

**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 14, 2019**

**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.

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| <b>The following aids are allowed:</b><br>Casio FX-991 calculator |
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**PLEASE NOTE:**

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

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**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** 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 |   |   |   |   |   |   |   |  |  | DO NOT MARK<br>IN THIS AREA |   |   |   |   |   |   |   |   |   | TEST<br>FORM | EXAM<br>NUMBER |   |   |   |   |   |   |   |   |   |
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| B         | B | B | 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 | C | C | C |      |  |
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| E         | E | E | E | E | E | E | E | E | E | E          | E | E | E | E | E | E | E | E | E |      |  |
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| H         | H | H | H | H | H | H | H | H | H | H          | H | H | H | H | H | H | H | H | H |      |  |
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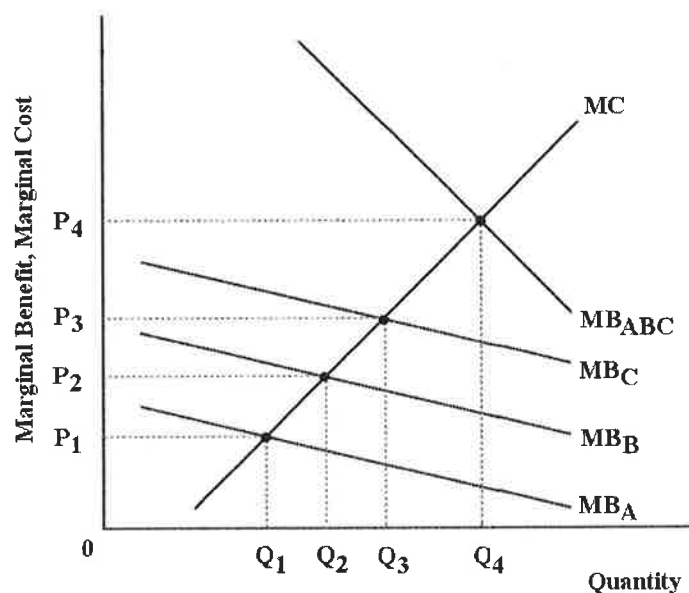
**Part A** [40 marks]

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

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

- 1) Which of the following best describes the reason for over fishing in Canadian offshore fisheries?
- A) Fishing has depleted fish stocks leading to smaller catches.
  - B) The private marginal cost incurred by current fishermen is less than the social marginal cost.
  - C) The private marginal cost incurred by future generations of fishermen is greater than the private marginal cost incurred by current fishermen.
  - D) The Canadian government explicitly encourages fishing through subsidies to fishermen.
  - E) The Canadian government allows foreign fishing within the Canadian offshore boundary.

*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 quantity of this public good to provide?
- A) 0
  - B) Q1
  - C) Q2
  - D) Q3
  - E) Q4
- 3) Moral hazard often arises in the case of insurance because
- A) insured people will not take sufficient care to reduce risks because the private cost of reducing risks exceeds the private benefit of reducing risks.
  - B) insured people will not take sufficient care to reduce risks because the private benefit of reducing risks exceeds the private cost of reducing risks.
  - C) people generally underestimate the amount of insurance coverage needed.
  - D) insurance companies have no incentive to investigate fraudulent claims.
  - E) people who are in the most need of insurance have the most trouble obtaining insurance coverage.

