

## Exam 1

**KEY**

Please answer each question. For short answer questions, show the formulas and calculations needed where appropriate. You have one hour and fifteen minutes (1:15). Good luck!

**Multiple Choice. (13 questions, 4 points each, 52 points total)**

- 1) For the study of economic growth, it is most helpful to examine movements in \_\_\_\_\_; for the study of business cycles, it is most helpful to examine movements in \_\_\_\_\_.
- A) deviations from trend in GNP; trend GNP
  - B) trend GNP; deviations from trend in GNP
  - C) trend GNP; trend GNP
  - D) deviations from trend in GNP; deviations from trend in GNP
- 2) In the second half of the twentieth century, the U.S. inflation rate was at its highest in the period from
- A) the mid-1970s to the early 1980s.
  - B) 1960 to the early 1970s.
  - C) the mid-1980s to the early 1990s.
  - D) 1990-2000.
- 3) Year-to-year fluctuations in the unemployment rate are primarily explained by
- A) structural shifts.
  - B) changes in government intervention.
  - C) changes in the level of economic activity.
  - D) changes in the structure of the population.
- 4) Additions to inventory are
- A) counted as an intermediate input.
  - B) subtracted from sales revenue in calculating profit income.
  - C) counted as a component of investment spending.
  - D) not counted as an expenditure in GDP accounting.
- 5) GDP and GNP may differ
- A) because some income generated by domestic production may be received as income by foreign residents.
  - B) whenever tariff rates become excessively high.
  - C) because some workers are illegal aliens.
  - D) because some intermediate good inputs are imported.
- 6) When there is rapid inflation,
- A) growth in nominal GDP exceeds growth in real GDP.
  - B) there can never be any growth in nominal GDP.
  - C) growth in real GDP exceeds growth in nominal GDP.
  - D) growth in real GDP and nominal GDP are roughly equal.

- 7) A price index can be computed by
- A) subtracting the nominal variable from its real counterpart.
  - B) subtracting the real variable from its nominal counterpart.
  - C) dividing a real variable by its real counterpart.
  - D) dividing a nominal variable by its real counterpart.
- 8) An example of a stock would be
- A) savings.
  - B) the amount of money in circulation.
  - C) investment.
  - D) real GDP.
- 9) Problems with interpreting the unemployment rate as a measure of labor market tightness include
- A) variations in how intensively the unemployed search for work and biases in the CPI.
  - B) biases in the CPI and dissatisfied workers.
  - C) discouraged workers and variations in how intensively the unemployed search for work.
  - D) dissatisfied workers and discouraged workers.
- 10) Additions to the nation's capital stock are brought about through
- A) the current account surplus.
  - B) investment and the current account surplus.
  - C) investment.
  - D) investment and the government budget surplus.
- 11) Who among the following is considered to be in the labor force?
- A) full-time students
  - B) unemployed workers
  - C) retirees
  - D) discouraged workers
- 12) If a macroeconomic variable tends to aid in predicting the future path of real GDP, it is said to be a
- A) leading variable.
  - B) lagging variable.
  - C) coincident variable.
  - D) convenient variable.
- 13) Real consumption tends to be
- A) countercyclical and less variable than real GDP.
  - B) countercyclical and more variable than real GDP.
  - C) procyclical and less variable than real GDP.
  - D) procyclical and more variable than real GDP.

Short Answer. (3 questions, 16 points each, 48 points total)

14) Suppose an economy produces only food and clothing, and that price and quantity data for two years are given in the table below.

Year 1		
Good	Quantity	Price
Food	20	\$6
Clothing	10	\$8

Year 2		
Good	Quantity	Price
Food	25	\$10
Clothing	20	\$7

Take Year 1 as the base year in calculating the following

(i) Year 2 real GDP.

(ii) The consumer price index (CPI) for Year 2.

$$(i) \text{ Yr 2 Real GDP} = 25 \cdot \$6 + 20 \cdot \$8 \\ = \$310$$

(ii) Using the basket of goods from yr 1, the price of the basket in yr 1 is \$200 (equal to yr 1 GDP at yr 1 prices). The price of the same basket in yr 2 prices is

$$\cancel{20 \cdot \$6} + 20 \cdot \$10 + 10 \cdot \$7 = \$270.$$

Thus, if the price level (index) was 100 in yr 1, it was

$$\frac{270}{200} \times 100 = 135$$

in yr 2. [Any ratio of 1:1.35 is ok.]

15) You are a baker. You paid \$150K in wages, \$50K for dough, \$20K for power, \$5K in interest for a business loan, \$25K in taxes, and made a profit of \$10K. How much did you contribute to GDP using the product approach?

$$\pi = 10 = \text{Revenue} - 150 - 50 - 20 - 5 - 25$$

$$\begin{aligned} \text{So Rev} &= 10 + 150 + 50 + 20 + 5 + 25 \\ &= 260. \end{aligned}$$

This is the mkt value of goods sold. To get Value added (i.e., contrib'n to GDP) subtract value of input goods and services:

$$\begin{aligned} \text{VA} &= 260 - 50 - 20 \\ &= \underline{190}. \end{aligned}$$

16) There are five major categories of expenditure that go into the calculation of GDP (by the expenditure approach). Name these components, and state whether each is roughly pro-cyclical, acyclical, or counter-cyclical. (To get five categories, "NX" must be broken up into two parts.)

$$Y = C + I + G + EX - IM$$

Consumption is procyclical,

Investment is procyclical,

Government spending is pretty much acyclical (but I'll accept any claim here!),

Exports are either acyclical or procyclical,

Imports are procyclical.