

**Name:** \_\_\_\_\_

**Student #:** \_\_\_\_\_

**QUEEN'S UNIVERSITY AT KINGSTON**  
**FACULTY OF ARTS AND SCIENCE**  
**Department of Economics**  
**ECONOMICS 110B**  
**Final Examination**

**Econ 110B Sections 001 & 002 – Prof Ian Cromb**

**April 13, 2024**

**INSTRUCTIONS TO STUDENTS:**

This examination is 3 HOURS in length.

There are 6 sections to this examination.

This exam is printed on both sides of the page.

Mark your selections in PENCIL on the Answer Sheet. Fill in the appropriate rectangle completely, but stay within its limits. There is only one correct answer for each question; multiple answers will be marked as incorrect. If you make changes, be sure to erase completely.

Before you begin the exam please record your *Student Number*, *Name*, and *Test Form A* in the appropriate sections of the Answer Sheet. For detailed instructions on filling in this information see the back of this page.

**The following aids are allowed:**  
Casio FX-991 calculator

**PLEASE NOTE:**

**Proctors are unable to respond to queries about the interpretation of exam questions.  
Do your best to answer exam questions as written.**

This material is copyrighted and is for the sole use of students registered in ECON 110 and 112 and writing this exam. This material shall not be distributed or disseminated. Failure to abide by these conditions is a breach of copyright and may also constitute a breach of academic integrity under the University Senate's Academic Integrity Policy Statement.

---

## Before You Begin the Exam:

1. Write your Student # under “**I.D. Number**” on the Answer Sheet and fill in the appropriate rectangle below each number. See example below.
2. Print your **Last Name** (family name) followed by first name in the appropriate space, and fill in the appropriate rectangle under each letter. (If your name is too long to fit in the spaces provided, please enter as many letters as you can.) See example below.
3. Under “**Test Form**”, fill in “**A**”. See example below.

I.D. NUMBER										TEST FORM										
1 0023456										A										
0	0	0	0	0	0	0	0	0	0	DO NOT MARK IN THIS AREA	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1		
2	2	2	2	2	2	2	2	2	2		2	2	2	2	2	2	2	2		
3	3	3	3	3	3	3	3	3	3		3	3	3	3	3	3	3	3		
4	4	4	4	4	4	4	4	4	4		4	4	4	4	4	4	4	4		
5	5	5	5	5	5	5	5	5	5		5	5	5	5	5	5	5	5		
6	6	6	6	6	6	6	6	6	6		6	6	6	6	6	6	6	6		
7	7	7	7	7	7	7	7	7	7		7	7	7	7	7	7	7	7		
8	8	8	8	8	8	8	8	8	8		8	8	8	8	8	8	8	8		
9	9	9	9	9	9	9	9	9	9		9	9	9	9	9	9	9	9		

LAST NAME										FIRST NAME										CODE	
GIDDIE										ABBIE											
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A				
B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B					
C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C					
D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D					
E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E					
F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F					
G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G					
H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H					
I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I					

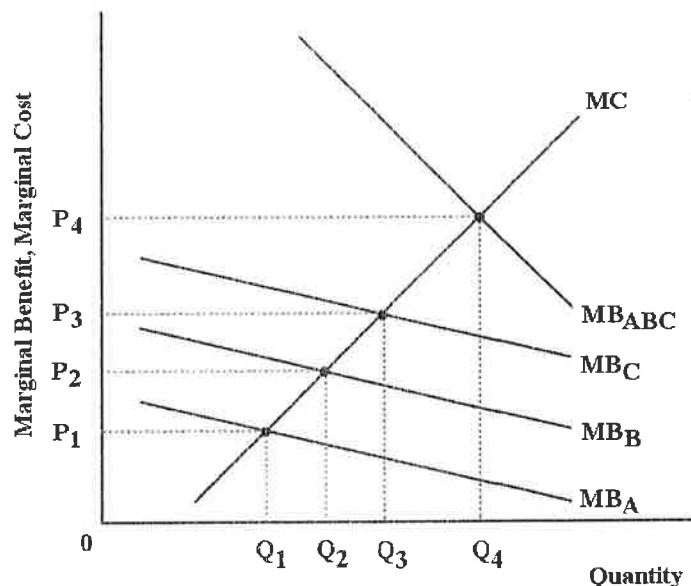
**Part A** [40 marks]

This section consists of 40 questions that survey the course material.

Answer all 40 questions; each question is worth 1 mark.

- 1) A homeowner decides to buy three large dogs that sleep outdoors and howl at the moon. An externality associated with this decision is
- A) the increased work for the homeowner in yard cleanup.
  - B) the cost of purchasing the dogs.
  - C) the neighbours' lost sleep.
  - D) the homeowner's lost sleep.
  - E) the veterinary costs of keeping the dogs healthy.

*The diagram below shows the marginal benefit and marginal cost of a public good. This economy has 3 individuals, A, B and C. The diagram shows the MB for each individual and a summation of their marginal benefits.*



**FIGURE 16-4**

- 2) Refer to Figure 16-4. What is the optimal provision of this public good?
- A) 0
  - B)  $Q_1$
  - C)  $Q_2$
  - D)  $Q_3$
  - E)  $Q_4$
- 3) If emissions permits are traded freely between profit-maximizing firms in the private market,
- A) there will be more than the optimal amount of pollution.
  - B) the amount of pollution abatement will be identical to that which the firms would have willingly undertaken on their own.
  - C) each firm will face identical costs of pollution abatement.
  - D) all firms will use identical pollution abatement technologies.
  - E) marginal abatement costs will be equalized across firms.

