITY, WHICH IN TURN ALWAYS INVOLVES 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.**

**I WENT OVER ALL OF THIS SLOWLY AND CAREFULLY IN CLASS (ESPECIALLY**

**POINT 3).**

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! There is no better use for these tax dollars!” 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 (16 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. You should mention a basic economic principle.

**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	200	150

Taft county

100

50

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 K. COUNTY, THE RATIO IS  $200 / 150 = 1.5$ . FOR T. COUNTY, THE RATIO IS  $100 / 50 = 2.0$ . T. COUNTY HAS THE COMPARATIVE ADVANTAGE IN THE PRODUCTION OF CORN BECAUSE IT IS TWICE AS EFFICIENT IN THE PRODUCTION OF CORN THAN IT IS IN THE PRODUCTION OF WHEAT. FOR K. COUNTY THE SAME RATIO IS LOWER AT 1.5, SO K. COUNTY PRODUCES CORN 50 % MORE EFFICIENTLY THAN IT PRODUCES WHEAT.**

**THE OPPORTUNITY COST OF PRODUCING ONE MORE UNIT OF CORN IN TERMS OF WHEAT FORGONE IS  $3 / 4$  ( $150/200$ ) FOR K. COUNTY AND  $1 / 2$  ( $50 / 100$ ) FOR T. COUNTY. T. COUNTY THUS HAS THE COMPARATIVE ADVANTAGE IN THE PRODUCTION OF CORN SINCE  $1 / 2 < 3 / 4$ .**

**THE OPPORTUNITY COST OF PRODUCING ONE MORE UNIT OF WHEAT IN TERMS OF CORN FORGONE IS  $4 / 3$  ( $200/150$ ) FOR K. COUNTY AND  $2$  ( $100 / 50$ ) FOR T. COUNTY. T. COUNTY THUS HAS THE COMPARATIVE ADVANTAGE IN THE PRODUCTION OF WHEAT SINCE  $4 / 3 < 2$ . NOTE THE RECIPROCALLS IN THESE TWO CALCULATIONS OF OPPORTUNITY COSTS, WHICH OUGHT TO MAKE SENSE.**

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

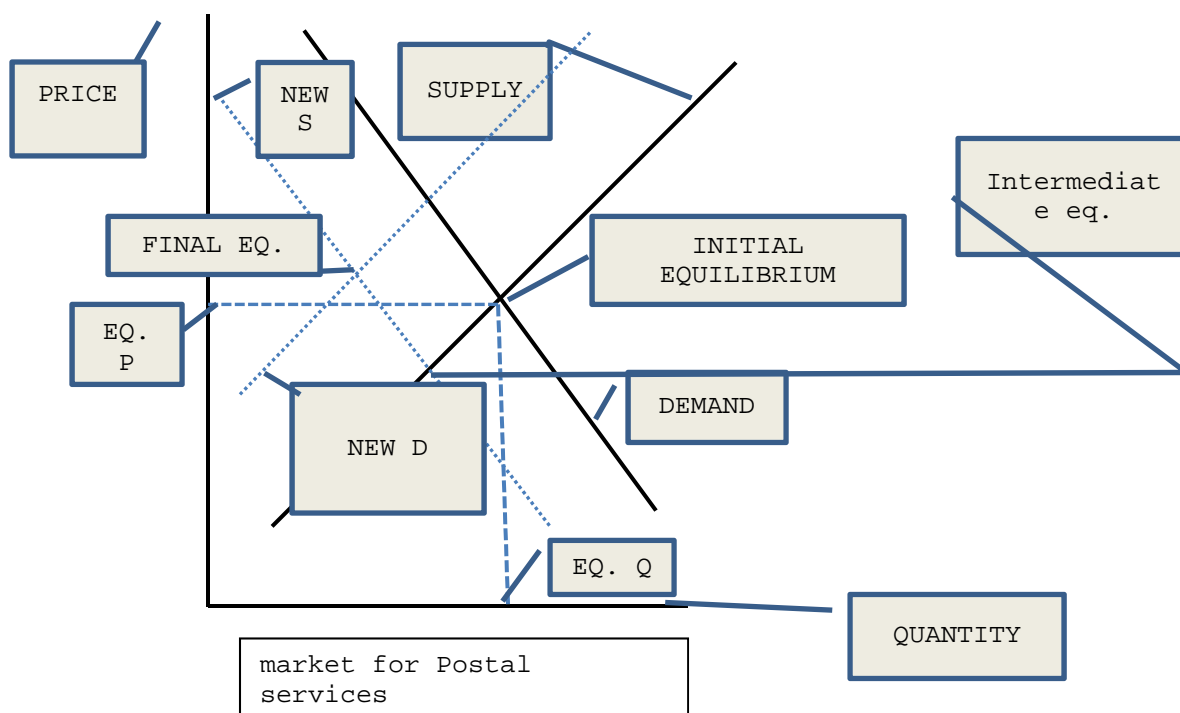
**T. COUNTY SHOULD EXPORT CORN AND IMPORT WHEAT, AND KERN COUNTY SHOULD DO THE REVERSE. THIS QUESTION IS A GIVE-AWAY.**

d) 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.**

### PART C Supply and Demand Analysis (10 points)

5. The Canada Post Corporation is currently losing a lot of money, as the volume (or the quantity) of mail being processed is in a state of long-term decline. This decline in quantity 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, 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. Costs per address have risen.



- The graph above consists of the supply and demand model applied to this market. Label both curves, both axes, and the equilibrium point.
- 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 EQUILIBRIUM PRICE AND QUANTITY FALL.**

c) 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.**

d) Every single January without fail Canada Post raises its rates – especially for overseas mail. 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.**