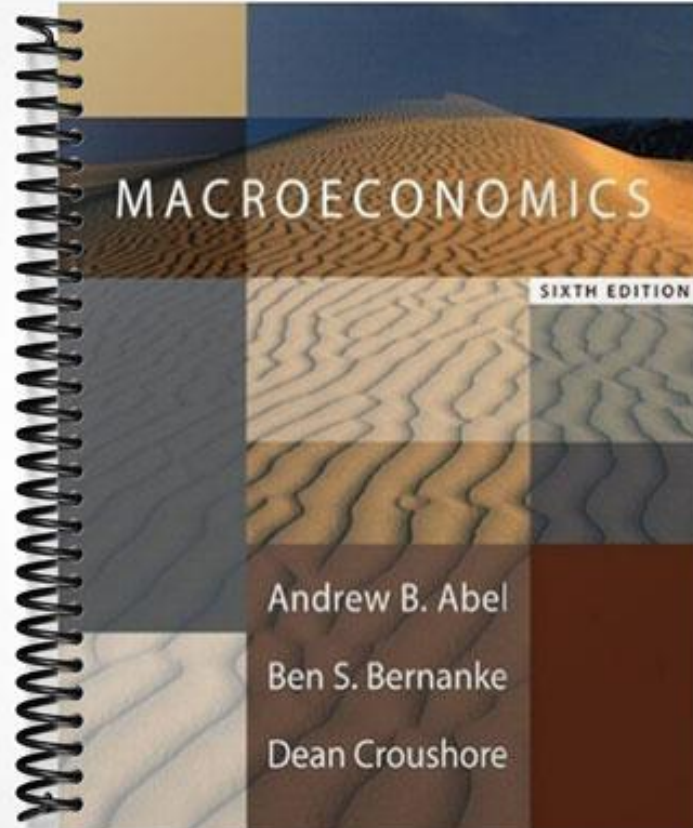


TEST BANK



MACROECONOMICS

SIXTH EDITION

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MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 1) The accounting framework used in measuring current economic activity is called 1) _____
A) the flow of funds accounts. B) the national income accounts.
C) the balance of payments accounts. D) the U.S. expenditure accounts.

Answer: B

- 2) The three approaches to measuring economic activity are the 2) _____
A) consumer, business, and government approaches.
B) product, income, and expenditure approaches.
C) cost, income, and expenditure approaches.
D) private, public, and international approaches.

Answer: B

- 3) The value of a producer's output minus the value of the inputs it purchases from other 3) _____
producers is called the producer's
A) gross product. B) surplus. C) value added. D) profit.

Answer: C

- 4) The Bigdrill company drills for oil, which it sells for \$200 million to the Bigoil company to be 4) _____
made into gas. The Bigoil company's gas is sold for a total of \$600 million. What is the total
contribution to the country's GDP from companies Bigdrill and Bigoil?
A) \$200 million B) \$400 million C) \$800 million D) \$600 million

Answer: D

- 5) Sam's Semiconductors produces computer chips, which it sells for \$10 million to Carl's 5) _____
Computer Company (CCC). CCC's computers are sold for a total of \$16 million. What is the
value added of CCC?
A) \$16 million B) \$10 million C) \$26 million D) \$6 million

Answer: D

- 6) The Compagnie Naturelle sells mounted butterflies, using butterfly bait it buys from another 6) _____
firm for \$20,000. It pays its workers \$35,000, pays \$1000 in taxes, and has profits of \$3000. What
is its value added?
A) \$19,000 B) \$3000 C) \$39,000 D) \$59,000

Answer: C

- 7) The equation total production = total income = total expenditure is called 7) _____
A) the total identity.
B) the goods-market equilibrium condition.
C) Say's Law.
D) the fundamental identity of national income accounting.

Answer: D

- 8) To ensure that the fundamental identity of national income accounting holds, changes in 8) _____
inventories are
A) counted as consumption. B) ignored.
C) treated as part of expenditure. D) treated as part of saving.

Answer: C

ESSAY. Write your answer in the space provided or on a separate sheet of paper.

- 9) Describe the three different approaches to measuring the amount of economic activity that occurs during a

period of time and explain why they all give identical measurements.

Answer: The approaches are the product approach, which measures the amount of output produced; the income approach, which measures the incomes received by producers of output; and the expenditure approach, which measures the amount of spending by the ultimate purchasers of output. They give identical measurements because everything that is produced is purchased by someone, so the expenditure and product approaches must be equal, and because anything that is purchased means that someone is earning income in the same amount, so the expenditure and income approaches must be equal.

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 10) To what extent are homemaking and child-rearing accounted for in the government's GDP accounts? 10) _____
- A) Only to the extent that they are provided for pay
 - B) All homemaking and child-rearing are accounted for
 - C) Not at all
 - D) Only to the extent that taxes are paid on them

Answer: A

- 11) The measurement of GDP includes 11) _____
- A) nonmarket goods such as homemaking and child-rearing.
 - B) estimated values of activity in the underground economy.
 - C) the benefits of clean air and water.
 - D) purchases and sales of goods produced in previous periods.

