



Fraser International College

Economics 105 Midterm Exam I (Summer 2023)

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Please indicate your lecture day: Monday morning (1) [✓]
Monday afternoon (2) []

Instructions:

1. There are 20 multiple choice questions that are 0.5 point each, totaling 10 points. Please put your answers on the table provided on page 3.
2. There are 3 short answer questions totaling 40 points as indicated on each question. Please provide all the steps and explanations. No point will be given without explanations.
3. All the questions must be answered in the exam sheet. No marks will be deducted for incorrect answers. The total number of marks available is 50.
4. Time allowed is 1.5 hours.
5. Answers written in pencil and whiteouts are NOT eligible for remark.
6. Please do not open the exam until you are asked to.
7. Page 2 serves as a draft paper, there are no extra paper provided during the exam, please use it wisely.
8. For all your final answers, please keep 2 decimal places.
9. Good luck!

Place Answers to the Multiple Choice Questions in the Chart Below
Fill in the space that corresponds to the correct answer.

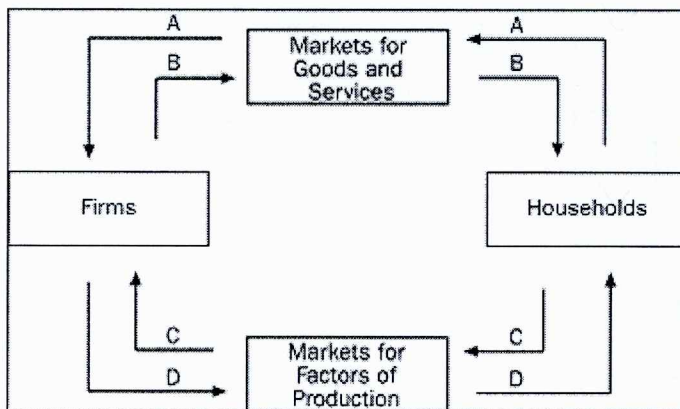
Question	A	B	C	D
1			✓	
2		✓		
3	✓			
4	✓			
5		✓		
6	✓			
7			✓	
8	✓			
9		✓		
10				✓
11	✓			
12	✓			
13				✓
14		✓		
15	✓			
16				✓
17			✓	
18			✓	
19			✓	
20			✓	

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Section I: Multiple Choice Questions

- BC 1. How are goods and services allocated in a market economy?
- by government decisions
 - by giving each individual just enough for a decent standard of living
 - by the actions of all firms and consumers
 - by inherited rights and properties
- B 2. What is the term used to describe a situation in which markets fail to allocate resources efficiently?
- economic meltdown
 - market failure
 - corporate bankruptcy
 - disequilibrium
- A 3. Which of the following display a direct or positive relationship?
- a country's productivity and its standard of living
 - a country's government spending and its tax rates
 - a country's total population and its per-capita income
 - a country's prices for its goods and services and its exports
- A 4. When economists attempt to simplify the real world and make it easier to understand, what do they do?
- They make assumptions.
 - They make mistakes in judgment.
 - They make predictions.
 - They make evaluations.

Figure 2-1



- BC 5. Refer to Figure 2-1. Which arrow shows the flow of the factors of production?
- arrow A
 - arrow B
 - arrow C
 - arrow D
- A 6. What does it mean if an economy is producing efficiently?
- There is no way to produce more of one good without producing less of the other.
 - It is possible to produce more of both goods.

- c. It is possible to produce more of one good without producing less of the other.
- d. It is not possible to produce more of one good at any cost.

C 7. Which of the following concepts is NOT illustrated by the production possibilities frontier?

- a. efficiency
- b. opportunity cost
- c. equity
- d. tradeoffs

AC 8. Suppose that a worker in Radioland can produce either 4 radios or 1 television per year, and a worker in Teeveeland can produce either 2 radios or 5 televisions per year. Each nation has 100 workers. If Radioland trades 100 televisions to Teeveeland in exchange for 100 radios each year, what is the impact on each country's maximum consumption of new radios and televisions per year?

- a. higher than it would be in the absence of trade because of the gains from trade
- b. the same as it would be in the absence of trade
- c. less than it would be in the absence of trade because neither country is specializing in the product for which it has a comparative advantage
- d. less than it would be in the absence of trade because Teeveeland has an absolute advantage in both goods and so would lose if it trades with Radioland

- 400 radios / 125

	radio	TV
R	1/4	4
T	2.5	0.4

DB 9. Suppose that the incomes of buyers in a particular market for a normal good decrease and there is also an increase in input prices. What would we expect to occur in this market?

- a. The equilibrium price would increase, but the impact on the amount sold in the market would be ambiguous.
- b. The equilibrium price would decrease, but the impact on the amount sold in the market would be ambiguous.
- c. Equilibrium quantity would increase, but the impact on equilibrium price would be ambiguous.
- d. Equilibrium quantity would decrease, but the impact on equilibrium price would be ambiguous.