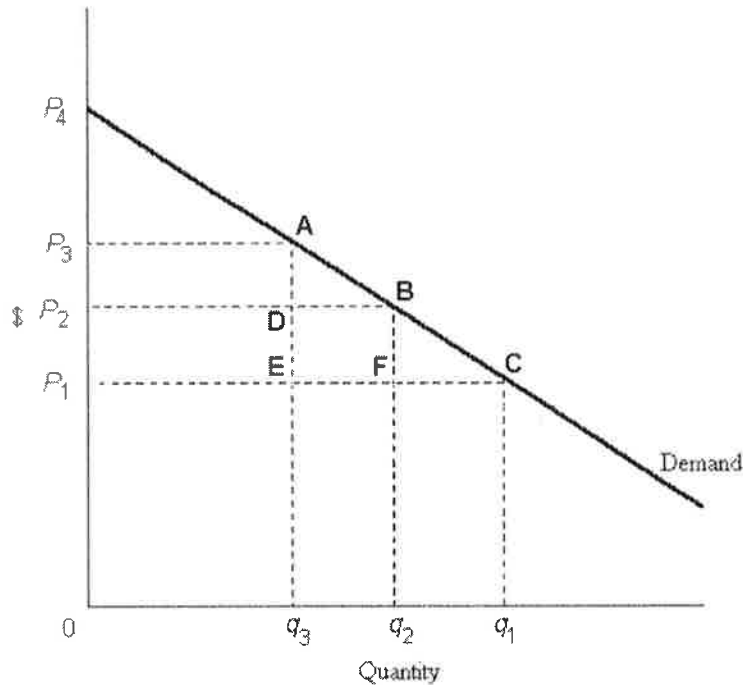


FIGURE 18-2

- 4) Refer to Figure 18-2. If a tax raises the price from  $P_1$  to  $P_2$ , the direct burden is the area  
 A) DEFB.                      B)  $P_1FBP_2$ .                      C)  $P_1CBP_4$ .                      D) BFC.                      E)  $P_1CP_4$ .
- 5) Refer to Figure 18-2. If a tax raises the price from  $P_1$  to  $P_2$ , the excess burden or deadweight loss is the area  
 A)  $P_3AP_4$ .                      B)  $P_2BAP_3$ .                      C)  $P_1CBP_2$ .                      D) BFC.                      E)  $P_1FBP_2$ .
- 6) If a country's labour force is 15 million people, and 0.5 million are unemployed, the country's unemployment rate is  
 A) 2.5 %.                      B) 3.3 %.                      C) 4.5 %.                      D) 6.7 %.                      E) 9.0 %.
- 7) If the Consumer Price Index changes from 120 in year one to 144 in year two, the rate of inflation in the intervening year is  
 A) 10 %.                      B) 16.7 %.                      C) 20 %.                      D) 25 %.                      E) 30 %.
- 8) A farmer raises free-range chickens, which he sells to a company for \$1000. That company sells the "processed" chickens to a grocery store for \$1600, which in turn produces roasted chickens which are sold to the public for \$2400. Based on this information, the value of total output is equal to  
 A) \$1400.                      B) \$1600.                      C) \$2400.                      D) \$4000.                      E) \$5000.

*The table below shows total output for an economy over 2 years.*

| 2003   | Price  | Quantity  |
|--------|--------|-----------|
| Good A | \$1.00 | 100 units |
| Good B | \$2.00 | 200 units |
| Good C | \$5.00 | 100 units |

| 2004   | Price   | Quantity  |
|--------|---------|-----------|
| Good A | \$2.00  | 120 units |
| Good B | \$3.00  | 200 units |
| Good C | \$10.00 | 98 units  |

**TABLE 20-1**

- 9) Refer to Table 20-1. The nominal Gross Domestic Product in 2004 was  
 A) \$700.                      B) \$840.                      C) \$980.                      D) \$1,740.                      E) \$1,820.
- 10) Refer to Table 20-1. The real GDP in 2004, expressed in 2003 dollars, was  
 A) \$700.                      B) \$840.                      C) \$970.                      D) \$1,010.                      E) \$1,740.
- 11) Unreported activities and nonmarket activities are excluded from GDP primarily because they  
 A) do not contribute to human welfare.  
 B) do not have an opportunity cost.  
 C) are difficult to measure.  
 D) do not contribute to national output of goods and services.  
 E) are morally repugnant.
- 12) If a representative family's disposable income rose from \$40 000 per year to \$42 000 and their desired consumption expenditures rose from \$38 000 to \$39 600, it can be concluded that the  
 A) average propensity to consume is 0.8.  
 B) average propensity to save is 0.8.  
 C) marginal propensity to consume is \$800.  
 D) marginal propensity to consume is 0.8.  
 E) marginal propensity to save is 0.8.

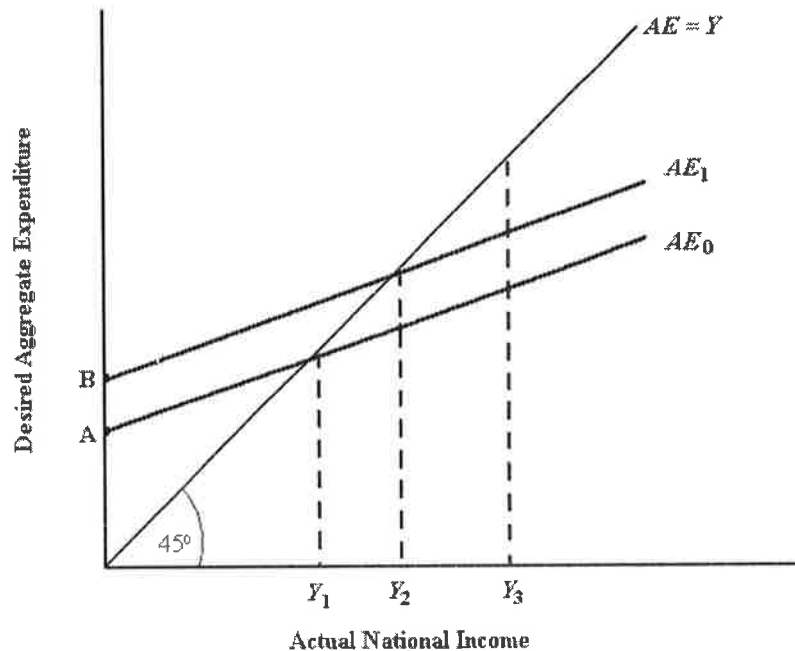


FIGURE 21-2

- 13) Refer to Figure 21-2. 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 must rise.
  - C) there is unintended inventory accumulation and income must fall.
  - D) there is unintended inventory decumulation and income must rise.
  - E) there is unintended inventory decumulation and income must fall.