Answer: B

- 12) Which of the following is included in U.S. GDP? 12) _____
- A) A newly constructed house
 - B) The purchase of a watch from a Swiss company
 - C) The sale of a new car from a manufacturer's inventory
 - D) The sale of a used car

Answer: A

- 13) Government statisticians adjust GDP figures to include estimates of 13) _____
- A) the underground economy.
 - B) the costs of pollution to society.
 - C) child-rearing services provided by stay-at-home parents.
 - D) the value of homemaking (work done within the home).

Answer: A

- 14) Because government services are not sold in markets, 14) _____
- A) they are excluded from measurements of GDP.
 - B) taxes are used to value their contribution.
 - C) they are valued at their cost of production.
 - D) the government tries to estimate their market value and uses this to measure the government's contribution to GDP.

Answer: C

- 15) Intermediate goods are 15) _____
- A) either capital goods or inventories.
 - B) capital goods, which are used up in the production of other goods but were produced in earlier periods.
 - C) final goods that remain in inventories.

D) goods that are used up in the production of other goods in the same period that they were produced.

Answer: D

- 16) Capital goods are 16) _____
- A) a type of intermediate good.
 - B) produced in one year, whereas final goods are produced over a period of more than one year.
 - C) final goods, because they are not used up during a given year.
 - D) produced in the same year as the related final good, whereas intermediate goods are produced in different years.

Answer: C

- 17) Marvin's Metal Company produces screws that it sells to Ford, which uses the screws as a component of its cars. In the national income accounts, the screws are classified as 17) _____
- A) capital goods.
 - B) intermediate goods.
 - C) final goods.
 - D) inventory.

Answer: B

- 18) Larry's Lathe-makers Limited produces lathes, which are purchased by furniture manufacturers all over the world. The standard lathe depreciates over a twenty-five year period. In the national income accounts, the lathes are classified as 18) _____
- A) intermediate goods.
 - B) inventory.
 - C) capital goods.
 - D) raw materials.

Answer: C

- 19) Fred the farmer purchased five new tractors at \$20,000 each. Fred sold his old tractors to other farmers for \$50,000. The net increase in GDP of these transactions was 19) _____
- A) \$50,000.
 - B) \$125,000.
 - C) \$100,000.
 - D) \$150,000.

Answer: C

- 20) Inventories include each of the following *EXCEPT* 20) _____
- A) goods in process.
 - B) office equipment.
 - C) raw materials held by firms.
 - D) unsold finished goods.

Answer: B

- 21) GDP differs from GNP because 21) _____
- A) $GDP = GNP - \text{capital consumption allowances}$.
 - B) $GNP = GDP - \text{capital consumption allowances}$.
 - C) $GDP = GNP - \text{net factor payments from abroad}$.
 - D) $GNP = GDP - \text{net factor payments from abroad}$.

Answer: C

- 22) If an American construction company built a road in Kuwait, this activity would be 22) _____
- A) fully included in U.S. GDP.
 - B) excluded from U.S. GNP.
 - C) included in U.S. GDP but not in U.S. GNP.
 - D) included in U.S. GNP only for that portion that was attributable to American capital and labor.

Answer: D

- 23) Nations such as Egypt and Turkey may have wide differences between GNP and GDP because both the

countries 23)

- A) have a large portion of their GNP produced by multinational corporations.
- B) have a high level of imports and exports relative to GNP.
- C) have a large number of citizens working abroad.
- D) purchase large amounts of military wares from other countries.

Answer: C

- 24) If $C = \$500$, $I = \$150$, $G = \$100$, $NX = \$40$, and $GNP = \$800$, how much is NFP ? 24) _____
- A) \$10 B) -\$10 C) \$5 D) -\$5

Answer: A

- 25) The income-expenditure identity says that 25) _____
- A) $Y = C + I + G + NX$. B) $Y = C + I + G$.
- C) $Y = C + I + G + NX + CA$. D) $Y = C + S + T$.

Answer: A

- 26) Which of the following is *not* a category of consumption spending in the national income accounts? 26) _____
- A) Services B) Housing purchases
- C) Nondurable goods D) Consumer durables

Answer: B

- 27) Consumer spending is spending by _____ households on final goods and services produced _____ 27) _____
- A) domestic and foreign; domestically and abroad
- B) domestic and foreign; domestically
- C) domestic; domestically and abroad
- D) domestic; domestically

Answer: C

- 28) In the expenditure approach to GDP, which of the following would be excluded from measurements of GDP? 28) _____
- A) All government payments are included in GDP
- B) Government payments for welfare
- C) Government payments for goods produced by foreign firms
- D) Government payments for goods produced by firms owned by state or local governments

Answer: B

- 29) Net national product equals 29) _____
- A) gross national product minus statistical discrepancy.
- B) national income minus taxes on production and imports.
- C) gross national product minus depreciation.
- D) national income plus depreciation.

Answer: C

- 30) Monica grows coconuts and catches fish. Last year she harvested 1500 coconuts and 600 fish. She values one fish as having a worth of three coconuts. She gave Rachel 300 coconuts and 100 fish for helping her to harvest coconuts and catch fish, all of which were consumed by Rachel. In terms of fish, Monica's income would equal 30) _____
- A) 2700 fish. B) 700 fish. C) 1100 fish. D) 900 fish.