- 4) Suppose taxes are levied in the following way. No individual pays any taxes on the first \$10,000 of their income. And for every dollar earned above this amount, all individuals pay 20 percent in taxes. This income-tax system is
- regressive.
  - progressive.
  - indexed.
  - proportional.
  - an accurate description of the Canadian system.

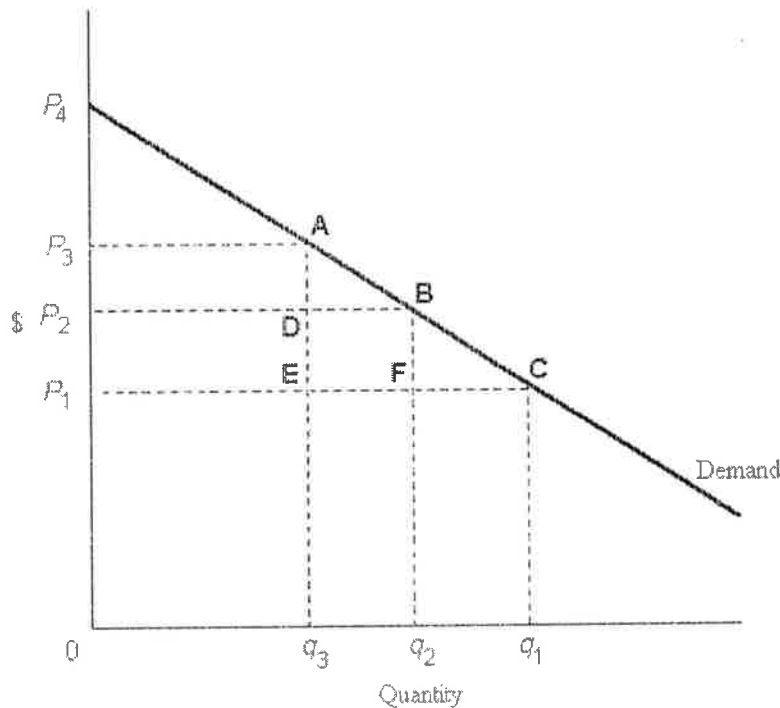


FIGURE 18-3

- 5) Refer to Figure 18-3. Suppose that supply is perfectly elastic and the price of this good is initially  $P_1$ . If an excise tax raises the price from  $P_1$  to  $P_3$ , the excess burden of the tax is
- the area  $P_3AP_4$ .
  - the area  $P_1Cq_10$ .
  - the area  $ACE$ .
  - the area  $BFC$ .
  - impossible to calculate from the given information.
- 6) Consider a small economy with 3 individuals where each individual produces \$1000 worth of final goods and services. The national income for this economy is
- \$3000.
  - less than \$3000 if some of the income is saved.
  - more than \$3000 if some of the income is invested.
  - less than \$3000 if there are taxes in this economy.
  - more than \$3000 if the individuals are earning profits.

- 7) If 27 million people are employed and 3 million people are unemployed, what is the unemployment rate?
- A) 11%
  - B) 89%
  - C) 10%
  - D) 90%
  - E) indeterminable from the information provided.
- 8) If the Consumer Price Index changes from 120 in the year 1 to 126 in the year 2, the rate of inflation is approximately
- A) 1.5 %
  - B) 2.5 %
  - C) 3 %
  - D) 5 %
  - E) 6 %
- 9) In Shoetown, a rancher takes \$0 worth of inputs and produces animal skins, which he sells to the tanner for \$400. The tanner then sells leather to the shoemaker for \$700, and the shoemaker then sells \$1200 worth of shoes. The value added from these transactions is
- A) \$ 800.
  - B) \$1000.
  - C) \$1200.
  - D) \$2300.
  - E) \$2500.
- 10) Which of the following is included in the current calculations of GDP?
- A) the purchase of a secondhand automobile from the previous owner
  - B) pizza purchased by college students for dinner
  - C) volunteer work undertaken by Mary Smith
  - D) the purchase of a 1939 painting from the previous owner
  - E) welfare payments
- 11) If a family's annual disposable income rose from \$60 000 to \$65 000 and their desired consumption expenditures rose from \$50 000 to \$54 000, it can be concluded that the family's
- A) marginal propensity to consume is \$800.
  - B) average propensity to consume is 0.8.
  - C) marginal propensity to consume is 0.8.
  - D) average propensity to save is 0.8.
  - E) marginal propensity to save is 0.8.