*Assume the following model of an economy:*

1.  $Y = C + I$
2.  $C = 100 + 0.8Y$
3.  $I = 200$

TABLE 21-4

- 14) From the information in Table 21-4 this economy's equilibrium level of income will be
- A) 500.
  - B) 600.
  - C) 750.
  - D) 1,000.
  - E) 1,500.
- 15) A decrease in domestic national income will cause a \_\_\_\_\_ the net exports curve.
- A) movement to the left along
  - B) parallel downward shift of
  - C) parallel upward shift of
  - D) rotation upward in
  - E) rotation downward in

- 16) Assume that aggregate expenditure is composed of consumption, investment, government expenditure and net exports ( $AE = C + I + G + NX$ ). As the price level falls, the aggregate expenditure curve shifts
- down and the economy will move upward along the  $AD$  curve.
  - down and the economy will 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 right as does the  $AD$  curve.
- 17) Suppose that a government report indicates that recent high-school graduates have better computing skills than did graduates in the past, resulting in an increase in labour productivity. This will
- shift the short run  $SRAS$  curve to the left.
  - shift the short run  $SRAS$  curve to the right.
  - shift the  $AD$  curve to the left.
  - shift the  $AD$  curve to the right.
  - cause a movement along the  $SRAS$  curve to the right.
- 18) Demand shocks have a small effect on real GDP and large effect on the price level
- the steeper the short run  $SRAS$  curve.
  - on the downward-sloping portion of the short run  $SRAS$  curve.
  - the flatter the short run  $SRAS$  curve.
  - on the intermediate (mid-portion) portion of the short run  $SRAS$  curve.
  - if the  $AD$  curve is flat.

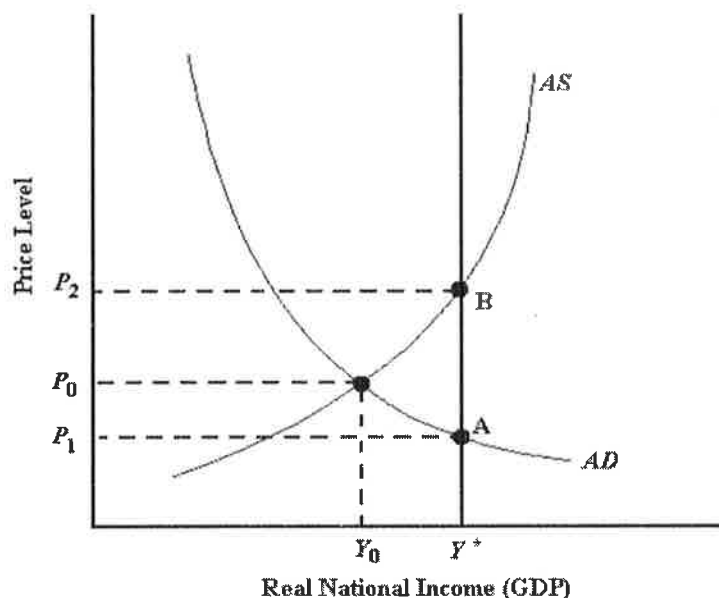


FIGURE 24-1

- 19) If the economy in Figure 24-1 is currently producing  $Y_0$  level of output and wages are sticky downward, then the
- economy will eventually move to point B.
  - economy will only move gradually toward point A as wages slowly adjust.
  - economy will quickly move to point A.
  - level of output will decrease below  $Y_0$ .
  - $AD$  curve will eventually shift to the right and return the economy to full employment level of output.

- 20) The long run aggregate supply,  $Y^*$  can shift rightward
- A) until it reaches the vertical segment of the *short run AS* curve, which is where the economy produces at maximum capacity.
  - B) continuously, with increases in available inputs and/or improvements in technology.
  - C) only in sudden spurts, with the unpredictable timing and extent of technological improvements.
  - D) only as net investment adds to the existing capital stock the economy can employ.
  - E) only when the population increases.
- 21) Suppose expansionary fiscal policy is used assuming an unchanging short run *AS* curve. If the short run *AS* shifts right unexpectedly, the fiscal policy will be \_\_\_\_\_, and equilibrium income \_\_\_\_\_ potential GDP.
- A) too weak; stays below
  - B) too weak; rises above
  - C) too strong; stays below
  - D) too strong; rises above
  - E) appropriate; equals
- 22) In the equation:  $GDP = L \times [E/L] \times [GDP/E]$  where (L) is the supply of labour and (E) is the level of employment, the term  $[E/L]$  represents
- A) productivity of labour.
  - B) the ratio of the population unemployed.
  - C) one minus the unemployment rate.
  - D) the level of employment at a given period of time.
  - E) none of the above
- 23) Consider the long-run theory of investment, saving, and growth. For a given level of private saving, an increase in government purchases of current services will likely \_\_\_\_\_ the economy's long-run growth rate.
- A) slow down
  - B) accelerate
  - C) not affect
  - D) increase
  - E) Not enough information to know
- 24) One important assumption of the Neoclassical growth model is that, with a given state of technology,
- A) increases in the use of a single factor bring increasing returns.
  - B) increases in the use of a single factor result in constant returns.
  - C) increases in the use of single factor bring diminishing returns.
  - D) the return from successive units of a single factor increases over time.
  - E) increases in GDP are possible only if all factors are increased at an equal rate.
- 25) The "new" theories of economic growth emphasize that the pace of technological change is \_\_\_\_\_ to economic signals, and that it is \_\_\_\_\_ to the economic system.
- A) responsive; exogenous
  - B) responsive; endogenous
  - C) unresponsive; exogenous
  - D) unresponsive; endogenous
  - E) unresponsive; unrelated