Answer: D

- 31) Monica grows coconuts and catches fish. Last year she harvested 1500 coconuts and 600 fish. She values one fish as having a worth of three coconuts. She gave Rachel 300 coconuts and 100 fish for helping her to harvest coconuts and catch fish, all of which were consumed by Rachel. Monica consumed the remaining fish and coconuts. In terms of fish, total consumption by both Monica and Rachel would equal _____
- A) 1100 fish. B) 700 fish. C) 2700 fish. D) 900 fish.

Answer: A

- 32) Private disposable income equals _____
- A) $NNP - \text{taxes} + \text{transfers} + \text{interest}$.
B) $\text{national income} - \text{taxes} - \text{transfers} + \text{interest}$.
C) $\text{national income} - \text{taxes} + \text{transfers} + \text{interest}$.
D) $GNP - \text{taxes} + \text{transfers} + \text{interest}$.

Answer: D

ESSAY. Write your answer in the space provided or on a separate sheet of paper.

- 33) Carl's Computer Center sells computers to business firms. Businesses then use the computers to produce other goods and services. Over the past year, sales representatives were paid \$3.5 million, \$0.5 million went for rent on the building, \$0.5 million went for taxes, \$0.5 million was profit for Carl, and \$10 million was paid for computers at the wholesale level. What was the firm's total contribution to GDP?

Answer: \$5 million. Note that the \$10 million paid for computers is not part of value added. Note also that the fact that the firm produces an intermediate good doesn't mean that it doesn't contribute to GDP.

- 34) What is the main conceptual difference between GDP and GNP? How different are GDP and GNP for the United States? For countries with many citizens who work abroad?

Answer: GDP represents output produced within a country, while GNP represents output produced by a country's factors of production; the difference is net factor payments from abroad. For the United States there's little difference, but for countries that have many citizens working abroad, there may be a big difference.

- 35) Citizens of the country of Heehaw produce hay and provide entertainment services (banjo playing). In one year they produced \$15 million worth of hay, with \$11 million consumed domestically and the other \$4 million sold to neighboring countries. They provided \$7 million worth of banjo-playing services, \$5 million in Heehaw, and \$2 million in neighboring countries. They purchased \$6 million worth of soda pop from neighboring countries.

Calculate the magnitudes of GNP, GDP, net factor payments from abroad, net exports, and the current account balance.

Answer: GNP is output by citizens, which equals $\$15 \text{ million} + \$7 \text{ million} = \$22 \text{ million}$. GDP is output produced in the country, which equals $\$15 \text{ million (hay)} + \$5 \text{ million (domestic banjo playing)} = \20 million . Net factor payments from abroad represent the difference between GNP and GDP; this is the $\$2 \text{ million}$ paid for banjo playing in other countries. Net exports are $\$4 \text{ million (hay sold abroad)} - \$6 \text{ million (soda pop imports)} = -\2 million . (Note that banjo playing abroad is not part of GDP, so it is not part of net exports either.) The current account balance is $\text{net exports} + \text{net factor payments} = -\$2 \text{ million} + \$2 \text{ million} = 0$.

- 36) In the country of Kwaki, people produce canoes, fish for salmon, and grow corn. In one year they produced 5000 canoes using labor and natural materials only, but sold only 4000, as the economy entered a recession. The cost of producing each canoe was \$1000, but the ones that sold were priced at \$1250. They fished \$30 million worth of salmon. They used \$3 million of the salmon as fertilizer for corn. They grew and ate \$55 million of corn. What was Kwaki's GDP for the year?

Answer: Inventories are valued at the cost of production, so the 1000 canoes in inventory were valued at \$1000

each, for a total of \$1250 each totaled \$5 million. Salmon as a final good were worth \$27 million (the other \$3 million \$1 million. Four were used up as an intermediate good), and corn worth \$55 million was grown. So total GDP (in thousand canoes at millions) was $\$1 + \$5 + \$27 + \$55 = \$88$ million.

- 37) In one year in the country of Countem, workers earned \$4150, proprietor's income was \$392, rental income was \$20, corporate profits were \$683, net interest was \$228, taxes on production and imports were \$329, business current transfer payments were \$12, the current surplus of government enterprises was \$3, statistical discrepancy was \$28, consumption of fixed capital was \$882, factor income received from the rest of the world was \$331, and payments of factor income to the rest of the world was \$623. Based on these data, compute national income, net national product, gross national product, and gross domestic product.

Answer: The first eight items sum to national income, which equals \$5817. Adding the statistical discrepancy to national income gives net national product, which is thus \$5845. Adding consumption of fixed capital to that gives gross national product, which is thus \$6727. Subtract net factor income, which equals factor income received from the rest of the world minus payments of factor income to the rest of the world ($\$331 - \$623 = -\$292$), from gross national product equals gross domestic product, which is thus \$7019.

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 38) The value of a household's assets minus the value of its liabilities is called 38) _____
A) wealth. B) income. C) stock. D) debt.

