

This exam was created by Mike Veall for use with Case/Fair/Strain/Veall, *Principles of Macroeconomics*, Second Canadian Edition.

THIS EXAMINATION PAPER INCLUDES 13 PAGES AND 43 QUESTIONS.

Special Instructions: Answer all questions. Use of Casio FX-991 calculator (including the FX-991Wplus) only is allowed. Answer all multiple choice questions on the scan sheet and all other questions on this examination paper, to be handed in. Scratch paper is available for calculations. This scratch paper must be handed in, but will not be graded.

Part A: Multiple Choice. Do all 39 questions. Circle the letter of the best answer. Each question is worth 1 mark. There is no penalty for an incorrect answer. In any question involving a demand or aggregate demand curve, assume that the curve always has the normal slope, that is, it is not vertical or horizontal.

1. Which of the following activities should be entirely included in Canada's GDP?

I An individual receives a transfer payment of \$1000 from the government

II The individual uses \$500 of the transfer payment to buy a used Canadian-made CD player.

III The individual uses \$100 of the transfer payment to buy Canadian-made CDs.

IV The individual uses \$400 of the transfer payment to buy Air Canada stock.

A. I, II, III and IV

B. only I

C. II, III but not I and IV

D. only III

E. II, III and IV but not I

2. Suppose the market rate of interest is 12% and the expected rate of inflation is 2%. The expected real rate of interest is \_\_\_\_%. If actual inflation turns out to be 5%, \_\_\_\_\_ lose.

A. 6%; lenders

B. 6%; borrowers

C. 10%; lenders

D. 10%; borrowers

E. 8%; lenders

3. The marginal propensity to consume or MPC is \_\_\_\_\_ divided by \_\_\_\_\_.

- A. consumption, income
- B. change in consumption, income
- C. change in consumption, change in income.
- D. consumption, change in income.

4. Planned investment differs from actual investment because

- A. Actual investment includes unplanned changes in inventories that occur when actual sales differ from expected sales.
- B. Planned investment does not include inventory changes.
- C. Planned investment does not include inventories.
- D. Actual investment includes financial investments such as the purchase of stocks; planned investment does not.
- E. Actual investment includes depreciation; planned investment does not.

5. Assume the following economy:

$$C = .75Y_d, \text{ where } Y_d \text{ is disposable income}$$

$$I = 30$$

$$G = 0$$

$$T = 0$$

$$EX = 10$$

$$IM = 10 + .15Y_d$$

Equilibrium output is:

- A. 25
- B. 50
- C. 75
- D. 100
- E. 125

6. In the model of the previous question, suppose that the government wishes to expand output to the full employment level of 200, but increases taxes as well to ensure that the government budget remains in balance. To accomplish these goals, government expenditure must rise by

- A. 75
- B. 100
- C. 125
- D. 150
- E. 175

7. Suppose the demand to see a single concert is  $Q_d = 1000 - P$  (P measured in dollars) and the quantity supplied is fixed at 600. Ticket sales are only in person (no phone, computer or FAX order) at a single outlet beginning at 12 noon on a particular day, one to a customer. The price is set at \$100. If the average value of time is \$25 per hour, we might expect a queue of length

- A. 4 hours.
- B. 8 hours.
- C. 12 hours.
- D. 16 hours.
- E. 20 hours.

8. Consider a commodity that is traded on a free market. If the government introduces either a binding price ceiling or a binding price floor, and there are no black markets, in both cases

- A. price must fall but the change in quantity traded is ambiguous.
- B. price must rise but the change in quantity traded is ambiguous.
- C. both the change in price and the change in quantity traded is ambiguous.
- D. quantity traded must fall and price must rise.
- E. quantity traded must fall.

9. Assume the economy only has two commodities, bread and water.

	<b>Production</b>	<b>Prices</b>
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<b>Good</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>
<b>Bread</b>	10	10	8	\$1	\$1	\$3
<b>Water</b>	8	4	5	\$0	\$1	\$1

Nominal GDP is \_\_\_\_\_ in 1996. Real GDP in 1997, using 1996 as the base year is \_\_\_\_\_:

- A. \$10 and \$10
- B. \$18 and \$10
- C. \$10 and \$18
- D. \$18 and \$18
- E. \$8 and \$10

10. Consider an economy with saving equal to 90, investment equal to 80, government spending equal to 150, net taxes equal to 160 and exports equal to 60. Imports are

- A. 30
- B. 40
- C. 50
- D. 60
- E. 70

11. Assume the banking system has deposits of \$200 million and it is fully loaned up. There are no leakages from the banking system. Assume that banks become less optimistic and the desired reserve ratio for all banks increases from 25% to 40%. Assume after the resulting money multiplier process is completed, banks are again fully loaned up. Loans have fallen by

- A. zero
- B. \$25 million
- C. \$50 million
- D. \$75 million

E. \$100 million

12. Given flexible exchange rates, the effects of an expansionary fiscal policy on output will be weakened because of \_\_\_\_\_ in interest rates and a(n) \_\_\_\_\_ of the exchange rate.