- 26) Which of the following is an example of the use of money as a medium of exchange?
- A) Dave keeps \$250 in his drawer for a "rainy day."
  - B) Mike gets a friend to give him a beer today in return for promising to give the friend two beer when Mike gets paid at the end of the month.
  - C) Judy lends her car to a friend who signs a promissory note that she will pay Judy \$10 a day for the use of the car after she returns the car to Judy.
  - D) Barry pays \$275 with his bank debit card for tickets for an NHL play-off game.
  - E) ABC Investments Inc. enters in its account books that it owes Nallai \$20 for his last month's investment income.
- 27) Suppose that the cash drain in the banking system increases during holiday periods. As a result,
- A) the capacity of the banking system to create deposit money is dampened during holiday periods.
  - B) the capacity of the banking system to create deposit money is increased during holiday periods.
  - C) commercial banks decrease their target reserve ratios.
  - D) changes in reserves will result in no change in deposits during holiday periods.
  - E) the money supply will automatically increase.
- 28) What is the present value of a bond that pays \$121.00 one year from today if the interest rate is 10% per year?
- A) \$100.00                      B) \$110.00                      C) \$121.00                      D) \$133.10                      E) \$221.00
- 29) Consider the demand for money. 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.
- 30) The reason why inflation can persist even after its original causes have been removed is that
- A) workers expect wage increases to match increases in labour productivity.
  - B) workers are willing to accept wage increases lower than the increase in productivity.
  - C) the Bank of Canada ensures that money-supply growth matches growth in real GDP.
  - D) inflationary expectations cause the *AS* curve to continue shifting upwards.
  - E) governments embark on a deficit-cutting program.
- 31) Suppose that next year 300 000 existing jobs in the economy are eliminated through layoffs and plant closures, and 400 000 new jobs are created through expansions and the creation of new firms. The amount of unemployment will rise over that year if
- A) more than 300 000 people drop out of the labour force.
  - B) more than 100 000 people drop out of the labour force.
  - C) less than 100 000 people drop out of the labour force.
  - D) less than 100 000 people join the labour force.
  - E) more than 100 000 people join the labour force.

- 32) Wage contracts are often set for periods of up to three years. As a result, fluctuations in aggregate demand and aggregate supply tend to
- A) cause changes in the amount of involuntary unemployment.
  - B) cause greater inflexibility of wages.
  - C) have no effect in labour markets until wages are renegotiated.
  - D) clear the labour market.
  - E) either increase or decrease the NAIRU.
- 33) An illustration of "crowding out" in macroeconomics is best provided by
- A) a decrease in government subsidies for low-cost housing causes an increase in private spending on housing.
  - B) a decrease in the money supply decreases nominal GDP.
  - C) an increase in tariffs causes a decrease in imports.
  - D) an increase in the money supply crowds out the issuance of privately held debt.
  - E) a fiscal expansion raises interest rates and thereby lowers private investment.
- 34) In an open economy like Canada's, a policy-induced increase in the government's budget deficit tends to
- A) attract foreign capital and reduce interest rates.
  - B) crowd out public consumption.
  - C) crowd out net exports and reduce interest rates.
  - D) attract foreign capital and crowd out net exports.
  - E) depreciate the domestic currency.
- 35) Consider the government's debt-to-GDP ratio. A significant reason for a government to maintain a low debt-to-GDP ratio is so that
- A) the real interest rate remains high, which leads to increased investment.
  - B) the Canadian dollar will appreciate and net exports will increase.
  - C) the government has the flexibility to use expansionary fiscal policy if the economy enters a recession.
  - D) the Bank of Canada has the flexibility to use contractionary policy.
  - E) there is no "crowding in" of investment or net exports.
- 36) Payments made to foreign firms arising from Canadians' purchases of foreign goods and services are shown in Canada's
- A) capital account.
  - B) current account.
  - C) official financing account.
  - D) capital-service account.
  - E) foreign-currency reserves.
- 37) The purchase of Canadian assets by foreigners is, for Canada, considered a capital
- A) outflow and is recorded as a credit on the current account.
  - B) outflow and is recorded as a debit on the capital account.
  - C) outflow and is recorded as a debit on the current account.
  - D) inflow and is recorded as a credit on the capital account.
  - E) inflow and is recorded as a credit on the current account.

