

Part 1: (2 points each) Multiple Choices

1. The standard of living in an economy is best measured by:

- A) average labor productivity.
- B) total output.
- C) output per person.
- D) output per employed worker.
- E) the inflation rate.

Answer: C

2. If average labor productivity increases while population and the number of employed workers remain constant, then total output:

- A) increases.
- B) decreases.
- C) remains constant.
- D) may increase or decrease.
- E) cannot be determined.

Answer: A

3. If the unemployment rate increases from 4 percent to 10 percent, then the economy is mostly likely in a(n):

- A) expansion.
- B) boom.
- C) recession.
- D) depression.
- E) aggregation.

Answer: C

4. "U.S. exports will increase as a result of joined CAFTA," is an example of a _____ statement, while "The U.S. should join CAFTA," is an example of a _____ statement.

- A) monetary policy; fiscal policy
- B) structural policy; fiscal policy
- C) normative; positive
- D) positive; normative
- E) positive; aggregation

Answer: D

5. The accuracy of the official unemployment rate is criticized because:

- A) unemployed homemakers and students who are not actively seeking employment are not included in the number of unemployed people.
- B) people who would like to work but have given up trying to find work are not included in the number of unemployed people.
- C) it fails to indicate how many people work at more than one job.
- D) people under 16 years of age and over 70 years of age are excluded from the data.
- E) the BLS survey does not include all the household in the U.S.

Answer: B

6. If total output is calculated by adding up the market value of goods and services produced, then more expensive items:

- A) receive the same weighting as cheaper items.
- B) receive a higher weighting than cheaper items.
- C) receive a smaller weighting than cheaper items.
- D) are excluded from the calculations.
- E) are double counted

Answer: B

7. The distribution of people of 16 or older in an economy is given: 15 people do not have a job but would like to have one. 10 have actually been sending out job applications during the past two weeks. The remaining 5 have not been sending out any application during last two months since they have been busy for planning for a travel. 50 people have full-time jobs. 4 people have part-time jobs. 3 people are retired and 7 people are in school.

What is the unemployment rate in the economy?

- A. 12.7%
- B. 15.6%
- C. 16.7%
- D. 21.7%
- E. 25 %

Answer: B

8. In the economy in question 7, what is the labor force participation rate?

- A. 82.2%
- B. 87.3%
- C. 91.1%
- D. 81%
- E. 75.9%

Answer: D

9. Suppose a jar of DeLux popcorn that is ultimately sold to a customer at Friendly Groceries is produced by the following production process:

Name of Company	Revenues	Cost of Purchased Inputs
Fulton Family Farm	\$0.50	0
DeLux Popcorn Co.	\$2.50	\$.50
Friendly Groceries	\$4.00	\$2.50

What is the value added of DeLux popcorn?

- A) \$0.50 B) \$1.50 C) \$2.00 D) \$2.50 E) \$7.00

Answer: C

10. If you left \$2,500 on deposit with a bank promising to pay you a 5 percent compound annual rate of interest, then after 50 years your deposit would total:

- A) 2,625 B) 8,750 C) 11,467 D) 28,668 E) 328,750

Answer: D

11. Based on the table below, if the production process described below is subject to diminishing returns to capital, then total packages wrapped when a fourth machine is installed must be less than _____ packages.

Number of (Identical) Machines	Total Packages Wrapped
1	5,000
2	9,000
3	12,000

- A) 3,000 B) 4,000 C) 12,000 D) 13,000 E) 15,000

Answer: E

Part 2: Short Answers

1. (You must show your work to get credit)

a) (8 points) In 2003 (base year), Alphaland produced 35 books, valued at \$45 each and 25 chairs, valued at \$ 30 each. In 2004, Alphaland produced 37 books valued at \$55 each and 45 chairs valued at \$50.

Calculate Nominal and real GDP in 2003 and 2004, using 2003 as the base year.

Answers: Nominal GDP \$2325 (2003) and \$4285 (2004), Real GDP \$2325 (2003) and \$3015 (2004)

b) (2 points) What was the growth rate in real GDP from 2003 to 2004 in Alphaland?

Answer: 29.7%

2. (3 points) The information about an economy is given. Compute its GDP and explain.

Consumer expenditures	\$600
Exports	\$70
Government purchases of goods and services	\$200
Construction of new homes and apartments	\$120
Sales of existing homes and apartments	\$250
Imports	\$55
Beginning-of-year inventory stocks	\$110
End-of-year inventory stocks	\$125
Business fixed investment	\$100
Government payments to retirees	\$120
Household purchases of durable goods	\$100

Answer: We find the four components of expenditure:

Consumption expenditures are 600. These already include household purchases of durable goods, so those would not be counted again.

Investment expenditures equal residential construction (120) plus business fixed investment (100) plus inventory investment (change in stocks over the year, or 15), for a

total of 235. Sales of existing homes and apartments are not counted in investment or GDP.

Government purchases are 200. Government payments to retirees are transfers and are not counted.

Net exports are exports (70) minus imports (55), or 15

GDP is the sum of the four components: $600 + 235 + 200 + 15 = 1050$

II. CPI and Inflation

1. Here is the information about Tom's wage

Year	Nominal wage	CPI (base year 2000)
1990	\$31,000	0.7
2000	\$39,000	1
2005	\$42,000	1.18
2006	Left blank	1.21

a. (2 points) What is the real wage in 2005 (in year 2000 \$)

Answer: \$35,593.22

b. (2 points) If the nominal wage grows at 6% per year from 2005 to 2010 and the rate of inflation is 1 % per year between 2005 and 2010, what is the annual growth rate of real wage from 2005 to 2010?

Answer: 5%

c. (3 points) CPI for year 2006 is 1.21. If he expects his real wage to be higher by 3% in 2006 than in 2005, what is his nominal wage in 2006? Show your work.

Answer: \$44,359.83

2. (4 points) State and briefly explain two shortcomings of the CPI when measuring inflation.

Answer: Substitution bias
Quality bias

III. Growth

1. (2 points) In Betaland, average labor productivity is \$300. Sixty per cent of the 2400 people in the country are employed. Calculate total output in Betaland.

Answer: \$432,000.

2. (2 points) Thomas Malthus (1766-1834) argued that, roughly speaking, increase in population would lower living standards, because population grows geometrically while food production only grows arithmetically (i.e. population grows faster than food production does).

It is true that population grew dramatically, but living standards greatly improved over the last century. It seems his prediction went wrong. Can you briefly explain why? What does he seem to have missed?

Answer: Average labor productivity tremendously increased. The main factor would be technological progress, but can mention other factors, too.