A. increases, appreciation

B. increases, depreciation

C. decreases, appreciation

D. decreases, depreciation

13. One of the main factors causing the "stagflation" of the 1970s was

A. increasing government deficits.

B. substantial increases in the money supply.

C. aggressive labour union activity during 1973-1977.

D. increases in the price of raw materials.

E. changes in fiscal policy.

14. Suppose the *AS-AD* model (with vertical long run aggregate supply) is a reasonable approximation to the economy. A well known wage settlement that increases inflationary expectations and hence other wage contracts will

A. always increase unemployment in both the short run and the long run.

B. always increase unemployment in the short run but possibly not in the long run

C. always increase unemployment in the long run but possibly not in the short run

D. typically have no effect on unemployment

E. typically increase unemployment both in the short run and the long run

15. Suppose Noil is a small sub-Saharan nation with few sophisticated resources. However it constructs an airport and hotel with lavish Western facilities and offers safari trips into its beautiful mountain ranges to groups from the developed countries. Noil is best described as having opted for a(n) \_\_\_\_\_ development strategy.

A. import substitution

B. computer-intensive

C. export promotion.

- D. balanced growth.
- E. agricultural.

16. Which statement does not represent Marx's views?

- A. Unemployment is used by capitalists to keep wages down.
- B. Private ownership and profit are unfair and unethical.
- C. Human beings should be thought of primarily as consumers, not workers.
- D. Capitalism will eventually collapse.
- E. Capital embodies the past efforts of labour; owners of capital have no moral claim to a share of the surplus.

17. Suppose most manufacturers of knitted goods can make blankets or sweaters. The supply of blankets will most likely shift to the right if:

- A. heating prices increase.
- B. it becomes fashionable to "wear" blankets instead of coats
- C. sweaters fall out of fashion.
- D. the cost of labour rises.
- E. consumers experience an increase in their income.

18. Suppose you could model the demand for kidneys for transplant as  $Q_d = 6\,000\,000 - 2P$  where  $P$  is in dollars. The supply of kidneys is  $Q_s = 1\,000\,000 + 8P$ . Assuming that  $P = 0$  (that is it is illegal to sell a kidney at any price and this law is enforced perfectly), the excess demand for kidneys will be: \_\_\_\_\_. Then assume the government stops enforcing the law and assume further that the price of kidneys is then determined by supply and demand. Compared to the case where  $P=0$ , the increase in the number of kidneys supplied for transplant will be\_\_\_\_\_.

- A. 1 000 000; 6 000 000
- B. 1 000 000; 5 000 000
- C. 5 000 000; 1 000 000
- D. 5 000 000; 4 000 000
- E. 5 000 000; 0

19. Suppose a farmer has two types of land. Each hectare of type A land can grow a tonne of rice but cannot be used for wheat. Each hectare of type B land can grow a tonne of wheat but cannot

be used for rice. That farmer's production possibility frontier is best described as

- A. a straight line.
- B. a right angle (i.e. two sides of a square or rectangle).
- C. a smooth curve (i.e. part of a circle or oval).
- D. a cross.
- E. a series of five straight lines each with different slopes.

20. A university has a fitness club. All 5000 members of the university community pay \$100 a year to be a member of the club. Total number of visits per year are 100 000. Now suppose the \$100 a year fee is eliminated and replaced by a \$5 per visit charge. Both before and after the fee change, only members of the university community use the club, the club is never too busy to discourage visits and the quality of the club remains uniformly high. The most likely outcome of the fee change is:

- A. club revenues stay the same because total number of visits will remain at 100 000 and that will raise the \$500 000 that was raised before by membership fees.
- B. club revenues will fall because those who visited the club less than average before the fee change will increase their usage but not by as much to offset the fall in visits by those who formerly visited the club more than average.
- C. club revenues will rise because those who visited the club less than average before the fee change will increase their usage by more than enough to offset the fall in visits by those who formerly visited the club more than average.
- D. club revenues will fall because almost no one will visit the club more with the new per visit fee and some will visit less.
- E. club revenues will rise, probably dramatically, because of the inherent efficiency in "user-pay" approaches.