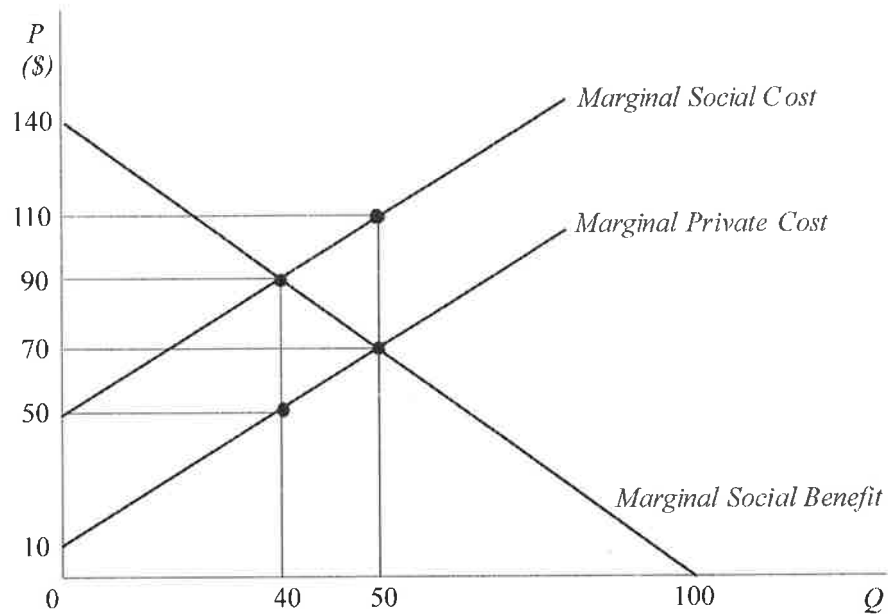
- 38) Suppose a Canadian grocery chain imports one million kilograms of cheese from a Swiss exporter. *Ceteris paribus*, the effect is to
- A) decrease the number of Canadian dollars needed to buy one Swiss franc.
  - B) increase the number of Swiss francs needed to buy one Canadian dollar.
  - C) increase the demand for Swiss francs in the foreign-exchange market.
  - D) increase the supply of Swiss francs in the foreign-exchange market.
  - E) increase the demand for Canadian dollars in the foreign-exchange market.
- 39) Suppose Canada has a flexible exchange rate. If there is a rise in the world price of copper (a major Canadian export), other exporting sectors of the Canadian economy will likely \_\_\_\_\_ due to the resulting \_\_\_\_\_ of the Canadian dollar.
- A) contract; depreciation
  - B) contract; appreciation
  - C) expand; depreciation
  - D) expand; appreciation
  - E) expand; reduced speculative appeal
- 40) Other things being equal, an increase in the current account deficit could result from
- A) an increase in private saving.
  - B) a fall in domestic investment.
  - C) a rise in domestic investment.
  - D) a fall in the government's budget deficit.
  - E) a rise in the government's budget surplus.

**Part B-110** [8 marks]

Answer all 8 questions; each question is worth 1 mark.

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.

The following diagram illustrates the competitive market for the good Q.



Use the space below for any calculations you may need to make.

- 41) Based on the diagram, unregulated production and sale of good Q involves:
- A. a negative externality in production.
  - B. a positive externality in consumption.
  - C. a positive externality in production.
  - D. a non-rivalrous good problem.
  - E. a socially optimal situation.
- 42) In equilibrium the price of good Q will be:
- A. 50                      B. 70                      C. 90                      D. 110                      E. 140
- 43) At a social optimum, the quantity of good Q produced is:
- A. impossible to determine from the diagram.
  - B. 0
  - C. 40
  - D. 50
  - E. 100
- 44) The deadweight loss associated with the competitive output level is equal to:
- A. 0                      B. 200                      C. 400                      D. 1600                      E. 2000
- 45) Suppose the government imposes a specific tax on output to restore efficiency to this market. The level of the tax should be \_\_\_\_ per unit of output.
- A. 0                      B. 20                      C. 40                      D. 60                      E. 90
- 46) The total direct burden associated with this optimal tax will be:
- A. 0                      B. 40                      C. 800                      D. 1000                      E. 1600
- 47) Suppose that production of each unit of output creates 10 units of pollution. The government decides not to place a tax on output, but instead institutes a system of tradable permits that give the holders the right to produce one unit of pollution. If the government issues the optimal number of permits, there will be \_\_\_\_\_ permits and they will trade at a price of \_\_\_\_\_.
- A. 40, \$40
  - B. 400, \$4
  - C. 500, \$2
  - D. 400, \$2
  - E. 500, \$4
- 48) In this case, the advantage of the tradable permit system over the tax system is that:
- A. it leads to a better social outcome than the tax system.
  - B. it ensures that each company produces where marginal social cost equals marginal social benefit, but the tax system does not.
  - C. it increases government revenue above that available under the tax system.
  - D. it provides better long-run incentives for emissions reduction than does the tax system.
  - E. it may be easier to implement politically since firms pay less tax.