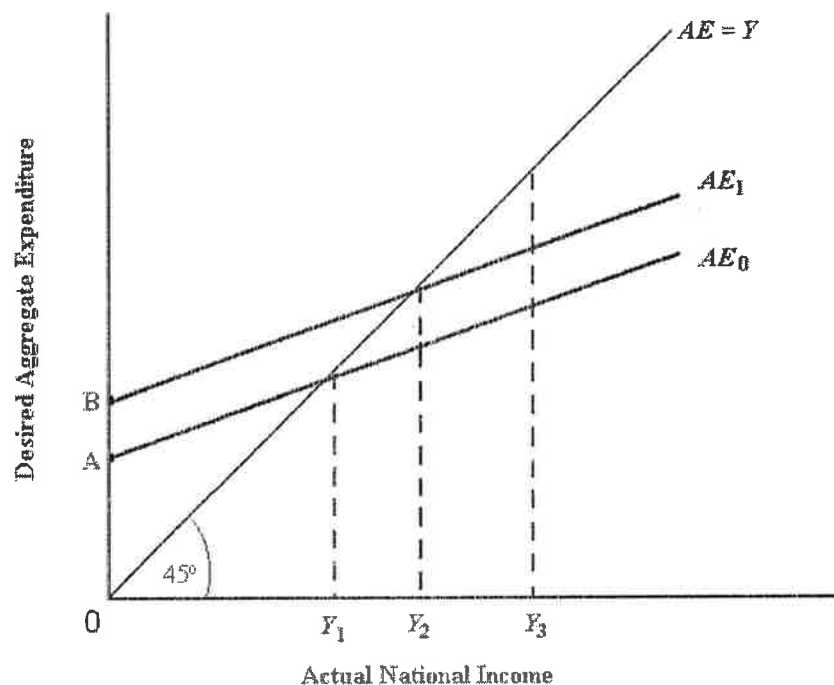


FIGURE 21-3

- 12) Refer to Figure 21-3. If national income is  $Y_3$  and the aggregate expenditure function is  $AE_1$ ,
- A) the economy is in equilibrium.
  - B) there is unintended inventory accumulation and income will rise.
  - C) there is unintended inventory accumulation and income will fall.
  - D) there is unintended inventory decumulation and income will rise.
  - E) there is unintended inventory decumulation and income will fall.
- 13) A rise in the Canadian-dollar price of foreign currency, other things being equal, causes Canada's net export (NX) function to shift \_\_\_\_\_ and \_\_\_\_\_.
- A) upward; become flatter
  - B) upward; become steeper
  - C) downward; become flatter
  - D) downward; keep the same slope
  - E) downward; become steeper

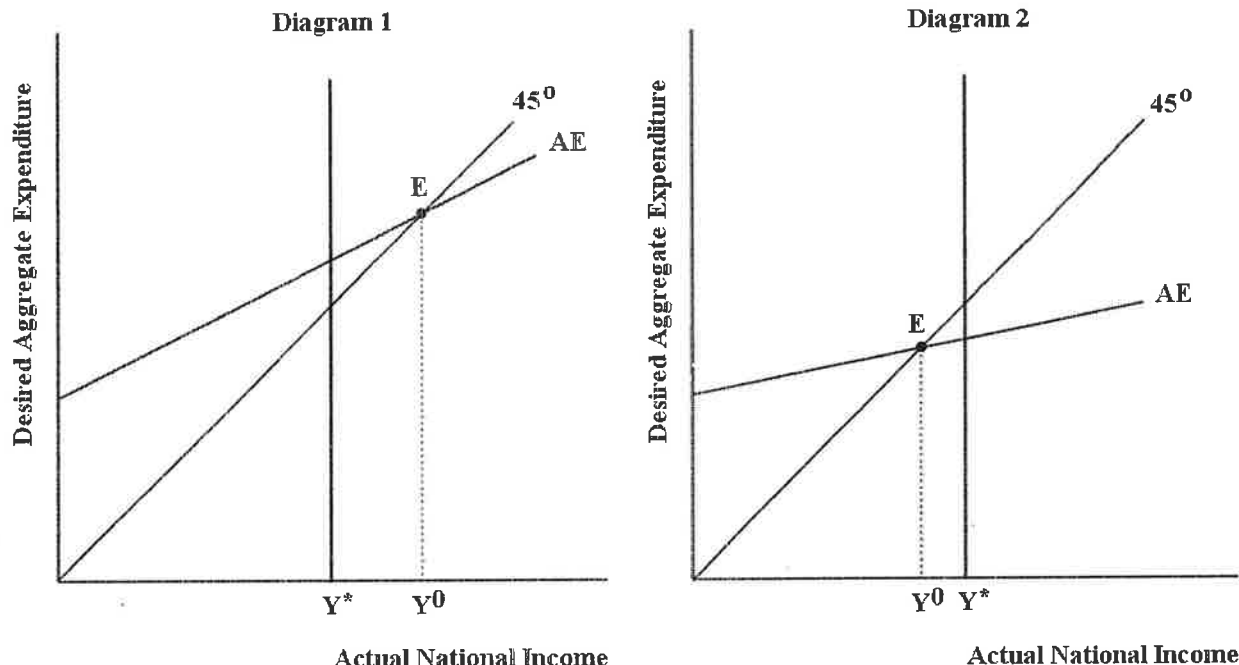


FIGURE 22-4

- 14) Refer to Figure 22-4, Diagram 2. Which of the following fiscal policy measures could the government implement to return national income to the full-employment level of GDP (potential output,  $Y^*$ )?
- reduce government spending
  - reduce transfer payments
  - increase taxes
  - increase government spending
  - decrease disposable income
- 15) Other things being equal, as the price level falls exogenously, the aggregate expenditure (AE) function shifts
- down and the economy will move upward along the  $AD$  curve.
  - down and the economy will move downward along the  $AD$  curve.
  - upward and the economy moves upward along the  $AD$  curve.
  - upward and the economy moves downward along the  $AD$  curve.
  - to the left, as does the  $AD$  curve.
- 16) A rightward shift in the aggregate demand ( $AD$ ) curve could result from a rise in
- induced imports.
  - desired investment.
  - the net tax rate.
  - desired saving.
  - the price level.