21. Both the price and quantity purchased of firewood rose this fall. A possible single explanation is:

- A. higher wages for woodcutters.
- B. the Y2K scare increasing the demand for firewood.
- C. health warnings that wood smoke can cause respiratory illness.
- D. the clearing of several forested areas for subdivisions.
- E. the spread of tree parasites which have made it necessary to destroy large tracts of forest land (and the wood cannot even be used for firewood).

22. Five "friends" meet for pizza at a restaurant that sells pizza by the slice. They agree to split the bill evenly without regard to how many slices each person eats. Suppose these individuals do not consider future contacts with each other and are self-interested. We would expect that as compared to having separate, individual bills where each individual pays for her/his own pizza, splitting the bill will lead to

A. more pizza consumed because the cost to each individual of eating another piece has been reduced.

B. the same amount of pizza because pizza still has the same price, whether it is paid for by one individual or by many.

C. less pizza because each individual now has to consider the impact on the total bill.

23. In the standard aggregate demand/aggregate supply model, in the long run, an increase in government debt may crowd out

A. neither investment nor net exports.

B. investment, but not net exports.

C. net exports, but not investment.

D. both investment and net exports.

E. interest payments.

24. Critics of the Bank of Canada argue that it contributed to the increase in the federal debt during the 1980s and early 1990s because its policies caused

A. high interest rates.

B. high inflation.

C. stagflation.

D. dangerously low unemployment rates.

E. a fall in tax rates.

25. Suppose an economy produces only carrots, potatoes and turnips. In 1980 it produces 100 carrots at 30 cents per carrot, 200 potatoes at 20 cents a potato and 300 turnips at 20 cents a turnip. In 1990 it produces 300 carrots at 10 cents a carrot, 200 potatoes at 20 cents a potato and 100 turnips at 30 cents a turnip. Using the GDP deflator with 1980 as the base year, price inflation between 1980 and 1990 totaled:

A. about 50 per cent.

B. about 33 per cent.



- C. about 0.
- D. about -25 per cent.
- E. about -33 per cent.

26. Assume the banking system has deposits of \$100 million and it is fully loaned up. There are no leakages from the banking system. Assume that banks become more optimistic and the desired reserve ratio for all banks falls from 26% to 25%. Assume after the resulting money multiplier process is completed, banks are again full loaned up. Loans have increased by

- A. zero
- B. \$1 million
- C. \$2 million
- D. \$3 million
- E. \$4 million

27. The optimal money balances held by individuals and firms will decrease if the interest earned on bonds \_\_\_\_\_ and the cost of switching between bonds and money \_\_\_\_\_.

- A. increases, increases.
- B. increases, decreases.
- C. decreases, increases.
- D. decreases, decreases.

28. Which of the following pairs of events will most likely result in a decrease in the equilibrium short-term interest rate? A(n) \_\_\_\_\_ in output and an open market \_\_\_\_\_ of short-term bonds.

- A. increase, purchase.
- B. increase, sale.
- C. decrease, purchase.
- D. decrease, sale.

29. Suppose the Bank of Canada decided to fix the exchange rate within a band, say between a floor of 67 cents American and a ceiling of 68 cents American. Between the floor and the ceiling price, which is more difficult to maintain and why?

- A. the floor price because of limited foreign exchange reserves.

- B. the ceiling price because of limited foreign exchange reserves.
- C. the floor price because the Bank of Canada is not legally permitted to issue currency without the authorization of the Minister of Finance.
- D. the ceiling price because the Bank of Canada is not legally permitted to issue currency without the authorization of the Minister of Finance.

30. Emerson runs an adventure tour business for Toronto customers and is deciding both whether to borrow money to expand and whether to switch his equipment purchases from a U.S. maker to a Canadian maker. The Bank of Canada changes to a slightly looser monetary policy. The result will likely make Emerson \_\_\_\_\_ likely to expand his business and \_\_\_\_\_ likely to switch equipment suppliers.

- A. more, more.
- B. more, less.
- C. less, more.
- D. less, less.

31. Suppose one-year nominal interest rates are 7% and the overall inflation rate is 2%. A decision is being made as to whether to decommission a commercial nuclear reactor today or one year from today. The reactor is and will remain safe. It is expected that its revenue will exactly cover its operating costs during the year and that the cost of decommissioning the reactor next year (i.e. nuclear clean-up) will be 5% more than it will be today. Looking at it solely from a financial perspective, the reactor should be decommissioned

- A. Today, because it will be cheaper.
- B. Today, because the inflation rate for nuclear clean-up exceeds the overall inflation rate.
- C. Today, because interest rates exceed the overall inflation rate.
- D. Next year, because interest rates exceed the inflation rate for nuclear clean-up.