**Part C** [8 marks]

Answer all 8 questions; each question is worth 1 mark.

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.

Consider the following aggregate expenditure ( $AE$ ) model of an economy. Output prices, factor prices and interest rates are assumed constant. We have the following information, where  $Y_D$  is disposable income and  $Y$  is national income.

Consumption:  $C = 50 + (2/3)Y_D$

Investment:  $I = 150$

Government Spending:  $G = 200$

Taxes (net of all transfers):  $T = (1/4)Y$

Exports:  $X = 0$

Imports:  $IM = 0$

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 aggregate expenditures is given by:

- A)  $AE = 400 + (1/6)Y$
- B)  $AE = 400 + (1/2)Y$
- C)  $AE = 400 + (2/3)Y$
- D)  $AE = 350 + (2/3)Y$
- E)  $AE = 350 + (1/2)Y$

50) The equilibrium level of national income is:

- A) 480
- B) 700
- C) 800
- D) 1050
- E) 1200

51) In equilibrium, the government is running a deficit equal to:

- A) 0
- B) 50.
- C) 100
- D) 150
- E) 200

52) In this model, the multiplier is equal to:

- A) 3
- B) 6/5
- C) 2
- D) 1
- E) 2/3

53) Suppose that investment decreases from 150 to 50. The new equilibrium level of national income is:

- A) 900
- B) 800
- C) 700
- D) 600
- E) 480

54) In the new equilibrium, the government is running a deficit equal to:

- A) 0
- B) 50.
- C) 100
- D) 150
- E) 200

55) Suppose that government wants to use fiscal policy to restore the original level of national income. A policy that would accomplish this goal is:

- A) an increase in spending ( $G$ ) of 50.
- B) an increase in spending ( $G$ ) of 100.
- C) a decrease in the tax rate such that  $T = (1/8)Y$ .
- D) an investment tax credit that ultimately increases investment by 100 and increases  $T$  by 50 in the new equilibrium.
- E) all of the above would produce the same effect on national income.

56) After the appropriate change in government fiscal policy outlined in question 55 above, then, in the new equilibrium, the government would be running a deficit equal to:

- A) 0
- B) 50.
- C) 100
- D) 150
- E) 200

**Part D** [8 marks]

Answer all 8 questions; each question is worth 1 mark.

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.

Suppose the balance sheet for the only commercial bank in a particular country is given below. Assume that the only money in the country is in the form of deposits at the commercial bank. Furthermore suppose that this bank operates with a target (desired) reserve ratio equal to 10%

Use the space below to keep track of your answers.

| <b>Assets</b>       |             | <b>Liabilities</b> |             |
|---------------------|-------------|--------------------|-------------|
| Reserves            | 200         | Deposits           | 2000        |
| Loans to the Public | 1600        |                    |             |
| Government Bonds    | 300         |                    |             |
| Other Assets        | 300         | Capital            | 400         |
| <b>Total</b>        | <b>2400</b> | <b>Total</b>       | <b>2400</b> |



- 57) In the initial situation shown by the balance sheet, the reserve ratio for the bank is:  
A)  $1/5$                       B)  $1/8$                       C)  $3/20$                       D)  $1/10$                       E)  $1/20$
- 58) In the country, the money supply is:  
A) 200                      B) 1600                      C) 2000                      D) 2200                      E) 3000
- 59) Suppose the central bank of the country wishes to increase the size of the money supply, and does so through an open market purchase of 100 worth of government bonds from the bank. Immediately after this transaction the reserve ratio will be:  
A)  $1/5$                       B)  $1/8$                       C)  $3/20$                       D)  $1/10$                       E)  $1/20$
- 60) After the bank has fully adjusted to the open market operation the money supply will be equal to  
A) 200                      B) 1600                      C) 2000                      D) 2200                      E) 3000
- 61) As a result of the central bank transaction and the reaction of the bank:  
A) interest rates and investment spending will be unchanged  
B) interest rates will rise and investment spending will decrease  
C) interest rates will rise and investment spending will increase  
D) interest rates will fall and investment spending will decrease  
E) interest rates will fall and investment spending will increase
- 62) As a result of the central bank transaction and the reaction of the bank:  
A) aggregate expenditure and aggregate demand will be unchanged  
B) aggregate expenditures will shift up and aggregate demand will shift right  
C) aggregate expenditures will shift up and aggregate demand will shift left  
D) aggregate expenditures will shift down and aggregate demand will shift right  
E) aggregate expenditures will shift down and aggregate demand will shift left
- 63) Now return to the original balance sheet, but suppose that the bank is governed by *additional* regulations that require it to have a capital/loan ratio of at least 25%. As above (in question 59), the central bank engages in open market purchase of 100 worth of government bonds from the bank. After the bank has fully adjusted to the open market operation the money supply will be equal to  
A) 200                      B) 1600                      C) 2000                      D) 2200                      E) 3000
- 64) In this new situation, as a result of the central bank transaction and the reaction of the bank:  
A) interest rates and investment spending will be unchanged  
B) interest rates will rise and investment spending will decrease  
C) interest rates will rise and investment spending will increase  
D) interest rates will fall and investment spending will decrease  
E) interest rates will fall and investment spending will increase

