ECN 204   Department of Economics
Introductory Macroeconomics   Ryerson University
Instructor: Sharif F. Khan   Fall 2005

Assignment 1
Deadline: September 23, 2004

Part A   Multiple-Choice Questions   [30 marks]

Each question is worth 1.5 marks. There is no negative marking for wrong answers

To answer each question correctly, you have to choose the best answer from the given four choices.

1. A nation's gross domestic product (GDP):
    A) is the dollar value of the total output produced within the borders of the nation.
    B) is the dollar value of the total output produced by its citizens, regardless of where they are living.
    C) can be found by summing $C + I_n + S + X_n$.
    D) is always some amount less than its $C + I_g + G + X_n$.

2. Suppose the total market value of all final goods and services produced in a particular country in 2000 is $600 billion and the total market value of final goods and services sold is $525 billion. We can conclude that:
    A) GDP in 2000 is $525 billion.
    B) NDI in 2000 is $525 billion.
    C) GDP in 2000 is $600 billion.
    D) inventories in 2000 fell by $75 billion.

3. National income accountants can avoid multiple counting by:
    A) including transfers in their calculations.
    B) counting both intermediate and final goods.
    C) only counting final goods.
    D) only counting intermediate goods.

4. Which is included in GDP?
    A) used autos purchased by consumers
    B) transfer payments
    C) telephone service for a home
    D) bread for a restaurant

5. Setup Corporation buys $100,000 of sand, rock, and cement to produce readi-mix concrete. It sells 10,000 cubic yards of concrete at $30 a cubic yard. The value added by Setup Corporation is:
   A) $300,000.
   B) $100,000.
   C) $200,000.
   D) zero dollars.

6. In calculating the GDP by income approach, we should sum up :
   A) wages, consumption, investment and rent.
   B) wages, rent, interest and profit income.
   C) wages, interest, investment, and exports.
   D) wages, profit income, investment, and consumption.

7. In calculating GDP by expenditure approach, we sum up:
   A) consumption, investment, government purchases, exports, and imports.
   B) investment, government purchases, consumption, and net exports.
   C) consumption, investment, wages, and rents.
   D) consumption, investment, government purchases, and imports.

8. Which of the following is not economic investment?
   A) the purchase of a drill press by the Ajax Manufacturing Company
   B) the purchase of 100 shares of Bell Canada by a retired business executive
   C) construction of a suburban housing project
   D) the piling up of inventories on a grocer's shelf

Use the following to answer question 9:

Assume an economy which is producing only one product. Output and price data for a three-year period are as follows.

-108Year	Units of output	Price per unit
-1081	20	$4
-1082	25	4
-1083	30	6

9. Refer to the above data. If year 2 is chosen as the base year, real GDP for year 1 is:
  A) $25.
  B) $100.
  C) $20.
  D) $80.

Use the following to answer questions 10-11:

(GDP figures are in billions of dollars.)

Year	Nominal GDP	Real GDP	Price index
1	5,200	4,800	
2	5,500		112
3	5,740	5,000	

10. Refer to the above table. What is the GDP price index in Year 1?
  A) 105.2
  B) 108.3
  C) 109.6
  D) 111.5

11. Refer to the above table. What was real GDP in Year 2?
  A) $4,820 billion
  B) $4,875 billion
  C) $4,911 billion
  D) $5,320 billion

12. Environmental pollution is accounted for in:
  A) GDP.
  B) NDI.
  C) PI.
  D) DI.
  E) none of the above.

13. Economic growth is best defined as an increase in:
  A) either real GDP or real GDP per capita.
  B) nominal GDP.
  C) total consumption expenditures.
  D) wealth in the economy.

14. Nominal GDP was $9,500 billion in Year 1 and $10,000 billion in Year 2. The GDP price index was 170 in Year 1 and 175 in Year 2. Between Years 1 and 2, the rate of growth in real GDP was approximately:
    A) 1.6 percent.
    B) 2.3 percent.
    C) 4.4 percent.
    D) 5.3 percent.