Answer: A

- 39) In a given year, a country's GDP = \$9841, net factor payments from abroad = \$889, taxes = \$869, transfers received from the government = \$296, interest payments on the government's debt = \$103, consumption = \$8148, and government purchases = \$185. The country had private saving equal to 39) _____
A) \$3850. B) \$2112. C) \$285. D) \$2397.

Answer: B

- 40) In a given year, a country's GDP = \$9841, net factor payments from abroad = \$889, taxes = \$869, transfers received from the government = \$296, interest payments on the government's debt = \$103, consumption = \$8148, and government purchases = \$185. The country had government saving equal to 40) _____
A) \$285. B) \$2112. C) \$2397. D) \$3850.

Answer: A

- 41) In a given year, a country's GDP = \$9841, net factor payments from abroad = \$889, taxes = \$869, transfers received from the government = \$296, interest payments on the government's debt = \$103, consumption = \$8148, and government purchases = \$185. The country had national saving equal to 41) _____
A) \$285. B) \$2112. C) \$2397. D) \$3850.

Answer: C

- 42) If a local government collects taxes of \$500,000, has \$350,000 of government consumption expenditures, makes transfer payments of \$100,000, and has no interest payments or investment, its budget would 42) _____
A) be in balance with neither a surplus nor a deficit.
B) show a surplus of \$150,000.
C) show a surplus of \$50,000.
D) show a deficit of \$50,000.

Answer: C

- 43) The government budget surplus equals 43) _____
A) government receipts minus government outlays.
B) government purchases plus transfers.
C) government purchases minus net receipts.
D) government purchases minus transfers.

Answer: A

- 44) National saving equals private saving plus government saving, which in turn equals 44) _____
A) $GDP + NFP$. B) $GDP + C + G$.
C) $GDP + NFP - C - G$. D) $C + S + T$.

Answer: C

- 45) The uses-of-saving identity says that an economy's private saving is used for 45) _____
A) investment, interest expenses, the government budget deficit, and the current account.
B) investment, the government budget deficit, and the current account.
C) investment, interest expenses, and the government budget deficit.
D) investment, interest expenses, the government budget deficit, transfer payments, and the current account.

Answer: B

- 46) The uses-of-saving identity shows that if the government budget deficit rises, then one of the 46) _____ following must happen.
A) Private saving must rise, investment must rise, and/or the current account must fall.
B) Private saving must rise, investment must fall, and/or the current account must rise.
C) Private saving must fall, investment must rise, and/or the current account must rise.
D) Private saving must rise, investment must fall, and/or the current account must fall.

Answer: D

- 47) Suppose that private saving is \$1590 billion, investment is \$1945 billion, and the current account 47) _____ balance is -\$489 billion. From the uses-of-saving identity, how much is government saving?
A) \$844 billion B) -\$134 billion C) -\$844 billion D) \$134 billion

Answer: B

- 48) Suppose that national saving is \$1456 billion, investment is \$1945 billion, and private saving is 48) _____ \$1590 billion. How much is the current account balance?
A) -\$489 billion B) \$221 billion C) -\$221 billion D) \$489 billion

Answer: A

- 49) In the mid-to-late 1980s, the United States had "twin deficits" because both _____ and 49) _____ were negative.
A) government saving; private saving B) government saving; the current account
C) the current account; investment D) saving; investment

Answer: B

ESSAY. Write your answer in the space provided or on a separate sheet of paper.

- 50) How does chain weighting lead to a different measurement of real GDP than the methods used by the BEA prior to 1996? What are the advantages of chain weighting? What are the disadvantages?

Answer: Prior to 1996, the growth rate of real GDP depended on which year was chosen as the base year. Now, however, the current year and preceding year are used as base years, averaging results using each as base year. The advantages of this method are that there is no longer a need to recompute historical data or to change base years. However, a disadvantage is that real GDP is no longer the sum of its components.

51) Explain how it was possible for U.S. national wealth to have risen substantially from 1990 to 1999, yet national saving declined as a percentage of GDP.

Answer: An increase in wealth doesn't require additional saving, if the value of existing assets increases. In the 1990s, gains in the stock market caused U.S. national wealth to rise.

52) In a given year, a country's GDP = \$3843, net factor payments from abroad = \$191, taxes = \$893, transfers received from the government = \$422, interest payments on the government's debt = \$366, consumption = \$3661, and government purchases = \$338. Calculate the values of private saving, government saving, and national saving.

Answer: Private saving = $Y + NFP - T + TR + INT - C = \$3843 + \$191 - \$893 + \$422 + \$366 - \$3661 = \268 .

Government saving = $T - TR - INT - G = \$893 - \$422 - \$366 - \$338 = -\$233$. National saving = $Y + NFP - C - G = \$3843 + \$191 - \$3661 - \$338 = \$35$.

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

53) The country of Old Jersey produces milk and butter, and it has published the following macroeconomic data, where quantities are in gallons and prices are dollars per gallon. 53) _____

Good	Year 1		Year 2	
	Quantity	Price	Quantity	Price
Milk	500	\$2	900	\$3
Butter	2000	\$1	3000	\$2

Between Year 1 and Year 2, nominal GDP grew by

- A) 190.0% B) 83.3% C) 65.5% D) 60.0%.