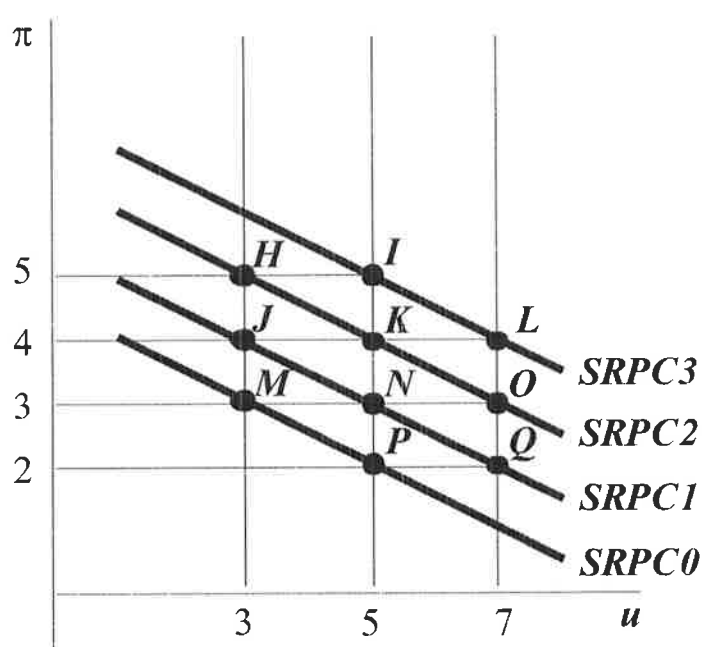
**Part E** [8 marks]

Answer all 8 questions; each question is worth 1 mark.

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.

The diagram below shows a family of short-run Phillips Curves (SRASs) for a particular economy. The output price inflation ( $\pi$ ) axis is measured in percentage points and the unemployment axis ( $u$ ) is also measured in percentage points. Assume that the natural rate of unemployment ( $u^*$  or NAIRU) for this economy is 5.

Use the space below to keep track of your answers.



- 65) The natural rate of unemployment is composed of:
1. frictional unemployment
  2. structural unemployment
  3. cyclical unemployment
- A) 1 only  
B) 2 only  
C) 3 only  
D) 1 and 2 only  
E) 1, 2, and 3
- 66) If the expected inflation rate is 3 and the economy is in long-run equilibrium, then it is operating at point:
- A) *K*                      B) *M*                      C) *N*                      D) *O*                      E) *P*
- 67) Suppose there is a positive aggregate demand shock. In the short-run the economy will be operating at point:
- A) *J*                      B) *K*                      C) *M*                      D) *N*                      E) *O*
- 68) If the central bank of the country does not validate this shock in any way then, in the long-run, the economy will be operating at point:
- A) *K*                      B) *M*                      C) *N*                      D) *O*                      E) *P*
- 69) If the central bank of the country attempts to maintain the new unemployment rate, then the next short-run equilibrium will find the economy operating at point:
- A) *H*                      B) *J*                      C) *L*                      D) *O*                      E) *K*
- 70) If instead, the central bank validates the new inflation rate, then in the long run the economy will be operating at point:
- A) *K*                      B) *N*                      C) *I*                      D) *J*                      E) *L*
- 71) Now suppose that the economy is operating in long-run equilibrium at point *K*. Assume the central bank wishes to reduce the inflation rate to 3 and engages in a contractionary monetary policy to achieve this result. As a result of the policy change, in the new short-run equilibrium, the economy will be operating at point:
- A) *K*                      B) *L*                      C) *M*                      D) *N*                      E) *O*
- 72) As a result of the policy change described in question 71, in the new long-run equilibrium, the economy will be operating at point:
- A) *K*                      B) *L*                      C) *M*                      D) *N*                      E) *O*

**Part F** [8 marks]

Answer all 8 questions; each question is worth 1 mark.