15. Labor productivity is measured by:
    A) the ratio of capital to labor.
    B) real output per worker-hour.
    C) real output per capital.
    D) the ratio of worker-hours to real GDP.

Use the following to answer questions 16-17:
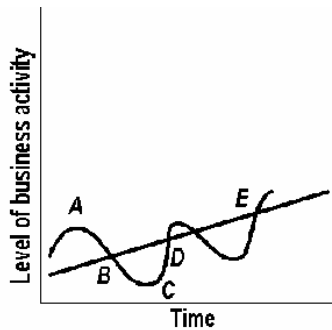
16. Refer to the above diagram. The phases of the business cycle from points A to D are, respectively:
    A) peak, recession, recovery, trough.
    B) trough, recovery, expansion, peak.
    C) expansion, recession, trough, peak.
    D) peak, recession, trough, recovery.

17. Refer to the above diagram. The straight line E drawn through the wavy lines would provide an estimate of the:
    A) recession fluctuation.
    B) growth trend.
    C) natural rate of unemployment.
    D) recovery trend.

18. Assuming the total population is 100 million, the civilian labor force is 50 million, and 47 million workers are employed, the unemployment rate:
    A) is 3 percent.
    B) is 6 percent.
    C) is 7 percent.
    D) is 9 percent.

19. The consumer price index (CPI):
    A) is an average of the prices of all consumer goods purchased each year.
    B) measures changes in the prices of a market basket of some 300 goods and services purchased by urban consumers.
    C) measures prices of goods, but not services since services don't fit into a market basket.
    D) is also known as the GDP price index.

20. The consumer price index was 140.3 in 1992 and 144.5 in 1993. Therefore, the rate of inflation in 1993 was about:
    A) 6.7 percent.
    B) 3.0 percent.
    C) 1.2 percent.
    D) 13.6 percent.

Part B   True/ False/ Uncertain Questions   [20 marks]

Each question is worth 5 marks.

Explain why the following statement is True, False, or Uncertain according to economic principles. Use diagrams and / or numerical examples where appropriate. Unsupported answers will receive no marks. It is the explanation that is important.

1. Exports are subtracted from imports in calculating Canadian GDP because exports are not available for domestic consumption.

2. Gross private domestic investment exceeds depreciation in an economy experiencing expanding production capacity.

3. Unanticipated inflation benefits creditors and savers.

4. If the price level doubles in a 23-year period, we can conclude that the average annual rate of inflation over that period was about 3 percent.

Part C   Problem Solving Question   [50 marks]

Answer all parts of the following three questions.

C-1 [20 marks]

Following is a list of national income figures for a certain year. All figures are in billions. Calculate GDP by both the expenditure and income methods. The answers derived by each approach should be the same.

Personal consumption expenditures	$120
Capital consumption allowances (depreciation)	20
Interest and investment income	10
Net income of farms and unincorporated businesses	17
Net exports	+5
Profits of corporations and government enterprises before taxes	42
Wages, salaries, and supplementary labour income	113
Indirect business taxes less subsidies	11
Government current purchases of goods and services	40
Net investment (net capital formation)	30
Taxes less subsidies on factors of production	10

C-2 [20 marks]

Using the following national income accounting data, compute (a) GDP, (b) GNP, (c) NDP, (d) NNI, (e) PI, (f) DI. All figures are in billions.

Wages, salaries, and supplementary labour income	$194.2
Canadian exports of goods and services	17.8
Capital consumption allowances (depreciation)	11.8
Government current purchases of goods and services	59.4
Indirect business taxes less subsidies	14.4
Net investment (net capital formation)	52.1
Government transfer payments	13.9
Canadian imports of goods and services	16.5
Personal taxes	40.5
Personal consumption expenditures	219.1
Net investments from non-residents	2.2
Undistributed corporate profits	10

C-3 [10 marks]

Assume that in a particular year the natural rate of unemployment is 5 percent and the actual rate of unemployment is 9 percent. Use Okun's law to determine the size of the GDP gap in percentage-point terms. If the nominal GDP is $500 billion in that year, how much output is being foregone because of cyclical unemployment?