Answer: A

54) The value of real GDP in the current year equals 54) _____

- A) the value of base-year output in prices of the current year.
 B) the value of current-year output in prices of the base year.
 C) the value of base-year output in prices of the base year.
 D) the value of current-year output in prices of the current year.

Answer: B

55) The country of Old Jersey produces milk and butter, and it has published the following macroeconomic data, where quantities are in gallons and prices are dollars per gallon. 55) _____

Good	Year 1		Year 2	
	Quantity	Price	Quantity	Price
Milk	500	\$2	900	\$3
Butter	2000	\$1	3000	\$2

Between Year 1 and Year 2, the percent change in real GDP (based on Year 1 as a base year) was

- A) 130%. B) 58%. C) 60%. D) 190%.

Answer: C

56) The country of Old Jersey produces milk and butter, and it has published the following macroeconomic data, where quantities are in gallons and prices are dollars per gallon. 56) _____

Good	Year 1		Year 2	
	Quantity	Price	Quantity	Price
Milk	500	\$2	900	\$3

Butter and 2000
 Year 2,
 But the
 wee GDP
 n deflator

(based 56)
on Year 1
as a base
year)
rose

- A) 83.33%. B) 123.00%. C) 60.00%. D) 81.25%.
Answer: D

57) Currently, the U.S. national income and product accounts (NIPA) use what type of price index to calculate real GDP? 57) _____

- A) Fixed-weight B) Chain-weight
C) Heavy-weight D) Variable-weight
Answer: B

58) If nominal GDP for 2003 is \$6400 billion and real GDP for 2004 is \$6720 billion (in 2003 dollars), then the growth rate of real GDP is 58) _____

- A) 50%. B) 5%. C) 0.5%. D) 0%.
Answer: B

59) If the price index was 100 in 1990 and 120 in 2000, and nominal GDP was \$360 billion in 1990 and \$480 billion in 2000, then the value of 2000 GDP in terms of 1990 dollars would be 59) _____

- A) \$384 billion. B) \$400 billion. C) \$300 billion. D) \$424 billion.
Answer: B

60) Nominal GDP in 1970 was \$1,035.6 billion, and in 1980 it was \$2,784.2 billion. The GDP price index was 30.6 for 1970 and 60.4 for 1980, where 1992 was the base year. Calculate the percent change in real GDP in the decade from 1970 to 1980. Round off to the nearest percentage point. 60) _____

- A) 97% B) 169% C) 136% D) 36%
Answer: D

61) Nominal personal consumption expenditures in the United States were \$1760.4 billion in 1980 and rose to \$3839.3 billion in 1990. The price index for personal consumption expenditures was 58.5 for 1980 and 92.9 for 1990, where 1992 was the base year. Calculate the percent change in real personal consumption expenditures (rounded to the nearest percentage point) in the decade. 61) _____

- A) 118% B) 37% C) 137% D) 59%
Answer: B

62) Nominal gross private domestic investment was \$1888.0 billion in 2004 and rose to \$2057.4 billion in 2005. The chain-weight price index for gross private domestic investment was 106.6 for 2004 and 110.3 for 2005, where 2000 was the base year. Calculate the percent change in real gross private domestic investment (rounded to the nearest percentage point) from 2004 to 2005. 62) _____

- A) 1% B) 5% C) 4% D) 3%
Answer: B

63) A disadvantage of chain-weighting is that 63) _____

- A) it causes output growth to slow.
B) past growth rates of real GDP change whenever the base year changes.
C) the components of real GDP don't sum to real GDP.
D) past inflation rates change whenever the base year changes.
Answer: C

64) The U.S. inflation rate _____ in the 1960s and 1970s, _____ in the 1980s, and _____ in the 1990s.

- 64) _____
 A) rose; fell sharply; rose again
 B) was steady; rose sharply; remained high
 C) was steady; rose sharply; fell
 D) rose; fell sharply; remained low
 Answer: D

- 65) Two years ago, the GDP deflator for Old York was 300, and today it is 330.75. Based on this information the annual average inflation rate for the two years was 65) _____
 A) 10%. B) 5.125%. C) 5%. D) 10.25%.

Answer: C

- 66) If the price index last year was 1.0 and today it is 1.4, what is the inflation rate over this period? 66) _____
 A) -4% B) 1.4% C) 40% D) 4%

Answer: C

- 67) You are given information on the consumer price index (CPI). The values given are those for December 31 of each year. 67) _____

<u>Year</u>	<u>CPI</u>
1989	126.1
1990	133.8
1991	137.9
1992	141.9
1993	145.8

In which year was the inflation rate the highest?