32. Comparing fixed and flexible exchange rate policies, an expansionary fiscal policy in Canada is likely to expand output more under \_\_\_\_\_ exchange rates because the increased government borrowing associated with the fiscal policy will not raise \_\_\_\_\_.

- A. fixed; interest rates.
- B. flexible; interest rates.
- C. fixed; the money supply.
- D. flexible; the money supply.

33. In the standard aggregate demand and aggregate supply model, suppose the economy is initially at long-run equilibrium of 900 billion dollars of real GDP. Then the money supply is increased. The short run effect of the money supply increase will be such that real GDP will \_\_\_\_\_ 900 billion dollars; in the long run real GDP will \_\_\_\_\_ 900 billion dollars. (Assume all real GDP figures are calculated using the same base year.)

- A. exceed; exceed.
- B. be less than; equal.
- C. exceed; be less than.
- D. exceed; equal.
- E. equal; equal.

34. In describing actual data for Canada, a major shortcoming of the standard aggregate demand/aggregate supply model is that it assumes:

- A. all investment increases the productive capacity of the economy and hence potential output while in reality most Canadian investment is made in other countries.
- B. the price level is fixed.
- C. that long-run equilibrium output is fixed: in reality it grows.
- D. that exchange rates are fixed.
- E. that interest rates are fixed.

35. Some economists believe that there is evidence of stagflation in the early 1970s, *before* the sharp increase in oil prices. Choose the following single explanation of this that is most consistent with the Aggregate Supply/Aggregate Demand model.

- A. There was an increase in Aggregate Demand due to a cut in taxes.
- B. There was a decrease in Aggregate Demand due to government cutbacks.
- C. Increasing inflation in the late 1960s led to demands for higher wage increases by workers.
- D. It was the undesired consequence of tight monetary policy.
- E. Rapid technological advance.

36. Some of the output of a Nortel plant in Ireland can be attributed to Canadian-owned capital (as Nortel is partly Canadian-owned). This portion of output is included

- A. in Canadian GDP but not in Irish GDP.

- B. both in Canadian GNP and Irish GNP.
- C. both in Canadian GDP and Irish GDP.
- D. in Canadian GNP but not in Irish GNP.
- E. in Canadian GDP but not in Irish GNP.

37. The only costs of a leaf-raking company are bags it purchases for \$100 per day and wages it pays of \$600 per day. It sells its product for \$800 per day. Its value added per day is:

- A. \$100.
- B. \$200.
- C. \$600.
- D. \$700.
- E. \$800.

38. Suppose Canadian exports fall. Assuming the aggregate supply curve is not flat, this will more likely cause a lasting \_\_\_\_\_ in the Canadian price level if exchange rates are \_\_\_\_\_.

- A. increase; fixed.
- B. increase; flexible.
- C. decrease; fixed.
- D. decrease; flexible.

39. Legislation requiring balanced budgets may be an automatic stabilizer because:

- A. during a recession, it requires government expenditure increases if the deficit target is not met.
- B. during a boom, it requires government expenditure decreases if the deficit target is not met.
- C. during a recession, it requires expansionary fiscal policy if the deficit target is not met.
- D. during a recession, it requires contractionary fiscal policy if the deficit target is not met.

Part B. Short answer. Do all questions. Answer in the space provided. Each question is worth 5 marks.

1. (a) Define the real rate of interest.

(b) Besides changing the Bank Rate, the Bank of Canada has two main instruments that it uses to

influence the money supply. Name them, and describe in a sentence or two how each could be used to increase the money supply. There is no need to describe the money multiplier process or to explain how changing the money supply can affect the economy more generally.

2. Use aggregate demand and short run aggregate supply curves to illustrate why it is sometimes thought that in choosing its monetary and fiscal policies, government faces a tradeoff between unemployment and inflationary pressures. (This tradeoff is sometimes called the Phillips Curve.)

3. (a) Define "government deficit". How does it differ from "government debt"?

(b) Give three distinct reasons why real GDP is not a measure of economic welfare.

4. You are given the following information about an economy where all amounts are in billions of dollars. Fill in the blanks. To receive any credit, you must show your calculations below.

$C = 100 + .8Y_d$ , where  $Y_d$  is disposable income,  $I = 50$ ,  $G = 80$ ,  $T = -150 + .25Y$  and  $EX = IM = 0$ .

Equilibrium income is \_\_\_\_\_ billion dollars. If government spending  $G$  is cut enough to

balance the government budget (that is to set  $G=T$ ), equilibrium income will be \_\_\_\_\_.

End of examination