D↓: P↓ Q↓
S↓: P↑ Q↓
! Q↓

D 10. Alyssa rents 5 movies per month when the price is \$3.00 each and seven movies per month when the price is \$2.50. What has Alyssa demonstrated?

- a. law of price
- b. law of supply
- c. actions of an irrational consumer
- d. law of demand

A 11. What does a market demand curve reflect?

- a. how much all buyers are willing and able to buy at each possible price
- b. how quantity demanded changes when the number of buyers changes
- c. the fact that the level of income is inversely related to quantity demanded
- d. when the buyers are willing to buy the most

A 12. You lose your job and as a result, you buy fewer mystery books. What does this show that you consider mystery books to be?

- a. a normal good
- b. an inferior good
- c. a luxury good
- d. a complementary good

D 13. How should Robert's contributions to GDP be calculated?

- a. using his income, not his expenditure

- b. using his expenditure, not his income
- c. using both his income and his expenditure
- d. using either his income or his expenditure, but not both

~~D~~
~~B~~ ~~A~~

14. According to the simple circular-flow model, which of the following do firms buy from households?

- a. natural resources, such as oil and minerals
- b. goods and services
- c. inventions and innovations
- d. labour

~~A~~ ~~B~~

15. How does the value of total sales of all firms in the country for a year compare with GDP?

- a. It equals GDP for the year.
- b. It is larger than GDP for the year.
- c. It is smaller than GDP for the year.
- d. It could be larger or smaller than GDP for the year.

~~D~~ ~~B~~

16. Which of the following supports the idea of using GDP as a measure of well-being?

- a. Countries with higher GDP tend to have more luxury cars.
- b. Countries with higher GDP tend to have more schools.
- c. Countries with higher GDP tend to have more fast food restaurants.
- d. Countries with higher GDP tend to have more food.

~~C~~ ~~D~~

17. Babe Ruth, the famous baseball player, earned \$80 000 in 1931. Today, the best baseball players can earn 200 times as much as Babe Ruth in 1931. Are the best baseball players better off than Babe Ruth?

- a. Yes, the best baseball players today are better off than Babe Ruth was in 1931 because they earn much more.
- b. No, because prices have also risen.
- c. It cannot be determined because one cannot make judgments about changes in the standard of living based on changes in prices and changes in incomes.
- d. It cannot be determined without additional information regarding increases in prices since 1931.

~~C~~

18. The price index is 180 in one year and 210 in the next. What is the inflation rate?

- a. 11.1 percent
- b. 14.3 percent
- c. 16.7 percent
- d. 19.0 percent

~~C~~

19. Ralph puts money in the bank and earns a 5 percent nominal interest rate. What happens if the inflation rate is 3 percent?

- a. Ralph will have 3 percent more money, which will purchase 2 percent more goods.
- b. Ralph will have 3 percent more money, which will purchase 8 percent more goods.
- c. Ralph will have 5 percent more money, which will purchase 2 percent more goods.
- d. Ralph will have 5 percent more money, which will purchase 8 percent more goods.

~~D~~ ~~C~~

20. What do economists call the inputs used to produce goods and services?

- a. productivity indicators
- b. capitalization producers
- c. production functions
- d. factors of production

Section II: Short Answer Questions

1. [20 points in total] The table below gives the production alternatives of two nations that are producing cloth and food, using equal amounts of resources.

Output per worker per day		
Country	Units of cloth	Units of food
Newland	10	2
Beeland	10	1

- a) Calculate the opportunity costs of producing a unit of cloth and a unit of food in both countries and fill in the following table. (2 points)

Country	OC of a unit of cloth	OC of a unit of food
Newland	$\frac{1}{5}$ of food	5 of cloth
Beeland	$\frac{1}{10}$ of food	10 of cloth

- b) Based on your calculation in part a), which country has the comparative advantage in cloth production? In food production? Circle the answers below and explain. (2 points)

Newland Beeland has the comparative advantage in cloth production because $\frac{1}{10} < \frac{1}{5}$ that Beeland has lower OC than Newland.

Newland Beeland has the comparative advantage in food production because $5 < 10$ that Newland has lower OC than Beeland.

- c) Which country has the absolute advantage in cloth production? In food production? Circle the answers below and explain. (2 points)

Newland Beeland both has the absolute advantage in cloth production because $10 = 10$ that they produce same units of cloth at same time.

Newland Beeland has the absolute advantage in food production because Newland can produce more units of food than Beeland at same time.

- d) Why a country cannot have the comparative advantage in both cloth and food? (1 point)

Because OC of cloth ($\frac{\text{units of food}}{\text{units of cloth}}$) and the OC of food ($\frac{\text{units of cloth}}{\text{units of food}}$) in two country cannot same, unless they have same OC.