- A) 1992 B) 1991 C) 1990 D) 1993

Answer: C

- 68) The consumer price index (CPI) was 180 for 2002 when using 1983 as the base year (1983 = 100). Now suppose we switch and use 2002 as the base year (2002 = 100). What is the CPI for 1983 with the new base year? 68) _____

- A) 111.2 B) 80.0 C) 18.0 D) 55.6

Answer: D

- 69) Nominal government purchases were \$2226.2 billion in 2004 and rose to \$2372.8 billion in 2005. Real government purchases were \$1940.6 for 2004 and \$1958.0 for 2005, where 2000 was the base year. Calculate the percent change in the chain-weight price index for government purchases (rounded to the nearest percentage point) from 2004 to 2005. 69) _____

- A) 6% B) 8% C) 4% D) 2%

Answer: A

- 70) The Boskin Commission concluded that the CPI overstates increases in the cost of living by _____ percentage point(s) per year. 70) _____

- A) less than 1 B) over 4 C) about 3 D) 1 to 2

Answer: D

- 71) The CPI may overstate inflation for all the following reasons EXCEPT 71) _____

- A) substitution by consumers towards cheaper goods.
 B) problems measuring changes in the quality of goods.
 C) problems measuring the quality of services.
 D) changes in Social Security benefits.

Answer: D

ESSAY. Write your answer in the space provided or on a separate sheet of paper.

72) What is the difference between nominal and real economic variables? Why do economists tend to concentrate on changes in real magnitudes?

Answer: Nominal variables are in units of money, while real variables are in physical quantities of output. We measure nominal variables using current market prices and real variables using market prices in a given base year. Nominal variables may increase, but you don't know if the increase is due to higher prices and the same quantity, or a higher quantity with unchanged prices; real variables reflect just quantity changes. For the most part, real variables (consumption, investment, and the capital stock) affect each other in the economy, with lesser roles played by nominal variables (money supply, and price level).

73) The country of Myrule has produced the following quantity of gauges and potatoes, with the price of each listed in dollar terms.

	Year			
	1		2	
	Quantity	Price	Quantity	Price
Gauges	8,000	\$4	10,000	\$3
Potatoes	6,000	\$8	5,000	\$14

- (a) Using Year 1 as the base year, what is the growth rate of real GDP from Year 1 to Year 2?
 (b) Based on the GDP deflator, what is the inflation rate from Year 1 to Year 2?

Answer: (a) Real GDP for Year 1 = Year 1 quantities at Year 1 prices = $(8000 \times \$4) + (6000 \times \$8) = \$80,000$.
 Real GDP for Year 2 = Year 2 quantities at Year 1 prices = $(10,000 \times \$4) + (5000 \times \$8) = \$80,000$.
 Growth rate of real GDP = 0%

(b) Nominal GDP for Year 1 = Year 1 quantities at Year 1 prices = $(8000 \times \$4) + (6000 \times \$8) = \$80,000$.
 Nominal GDP for Year 2 = Year 2 quantities at Year 2 prices = $(10,000 \times \$3) + (5000 \times \$14) = \$100,000$.
 GDP deflator = nominal GDP/real GDP
 GDP deflator in Year 1 = $\$80,000/\$80,000 = 1$.
 GDP deflator in Year 2 = $\$100,000/\$80,000 = 1.25$.
 Inflation rate = $[(1.25/1) - 1] \times 100\% = 25\%$.

74) By how much does the CPI overstate true increases in the cost of living, according to the Boskin Commission? What are the main reasons for this bias in the CPI? What are the economic implications of the bias?

Answer: The Boskin Commission reported that the CPI overstates inflation by 1 to 2 percentage points per year. The bias arises because of difficulty in measuring quality change (especially for services) and because the CPI doesn't account for the substitution that people make between goods when relative prices change. The bias implies that our measures of real income growth are understated and that Social Security benefits are being adjusted more than they should be to account for inflation.

75) In 1975, Richard Petty won the NASCAR race in Richmond, earning \$6,265. In 2006, Dale Earnhardt, Jr., won the race, earning \$239,166. The CPI index was 52.5 in 1975 and 198.7 in 2006 (base year = 1982-1984). Calculate the real earnings of both Petty and Earnhardt.

Answer: Petty: $\$6,265/(52.5/100) = \$11,933$. Earnhardt: $\$239,166/(198.7/100) = \$120,365$. So Earnhardt's real earnings were over ten times those of Petty (thanks to NASCAR's increased popularity).

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

76) The nominal interest rate minus the inflation rate is the _____
 A) discount rate. B) forward rate.

C) real interest rate.

D) depreciation rate.

Answer: C

- 77) By Marks buys a one-year German government bond (called a bund) for \$400. He receives principal and interest totaling \$436 one year later. During the year the CPI rose from 150 to 162. The nominal interest rate on the bond was _____, and the real interest rate was _____.
A) 9%; -1% B) 9%; 1% C) 36%; 12% D) 36%; 24%

Answer: B

- 78) The expected real interest rate (r) is equal to _____
A) nominal interest rate plus expected inflation rate.
B) nominal interest rate minus expected inflation rate.
C) nominal interest rate minus inflation rate.
D) expected nominal interest rate minus inflation rate.