- 17) The economy's short run aggregate supply (SRAS) curve is assumed to slope upward because
- A) inputs become more expensive at higher levels of output.
  - B) inputs become less expensive at higher levels of output.
  - C) firms' unit costs rise as output increases.
  - D) firms' unit costs fall as output increases.
  - E) aggregate demand increases at higher levels of national income.
- 18) Consider the following news headline: "Information technology costs for Canadian firms continue to drop." Choose the statement below that best describes the likely macroeconomic effect.
- A) the AD curve shifts to the right; the price level rises and real GDP rises
  - B) the AD curve shifts to the left; the price level falls and real GDP falls
  - C) the AS curve shifts to the left; the price level rises and real GDP falls
  - D) the AS curve shifts to the right; the price level falls and real GDP rises
  - E) the AD and AS curves both shift to the right; the effect on the price level is indeterminate and real GDP rises
- 19) As the macro economy adjusts from the short run to the long run,
- A) wages and other factor prices adjust to close output gaps.
  - B) potential output is adjusting to close inflationary or recessionary gaps.
  - C) wages and other factor prices remain constant.
  - D) aggregate demand shocks cause deviations from potential output.
  - E) aggregate supply shocks cause deviations from potential output.
- 20) Income taxes in Canada can be considered to be automatic stabilizers because tax
- A) revenues increase when income increases, thereby offsetting some of the increase in aggregate demand.
  - B) revenues decrease when income increases, thereby intensifying the increase in aggregate demand.
  - C) structures can be changed when the Minister of Finance brings down a budget.
  - D) revenues are changed through discretionary fiscal policy to keep the budget balanced.
  - E) revenues are changed through discretionary fiscal policy to create surpluses in recessions.
- 21) Consider a small economy where factor supply is 1000 units, the factor utilization rate is 0.9 and a simple measure of productivity (GDP per factor employed) is \$80. This economy's GDP is
- A) \$7200                      B) \$72 000                      C) \$80 000                      D) \$88 888                      E) \$90 000
- 22) Many economists argue that, in the long run, fiscal policy is ineffective because it has little effect on
- A) nominal GDP.
  - B) potential GDP.
  - C) nominal interest rates.
  - D) the price level.
  - E) the inflation rate.
- 23) For a given level of national income, an increase in private consumption or government purchases will cause national saving to
- A) increase.
  - B) grow at a constant rate.
  - C) remain unchanged from its initial level.
  - D) exceed investment.
  - E) decrease.



- 24) In the Neoclassical growth model, increases in the stock of physical capital, other things being equal, will lead to
- A) decreasing GDP and falling living standards.
  - B) decreasing GDP and increasing living standards.
  - C) increasing GDP and falling living standards.
  - D) increasing GDP and increasing living standards.
  - E) increasing GDP and decreased national wealth.
- 25) If real GDP falls, other things being equal, we can expect
- A) an increase in the speculative demand for money.
  - B) an increase in the total demand for money.
  - C) a decrease in transactions demand for money.
  - D) an increase in transactions demand for money.
  - E) an increase in precautionary demand for money.
- 26) When there is an excess supply of money, monetary equilibrium is restored through
- A) interest rates rising.
  - B) individuals attempting to sell bonds.
  - C) the price of bonds falling.
  - D) the price of bonds increasing.
  - E) the price level falling.
- 27) An increase in the money supply sets the monetary transmission mechanism in motion which results in
- A) a rise in the rate of interest, a rise in the level of desired investment, a downward shift in the *AE* curve, and a leftward shift in the *AD* curve.
  - B) a fall in the rate of interest, a fall in the level of desired investment, a downward shift in the *AE* curve, and a leftward shift in the *AD* curve.
  - C) a fall in the rate of interest, a rise in the level of desired investment, an upward shift in the *AE* curve, and a rightward shift in the *AD* curve.
  - D) a rise in the rate of interest, a fall in the level of desired investment, an upward shift in the *AE* curve, and a rightward shift in the *AD* curve.
  - E) a rise in the rate of interest, a fall in the level of desired investment, a downward shift in the *AE* curve, and a leftward shift in the *AD* curve.
- 28) Consider the monetary transmission mechanism in an open economy. Other things being equal, an increase in the domestic money supply leads to
- A) an appreciation of the domestic currency, thereby inhibiting net exports and raising aggregate demand.
  - B) a depreciation of the domestic currency, thereby inhibiting net exports and raising aggregate demand.
  - C) a depreciation of the domestic currency, thereby stimulating net exports and raising aggregate demand.
  - D) an appreciation of the domestic currency, thereby stimulating net exports and raising aggregate demand.
  - E) an appreciation of the domestic currency, thereby stimulating net exports and reducing aggregate demand.