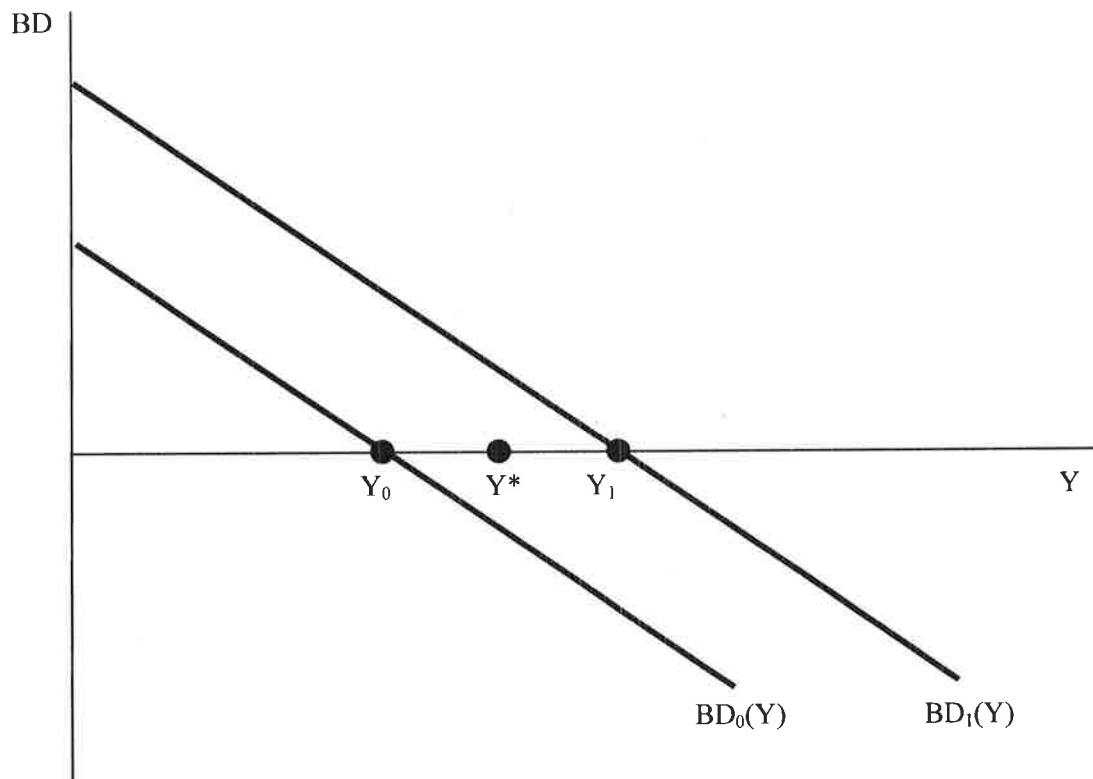
The following 8 questions (73-80) relate to the information given below. Try to do the questions in order since the answers for some questions depend on the answers to previous questions in the series.

The budget deficit function  $BD$  for a country is given as:

$$BD(Y) = G + iD - T(Y)$$

where  $G$  is government expenditures (purchases of goods and services),  $i$  is the interest rate,  $D$  is the given stock of government debt and  $T(Y) = tY$  is the tax revenue function (net of program transfers). The potential output or real income  $Y$  in this country is attained when  $Y = Y^*$ .

The budget deficit diagram below, with a given net tax rate, will help you to keep track of your answers.



73) The budget deficit function is negatively-sloped because:

- A) government expenditures decrease with  $Y$ .
- B) fiscal revenue decreases with  $Y$ .
- C) government debt decreases with  $Y$ .
- D) fiscal revenue increases with  $Y$ .
- E) government expenditures increase with  $Y$ .

- 74) The primary (or operating) budget deficit is given by:  
A)  $iD - T$                       B)  $G - T$                       C)  $G - iD$                       D)  $T - G$                       E)  $BD$
- 75) The stock of government debt ( $D$ ) will surely increase if:  
A)  $G - T > 0$                       B)  $G - T < 0$                       C)  $G + iD > 0$                       D)  $T - G > 0$                       E)  $BD = 0$
- 76) A positive structural deficit is represented by:  
A)  $BD_0(Y_1)$ .                      B)  $BD_0(Y_0)$                       C)  $BD_0(Y^*)$ .                      D)  $BD_1(Y^*)$                       E)  $BD_1(Y_0)$ .
- 77) For a given debt level, the move \_\_\_\_ represents a \_\_\_\_ fiscal policy.  
A)  $BD_1(Y)$  to  $BD_0(Y)$ ; expansionary.  
B)  $BD_1(Y)$  to  $BD_0(Y)$ ; neutral.  
C)  $BD_1(Y)$  to  $BD_0(Y)$ ; contractionary.  
D)  $BD_0(Y)$  to  $BD_1(Y)$ ; contractionary.  
E)  $BD_0(Y)$  to  $BD_1(Y)$ ; neutral.
- 78) The stance of fiscal policy changes with:  
A) the real income  $Y$ .  
B) the government debt.  
C) the interest rate.  
D) the primary deficit.  
E) the debt service.
- 79) A rise in the actual budget deficit may be as a result of:  
A) an increase in fiscal revenue.  
B) a decrease in government expenditures.  
C) a decrease in the government debt stock.  
D) an increase in the net tax rate.  
E) an increase in the interest rate.
- 80) In the  $BD$  diagram, an expansionary fiscal policy can be represented by:  
1. an upward shift in  $BD(Y)$   
2. a flatter slope of  $BD(Y)$   
3. a steeper slope of  $BD(Y)$   
A) 1 only  
B) 2 only  
C) 3 only  
D) 1 and 2 only  
E) 1, 2, and 3