Answer: B

- 79) In 2004, inflation exceeded expected inflation. In 2005, expected inflation exceeded inflation. Therefore the real interest rate was _____ than the expected real interest rate in 2004 and the real interest rate was _____ than the expected real interest rate in 2005.
A) greater; less B) less; greater C) greater; greater D) less; less

Answer: B

- 80) If the expected inflation rate was 2.5%, the expected real interest rate was 4.0%, and the actual inflation rate turned out to be 3.2%, then the real interest rate equals _____
A) 1.7%. B) 4.7%. C) 3.3%. D) 3.2%.

Answer: C

- 81) By Marks buys a one-year German government bond (called a bund) for \$400. He receives principal and interest totaling \$436 one year later. During the year the CPI rose from 150 to 162, but he had thought the CPI would be at 159 by the end of the year. By Marks had expected the real interest rate to be _____, but it actually turned out to be _____.
A) 8%; 1% B) 6%; 3% C) 1%; 3% D) 3%; 1%

Answer: D

- 82) Historical analysis of real interest rates in the United States shows that _____
A) real interest rates were unusually low in the 1980s, spurring the economic growth that occurred during the Reagan administration.
B) real interest rates were unusually low in both the 1970s and 1980s.
C) real interest rates were unusually low in the 1970s and unusually high in the 1980s.
D) real interest rates were unusually high in both the 1970s and 1980s.

Answer: C

ESSAY. Write your answer in the space provided or on a separate sheet of paper.

- 83) The nominal interest rate is 7%, today's price level is 150, and you expect the price level to be 156 one year from now. What is the expected inflation rate? What is the expected real interest rate?
Answer: Expected inflation rate = $156/150 - 1 = 0.04 = 4\%$; expected real interest rate = $7\% - 4\% = 3\%$.

- 84) Loretta agrees to lend Ted \$500,000 to buy computers for his consulting firm. They agree to a nominal interest rate of 8%. Both expect the inflation rate to be 2%.
(a) Calculate the expected real interest rate.
(b) If inflation turns out to be 3% over the life of the loan, what is the real interest rate? Who gains from unexpectedly high inflation, Loretta or Ted?

- (c) If inflation turns out to be 1% over the life of the loan, what is the real interest rate? Who gains from unexpectedly low inflation, Loretta or Ted?

Answer: (a) $8\% - 2\% = 6\%$.

(b) $8\% - 3\% = 5\%$. Ted gains from unexpectedly high inflation, because he repays the loan with dollars that aren't worth as much as was expected.

(c) $8\% - 1\% = 7\%$. Loretta gains from unexpectedly low inflation, because she gets repaid with dollars that are worth more than was expected.

- 85) You took out a loan one year ago at a nominal interest rate of 7.5%. The CPI stood at 173.2 at the time and you expected it to rise to 178.6 over the year. Today the CPI is actually 179.5. Calculate the expected real interest rate on the loan and the real interest rate on the loan.

Answer: The expected inflation rate when you took out the loan equals $(178.6 - 173.2)/173.2 = 3.1\%$, so your expected real interest rate was 7.5% (nominal interest rate) - 3.1% (expected inflation rate) = 4.4% . The actual inflation rate over the period equals $(179.5 - 173.2)/173.2 = 3.6\%$, so your real interest rate was 7.5% (nominal interest rate) - 3.6% (inflation rate) = 3.9% .

- 1) B
- 2) B
- 3) C
- 4) D
- 5) D
- 6) C
- 7) D
- 8) C
- 9) The approaches are the product approach, which measures the amount of output produced; the income approach, which measures the incomes received by producers of output; and the expenditure approach, which measures the amount of spending by the ultimate purchasers of output. They give identical measurements because everything that is produced is purchased by someone, so the expenditure and product approaches must be equal, and because anything that is purchased means that someone is earning income in the same amount, so the expenditure and income approaches must be equal.
- 10) A
- 11) B
- 12) A
- 13) A
- 14) C
- 15) D
- 16) C
- 17) B
- 18) C
- 19) C
- 20) B
- 21) C
- 22) D
- 23) C
- 24) A
- 25) A
- 26) B
- 27) C
- 28) B
- 29) C
- 30) D
- 31) A
- 32) D
- 33) \$5 million. Note that the \$10 million paid for computers is not part of value added. Note also that the fact that the firm produces an intermediate good doesn't mean that it doesn't contribute to GDP.
- 34) GDP represents output produced within a country, while GNP represents output produced by a country's factors of production; the difference is net factor payments from abroad. For the United States there's little difference, but for countries that have many citizens working abroad, there may be a big difference.
- 35) GNP is output by citizens, which equals \$15 million + \$7 million = \$22 million. GDP is output produced in the country, which equals \$15 million (hay) + \$5 million (domestic banjo playing) = \$20 million. Net factor payments from abroad represent the difference between GNP and GDP; this is the \$2 million paid for banjo playing in other countries. Net exports are \$4 million (hay sold abroad) minus \$6 million (soda pop imports) = -\$2 million. (Note that banjo playing abroad is not part of GDP, so it is not part of net exports either.) The current account balance is net exports + net factor payments = -\$2 million + \$2 million = 0.
- 36) Inventories are valued at the cost of production, so the 1000 canoes in inventory were valued at \$1000 each, for a total of \$1 million. Four thousand canoes at \$1250 each totaled \$5 million. Salmon as a final good were worth \$27 million (the other \$3 million were used up as an intermediate good), and corn worth \$55 million was grown. So

total GDP (in millions) was $\$1 + \$5 + \$27 + \$55 = \$88$ million.