- 29) The long-run neutrality of money implies that
- A) changes to the money supply have no effect on either the price level or real GDP.
  - B) changes to the money supply never have any effect on real GDP.
  - C) in response to any change in the money supply, the economy's adjustment process will bring  $Y$  back to  $Y^*$ , which is unaffected by the change in the money supply.
  - D) the economy's level of potential output will adjust to accommodate any change in the money supply.
  - E) in response to any change in the money supply, the demand for money will adjust to cancel out its effects on all macroeconomic variables.
- 30) Consider the monetary transmission mechanism. Other things being equal, the flatter is the investment demand function, the
- A) more responsive is desired investment to a change in interest rates.
  - B) less responsive is desired investment to a change in interest rates.
  - C) less responsive is the interest rate to a change in the money supply.
  - D) more responsive is the demand for money to a change in interest rates.
  - E) less responsive is the demand for money to a change in interest rates.
- 31) If the Bank of Canada chooses to expand the money supply directly, it could
- A) sell government securities on the open market.
  - B) sell some of its foreign currency assets.
  - C) reduce its deposits at commercial banks.
  - D) buy government securities on the open market.
  - E) change the price level.
- 32) Time lags in monetary policy can cause
- A) monetary policy to work more slowly and more smoothly than was initially predicted by economists.
  - B) an expansionary policy to have too little an effect because it takes much longer to work than was expected by policymakers.
  - C) monetary expansions to work very quickly but cause monetary contractions to work very slowly.
  - D) difficulty in the timing of appropriate policy and can even lead to destabilization.
  - E) short-term monetary policy to work more effectively than long-term targeting.
- 33) The idea that, in the long run, the Phillips curve is vertical, implying no trade-off between inflation and unemployment, is based on the premise that
- A) inflation and unemployment are unrelated.
  - B) expectations do not adjust to reflect actual inflation.
  - C) changes in unemployment do not influence real GDP.
  - D) inflationary expectations fully adjust to actual inflation.
  - E) inflationary expectations do not influence inflation.
- 34) Suppose policymakers are faced with ending sustained inflation. They must weigh the future benefits of \_\_\_\_\_ against the immediate costs of \_\_\_\_\_.
- A) lower inflation; administering the policy
  - B) a higher rate of economic growth; reduced output
  - C) lower rate of economic growth; lower inflation
  - D) lower inflation; reduced output and higher unemployment
  - E) a higher real GDP; lower inflation

- 35) Suppose John finishes school and immediately gets a part-time job. The measured unemployment rate would
- A) rise because he was not in the labour force when in school.
  - B) not change since he is now employed.
  - C) fall because he was considered unemployed when in school.
  - D) fall because he was not in the labour force when in school.
  - E) not change because part-time jobs aren't counted in the labour force.
- 36) Suppose the Canadian government implements a new program to provide training to unemployed workers. The government is likely trying to reduce
- A) frictional unemployment.
  - B) structural unemployment.
  - C) cyclical unemployment.
  - D) seasonal unemployment.
  - E) the gross flow of people out of unemployment.
- 37) Suppose during one fiscal year, government purchases are \$195 billion, debt-service payments are \$22 billion and net tax revenues are \$208 billion. What is the government's primary budget deficit/surplus?
- A) primary budget surplus of \$22 billion
  - B) primary budget deficit of \$13 billion
  - C) primary budget surplus of \$13 billion
  - D) primary budget deficit of \$9 billion
  - E) primary budget surplus of \$9 billion
- 38) Suppose that in Year 2 there was a lower federal budget deficit than in Year 1. This could be explained by \_\_\_\_\_ in Year 2.
- A) higher government expenditures (with constant real GDP)
  - B) higher real GDP (with constant fiscal policy)
  - C) lower real GDP (with constant fiscal policy)
  - D) a higher stock of government debt
  - E) an upward shift of the budget deficit function
- 39) Consider a government with a positive stock of debt and suppose the real interest rate on government bonds equals the rate of growth of real GDP. In this case, the government's debt-to-GDP ratio will rise only if.
- A) the debt-to-GDP ratio is already high.
  - B) the primary budget surplus exceeds the overall budget surplus.
  - C) the real interest rate is high.
  - D) there is an overall budget deficit.
  - E) there is a primary budget deficit.
- 40) An annually balanced government budget would tend to
- A) accentuate the swings in national income that accompany changes in autonomous expenditure flows.
  - B) increase national income in response to changes in autonomous expenditure flows.
  - C) reduce national income in all circumstances.
  - D) reduce national income in response to changes in autonomous expenditure flows.
  - E) reduce the swings in national income that accompany changes in autonomous expenditure flows.

**Part B** [8 marks]

The following 8 questions (41-48) relate to the information given below. Try to do the questions in order since the answers for some questions depend on the answers to previous questions in the series.

Each question is worth 1 mark.

Two firms in Canada each produce a good that is sold in Canada. Each firm takes the market price as given. The marginal social benefit (the inverted demand curve) of this good given by  $MSB = P = 25 - Q/2$ . Marginal private cost (i.e. supply curve) and total private cost of the small (s) and big (b) firm are given by:

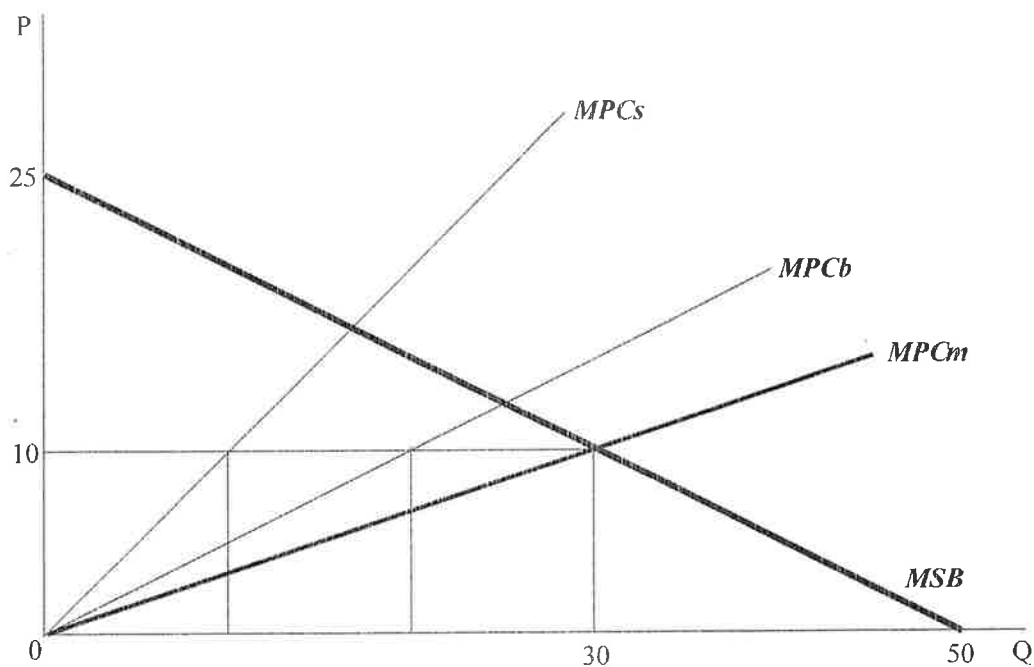
$$MPC_s = Q_s$$

$$TPC_s = (Q_s)^2/2$$

$$MPC_b = Q_b/2$$

$$TPC_b = (Q_b)^2/4$$

Market (m) marginal private cost (market supply) is therefore  $MPC_m = Q/3$ , and the initial equilibrium price and quantity are (10, 30). The initial situation is outlined in the diagram below.



- 41) Each firm sets output so that marginal private cost equals price in order to maximize profits. Output levels (small firm, big firm respectively) are given by:  
A) 10, 20      B) 20, 10      C) 10, 10      D) 20, 20      E) 30, 30
- 42) The profits earned by the small firm and the large firm are given by  
A) 200, 400      B) 100, 200      C) 50, 100      D) 25, 50      E) 0, 0
- 43) Suppose now that production of this good creates an external cost (pollution) of \$5.00 per unit. The optimal level of output in this market is given by  
A) 10      B) 24      C) 25      D) 30      E) 50
- 44) The deadweight loss associated with this externality is  
A) 0      B) 12      C) 15      D) 16      E) 20
- 45) Suppose the government levies a tax of \$5.00 per unit of output, and as a result the level of market output goes to its optimal level. The total cost to society of all the pollution generated by these two firms is:  
A) 50      B) 80      C) 100      D) 120      E) 150
- 46) Suppose the government levies a tax of \$5.00 per unit of output, and as a result the level of market output goes to its optimal level. The Direct Burden of this tax is:  
A) 50      B) 80      C) 100      D) 120      E) 150
- 47) The profits earned by the small firm and the large firm when the government levies a \$5.00 tax are given by  
A) 104, 208      B) 100, 200      C) 50, 100      D) 30, 60      E) 32, 64
- 48) Suppose that an abatement technology becomes available that will completely eliminate the pollution. The government gives producers the option of buying the technology for a total price of \$60.00. Both firms will have to buy the technology, or the tax will remain. The small firm will have to pay \$20.00 and the large firm \$40.00. In return the government will rescind the tax on output, and since adopting the abatement technology does not affect the marginal cost of production, output will return to its former level.  
A) The small firm will accept the offer and the large firm will reject it.  
B) The small firm will reject the offer and the large firm will accept it.  
C) The small firm will accept the offer and the large firm will accept it.  
D) The small firm will reject the offer and the large firm will reject it.  
E) There is no way to know the answer to this question.

**Part C** [8 marks]

The following 8 questions (49-56) relate to the information given below. Try to do the questions in order since the answers for some questions depend on the answers to previous questions in the series.

Each question is worth 1 mark.

Consider the following aggregate expenditure ( $AE$ ) model of an open economy. Output and factor prices are assumed constant. The government is assumed to have no debt.

The model of the economy is given below, where  $Y_D$  is disposable income and  $Y$  is national income.

Consumption:  $C = 100 + (0.80)Y_D$

Taxes (net of all transfers):  $T = (0.25)Y$

Investment:  $I = 100$

Government Spending:  $G = 200$

Exports:  $X = 60$

Imports:  $IM = (.10)Y$

The space below is provided for you to keep track of your answers as you work through the series of questions. [Hint: You may want to sketch an  $AE$  diagram to help with this process.]

49) The equation for desired aggregate expenditures is given by:

- A)  $AE = 540 + (.40)Y$
- B)  $AE = 460 + (.60)Y$
- C)  $AE = 540 + (.60)Y$
- D)  $AE = 460 + (.50)Y$
- E)  $AE = 540 + (.50)Y$

50) The equilibrium level of national income is:

- A) 840
- B) 920
- C) 960
- D) 1000
- E) 1200

51) The multiplier is equal to:

- A) 1.00
- B) 1.43
- C) 1.67
- D) 2.00
- E) 2.50

52) In equilibrium, the government has a budget surplus equal to:

- A) 0
- B) 10
- C) 20
- D) 30
- E) 40

53) Suppose the government desires to increase the level of national income to 1000 by increasing government expenditures. The government expenditure increase required is:

- A) 40
- B) 48
- C) 56
- D) 67
- E) 80

54) In the new equilibrium, the government has a budget surplus equal to:

- A) 0
- B) 10
- C) 20
- D) 30
- E) 40

55) Suppose instead of increasing spending, the government reduces the tax rate from 25% down to 20%. In the new equilibrium, the level of national income is:

- A) 840
- B) 920
- C) 960
- D) 1000
- E) 1200

56) In this new equilibrium, the government has a budget surplus equal to:

- A) 0
- B) 10
- C) 20
- D) 30
- E) 40

**Part D** [8 marks]

The following 8 questions (57-64) relate to the information given below. Try to do the questions in order since the answers for some questions depend on the answers to previous questions in the series.

Each question is worth 1 mark.

Suppose that the balance sheet (T-account) for Moneybank, the only commercial bank in the country of Monetaria, is as shown below. There is also a central bank in Monetaria, the MCB, and a central government.