B/C OC of 2 goods are inversely related

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- e) Now assume that the productivity of Beeland's workers triple for each good. Which country has a comparative advantage in food production? Explain how you determine your answer. Circle and explain your answers below. (2 points)

Newland Beeland has the comparative advantage in food production because $5 < \frac{20}{3} = 10$ that Beeland has same OC before change.

2

- f) If you were asked to set the range for the terms of trade for food so that these two countries can specialize and trade with each other, what is that range? Why? (2 points)

2 > 1 that when Newland 1 ^{worker} producer 1 day produce food that they can trade ~~units of food~~ to Beeland and Beeland no trade. and Newland has comparative advantage on it

5 units of clothes < price of 1 food < 10 units of clothes

So that we'll have one ^{buyer} longer & one seller

- g) Now assumes that the productivity of Beeland remains the same as in part a) and both countries have 10 workers. They specialize (which means that they only produce the good that they have comparative advantage) and trade with each other. Assumes further that the terms of trade is that 70 units of clothes trade for 9 kilograms of food. (9 points)

	Before Trade		After Trade		Gains from trade
	Production	Consumption	Production	Consumption	
Newland Food	+ 55 8	+ 1.2 8	+ 20	- 9 11	+ 11 3
Newland Cloth	+ 60	+ 20 60	0	+ 70	+ 70 10
Beeland Food	8 + 2	+ 0.2 8	0	+ 9 10	+ 9 1
Beeland Cloth	20 + 80	- 6 20	100	- 70 30	+ 30 10

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2. Given the following scenarios, please indicate how each of them influence different components in 2023 GDP in the expenditure approach and how much. Please fill the answers in the table below. If it does not impact GDP you can leave your answers blank. (10 points)

- You buy a new car for \$40,000 for your leisure use and it is built in the United States.
- You buy a used car for \$10,000 from a local store.
- You buy Tesla stocks for \$5,000 and have a capital loss of \$2,000.
- You buy a new house for \$1,200,000.
- You spent \$15 to buy a lottery ticket and win \$100.
- You buy an on sale printer to be used in your office for \$150 and it is a 2022 model.
- You buy a bag of coffee beans from Starbucks for \$35 and use it to make coffee at home.
- You rent an apartment in Corner Stone at SFU for \$1,250 a month.
- You buy a pack of water color for your cousin for \$12.
- You donate \$100 to Variety, the children's charity.

	GDP	C	I	G	NX
a)	+\$40k 0	+\$40k 40k			+\$40k -40k
b)	+\$10k		+\$10k		
c)	0 +\$5k		+\$5k		
d)	+\$1.2 m	+\$1.2m	+\$1.2m 1200k		
e)	+\$15		+\$15		
f)	+\$150 0		+\$150 +150 -150		
g)	+\$35	+\$35			
h)	+\$1,250	+\$1,250			
i)	+\$12	+\$12			
j)	0				

↓
FGDP 不变

④

3. You are given the following information in the table. Please based on these information calculate the following questions. (10 points)

	2020		2021		2022	
	Price	Quantity	Price	Quantity	Price	Quantity
Food	\$1	1000	\$1.5	1200	\$1.8	1200
Cloth	\$25	2000	\$38	2500	\$40	2800

- a) Please calculate nominal GDP for 2020, 2021 and 2022. (3 points)

$$\text{Nominal GDP}_{2020} = 1 \times 1000 + 25 \times 2000 = \$51,000$$

$$\text{Nominal GDP}_{2021} = 1.5 \times 1200 + 38 \times 2500 = \$96,800$$

$$\text{Nominal GDP}_{2022} = 1.8 \times 1200 + 40 \times 2800 = \$114,160$$

- b) Please use 2020 as the base year calculate real GDP for 2020, 2021 and 2022. (3 points)

$$\text{Real GDP}_{2020} = \$51,000$$

$$\text{Real GDP}_{2021} = 1 \times 1200 + 25 \times 2500 = \$63,700$$

$$\text{Real GDP}_{2022} = 1 \times 1200 + 25 \times 2800 = \$71,200$$

- c) What are the GDP deflators for 2020, 2021 and 2022? (3 points)

$$\text{GDP deflator}_{2020} = 100$$

$$\text{GDP deflator}_{2021} = \frac{96800}{63700} \times 100 = 151.96$$

$$\text{GDP deflator}_{2022} = \frac{114160}{71200} \times 100 = 160.34$$

- d) What are the inflation rates in 2021 and 2022? (2 points)

$$\pi_{2021} = \frac{151.96 - 100}{100} \times 100\% = 51.96\%$$

$$\pi_{2022} = \frac{160.34 - 151.96}{151.96} \times 100\% = 5.51\%$$