- 37) The first eight items sum to national income, which equals \$5817. Adding the statistical discrepancy to national income gives net national product, which is thus \$5845. Adding consumption of fixed capital to that gives gross national product, which is thus \$6727. Subtract net factor income, which equals factor income received from the rest of the world minus payments of factor income to the rest of the world ($\$331 - \$623 = -\$292$), from gross national product equals gross domestic product, which is thus \$7019.
- 38) A
- 39) B
- 40) A
- 41) C
- 42) C
- 43) A
- 44) C
- 45) B
- 46) D
- 47) B
- 48) A
- 49) B
- 50) Prior to 1996, the growth rate of real GDP depended on which year was chosen as the base year. Now, however, the current year and preceding year are used as base years, averaging results using each as base year. The advantages of this method are that there is no longer a need to recompute historical data or to change base years. However, a disadvantage is that real GDP is no longer the sum of its components.
- 51) An increase in wealth doesn't require additional saving, if the value of existing assets increases. In the 1990s, gains in the stock market caused U.S. national wealth to rise.
- 52) Private saving = $Y + NFP - T + TR + INT - C = \$3843 + \$191 - \$893 + \$422 + \$366 - \$3661 = \268 . Government saving = $T - TR - INT - G = \$893 - \$422 - \$366 - \$338 = -\$233$. National saving = $Y + NFP - C - G = \$3843 + \$191 - \$3661 - \$338 = \$35$.
- 53) A
- 54) B
- 55) C
- 56) D
- 57) B
- 58) B
- 59) B
- 60) D
- 61) B
- 62) B
- 63) C
- 64) D
- 65) C
- 66) C
- 67) C
- 68) D
- 69) A
- 70) D
- 71) D
- 72) Nominal variables are in units of money, while real variables are in physical quantities of output. We measure nominal variables using current market prices and real variables using market prices in a given base year. Nominal variables may increase, but you don't know if the increase is due to higher prices and the same quantity, or a higher quantity with unchanged prices; real variables reflect just quantity changes. For the most part, real variables (consumption, investment, and the capital stock) affect each other in the economy, with lesser roles played by nominal variables (money supply, and price level).

- 73) (a) Real GDP for Year 1 = Year 1 quantities at Year 1 prices = $(8000 \times \$4) + (6000 \times \$8) = \$80,000$.
 Real GDP for Year 2 = Year 2 quantities at Year 1 prices = $(10,000 \times \$4) + (5000 \times \$8) = \$80,000$.
 Growth rate of real GDP = 0%
- (b) Nominal GDP for Year 1 = Year 1 quantities at Year 1 prices = $(8000 \times \$4) + (6000 \times \$8) = \$80,000$.
 Nominal GDP for Year 2 = Year 2 quantities at Year 2 prices = $(10,000 \times \$3) + (5000 \times \$14) = \$100,000$.
 GDP deflator = nominal GDP/real GDP
 GDP deflator in Year 1 = $\$80,000/\$80,000 = 1$.
 GDP deflator in Year 2 = $\$100,000/\$80,000 = 1.25$.
 Inflation rate = $[(1.25/1) - 1] \times 100\% = 25\%$.
- 74) The Boskin Commission reported that the CPI overstates inflation by 1 to 2 percentage points per year. The bias arises because of difficulty in measuring quality change (especially for services) and because the CPI doesn't account for the substitution that people make between goods when relative prices change. The bias implies that our measures of real income growth are understated and that Social Security benefits are being adjusted more than they should be to account for inflation.
- 75) Petty: $\$6,265/(52.5/100) = \$11,933$. Earnhardt: $\$239,166/(198.7/100) = \$120,365$. So Earnhardt's real earnings were over ten times those of Petty (thanks to NASCAR's increased popularity).
- 76) C
- 77) B
- 78) B
- 79) B
- 80) C
- 81) D
- 82) C
- 83) Expected inflation rate = $156/150 - 1 = 0.04 = 4\%$; expected real interest rate = $7\% - 4\% = 3\%$.
- 84) (a) $8\% - 2\% = 6\%$.
 (b) $8\% - 3\% = 5\%$. Ted gains from unexpectedly high inflation, because he repays the loan with dollars that aren't worth as much as was expected.
 (c) $8\% - 1\% = 7\%$. Loretta gains from unexpectedly low inflation, because she gets repaid with dollars that are worth more than was expected.
- 85) The expected inflation rate when you took out the loan equals $(178.6 - 173.2)/173.2 = 3.1\%$, so your expected real interest rate was 7.5% (nominal interest rate) - 3.1% (expected inflation rate) = 4.4% . The actual inflation rate over the period equals $(179.5 - 173.2)/173.2 = 3.6\%$, so your real interest rate was 7.5% (nominal interest rate) - 3.6% (inflation rate) = 3.9% .