Assume that money in Monetaria is in the form of deposits in the banking system and a fixed amount of cash that people carry in their wallets and use for small purchases.

Moneybank has a desired or target reserve ratio (Reserves to Private Deposits) equal to 10%. Subject to this constraint, Moneybank will always issue as many loans as it can.

<b>Assets:</b>		<b>Liabilities:</b>	
Reserves	500	Private Deposits	5000
Loans to the Public	4000	Government Deposits	1000
Government Bonds	2500	Capital	1000
<b>Total</b>	<b>7000</b>	<b>Total</b>	<b>7000</b>

57) By reviewing the balance sheet, we can say that:

- A) Moneybank has insufficient reserves, so the bank may call in some loans.
- B) Moneybank has insufficient reserves, so the bank may have to raise capital.
- C) Moneybank's reserves are equal to the target, so the bank is in equilibrium.
- D) Moneybank has excess reserves, so the bank will want to increase loans.
- E) Moneybank has excess reserves, so the bank may want to reduce capital.



- 58) Suppose the public of Monetaria are currently holding 10% of their money balances in cash. By reviewing the balance sheet, we can say that the money supply in the country is equal to:
- A) 6500
  - B) 5500.
  - C) 4500
  - D) 3000
  - E) 1000
- 59) Suppose the government prints 500 worth of cash and transfers it to Moneybank, increasing its deposits by 500. Immediately after this transaction, the reserve ratio will be:
- A) 0%
  - B) 5%
  - C) 10%
  - D) 15%
  - E) 20%
- 60) After it has fully adjusted to the increase in cash there will have been an increase in loans to the public of \_\_\_\_\_ and an increase in the money supply of \_\_\_\_\_:
- A) 0; 0
  - B) 1000; 1000
  - C) 3500; 3500
  - D) 5000; 5000
  - E) 10000; 10000
- 61) The “money multiplier” (change in deposits/change in reserves) is equal to:
- A) 0
  - B) 1
  - C) 2
  - D) 5
  - E) 10
- 62) Now suppose that whenever the total deposits in Monetaria change, the amount of cash that residents want to keep in their wallets changes as well. In particular, suppose that residents still want to keep cash equal to 10% of deposits. The “money multiplier” in that case would equal:
- A) 0
  - B) 1
  - C) 2
  - D) 5
  - E) 10
- 63) Given the results of question 60, the result in the money market will be:
- A) a large change in interest rates if the money demand function is steeply sloped.
  - B) a small change in interest rates if the money demand function is steeply sloped.
  - C) a large change in interest rates if the money demand function is gently sloped.
  - D) no change in interest rates because the money supply has not changed.
  - E) no change in interest rates because the money demand does not respond to changes in the money supply.
- 64) Given the results of question 60, in the real economy:
- A) investment spending and net exports will increase.
  - B) investment spending and net exports will decrease.
  - C) investment spending will increase, and net exports will decrease.
  - D) investment spending will decrease, and net exports will increase.
  - E) neither investment spending nor net exports will be affected.

**Part E** [8 marks]

The following 8 questions (65-72) relate to the information given below. Try to do the questions in order since the answers for some questions depend on the answers to previous questions in the series.

Each question is worth 1 mark.

Suppose a country produces only two final goods, bananas, and oranges. The table shows the production of goods and their prices for 2022 and 2023:

	Bananas	Oranges
2022 {quantity, price/unit}	{1000 kg, \$1.00/kg}	{500 kg, \$2.00/kg}
2023 {quantity, price/unit}	{1200 kg, \$0.95/kg}	{400 kg, \$2.25/kg}

You may wish to use the space below for any calculations and diagrams that will help as you work through the series of questions.

65) Nominal GDP in 2022 and 2023 are, respectively:

- A) 1500; 1600      B) 2000; 2000      C) 2000; 2040      D) 2000; 2075      E) 2200; 900

- 66) If 2022 is the base year, then real GDP in 2022 and 2023 are, respectively:  
A) 1500; 1600      B) 2000; 2000      C) 2000; 2040      D) 2000; 2075      E) 2200; 900
- 67) If 2022 is the base year, then the GDP deflator in 2023 is:  
A) 90      B) 100      C) 101      D) 102      E) 103.75
- 68) If 2022 is the base year, then the inflation rate in the GDP deflator between 2022 and 2023 is:  
A) -10%      B) 0%      C) 1%      D) 2%      E) 3.75%
- 69) Suppose that the economy had experienced an extended period with a rate of inflation equal to the one you calculated in question 68. This would only have been possible if:  
1. expectations of inflation equal this rate  
2. the monetary authority validated the inflation by increasing the money supply  
3. the economy had been in a long run AD-AS equilibrium  
A) 1 only  
B) 2 only  
C) 3 only  
D) 1 and 2 only  
E) 1, 2 and 3
- 70) Now suppose that the economy experiences a positive aggregate demand (AD) shock. As a result:  
A) inflation will remain constant  
B) inflation will rise  
C) inflation will fall  
D) inflation may rise or fall depending on the strength of the shock  
E) inflation may rise or fall depending on whether the shock was expected or not
- 71) Suppose instead that the economy experiences a negative aggregate supply (SRAS) shock. As a result:  
A) inflation will remain constant  
B) inflation will rise  
C) inflation will fall  
D) inflation may rise or fall depending on the strength of the shock  
E) inflation may rise or fall depending on whether the shock was expected or not
- 72) 72) Suppose the monetary authority does not change its policy in response to AD or SRAS shocks. In either of the cases described in questions 70 and 71 above:  
1. the economy will return to long run equilibrium  
2. any change in inflation will be temporary  
3. long run inflationary expectations will change  
A) 1 only  
B) 2 only  
C) 3 only  
D) 1 and 2 only  
E) 1, 2 and 3

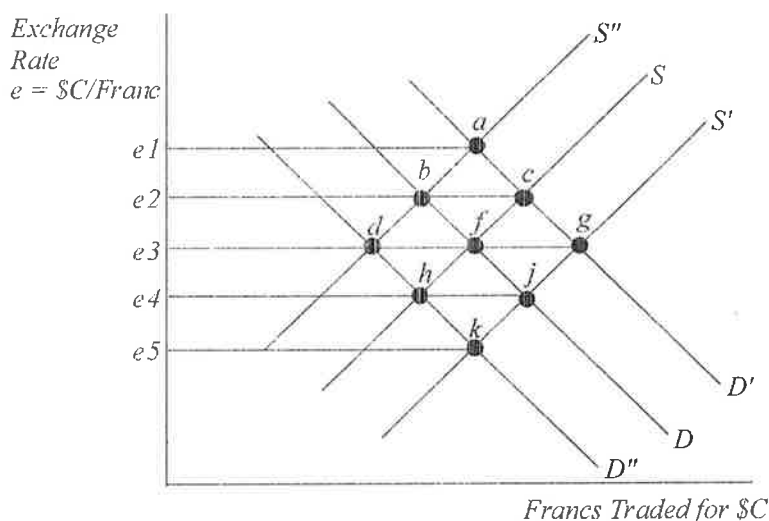
**Part F** [8 marks]

The following 8 questions (73-80) relate to the information given below. Try to do the questions in order since the answers for some questions depend on the answers to previous questions in the series.

Each question is worth 1 mark.

The diagram below represents the market for Swiss Francs exchanged for Canadian dollars. The horizontal axis measures the quantity of Francs traded for Canadian dollars (\$C) and the vertical axis measures the exchange rate, the number of \$C per Franc.

Assume that the market is in the equilibrium represented by point “f”, and that the exchange rate between the Canadian dollar and the Franc is fully flexible.



- 73) The supply curve of Francs for Canadian dollars is upward sloping because, as  $e$  rises,
- A) the Canadian dollar appreciates so Swiss want to purchase fewer exports from Canada.
  - B) the Canadian dollar depreciates so Swiss want to purchase fewer exports from Canada.
  - C) the Canadian dollar appreciates so Swiss want to purchase more exports from Canada.
  - D) the Canadian dollar depreciates so Swiss want to purchase more exports from Canada.
  - E) the Canadian dollar appreciates so Canadians want to purchase more imports from Switzerland.
- 74) At the initial equilibrium point  $f$ ,
- A) the current account balance plus the capital account balance is positive.
  - B) the current account balance plus the capital account balance is negative.
  - C) the current account balance plus the capital account balance is zero.
  - D) the balance on the official financing account at the Bank of Canada is positive.
  - E) the balance on the official financing account at the Bank of Canada is negative.

- 75) Suppose consumer tastes in Canada change toward Swiss chocolate and watches. The new exchange rate will be \_\_\_\_ and the new equilibrium will be at \_\_\_\_.
- A)  $e_2$ ; point  $b$       B)  $e_2$ ; point  $c$       C)  $e_3$ ; point  $d$       D)  $e_4$ ; point  $h$       E)  $e_4$ ; point  $j$

**Return to the original equilibrium at point “f”. For the balance of the series suppose that, as a result of Swiss monetary policy expansion, interest rates in Canada increase relative to those in Switzerland.**

- 76) As a result of the decrease in Swiss interest rates, the new exchange rate will be \_\_\_\_ and the new equilibrium will be at \_\_\_\_.
- A)  $e_2$ ; point  $b$       B)  $e_1$ ; point  $a$       C)  $e_3$ ; point  $d$       D)  $e_5$ ; point  $k$       E)  $e_4$ ; point  $j$
- 77) As a result of the change in Swiss interest rates,
- A) the Canadian dollar depreciates and Canadian net exports to Switzerland will increase.  
B) the Canadian dollar depreciates and Swiss net exports to Canada will increase.  
C) the value of the Canadian dollar is unchanged so Canadian net exports to Switzerland will be unchanged.  
D) the Canadian dollar appreciates and Canadian net exports to Switzerland will decrease.  
E) the Canadian dollar appreciates and Swiss net exports to Canada will decrease.
- 78) As a result of the change in Swiss interest rates, in Canada
- A) the aggregate demand curve shifts left.  
B) the aggregate demand curve shifts right.  
C) the short run aggregate supply curve shifts left.  
D) the short run aggregate supply curve shifts right.  
E) neither the short run aggregate supply curve nor the aggregate demand curve are affected.
- 79) If Canada was initially running a current account deficit, then the change in Swiss interest rates will
- A) cause a decrease in the size of the current account deficit.  
B) have no effect on the size of the current account deficit.  
C) cause an increase in the size of the current account deficit.  
D) result in a change in the size of the current account deficit but in an indeterminable direction.  
E) cause the current account to move into surplus.
- 80) As a result of the change in Swiss interest rates, Canada will
- A) not change its net borrowing/lending from/to the rest of the world.  
B) increase its net borrowing from the rest of the world.  
C) decrease its net borrowing from the rest of the world.  
D) increase its net lending to the rest of the world.  
E) decrease its net lending to the rest of the world.