# CHAPTER 2 Measuring the Macroeconomy

## MULTIPLE CHOICE

1. Who created the original National Income and Product Accounts in the 1930s?
   a. John M. Keynes
   b. Paul A. Samuelson
   c. William D. Nordhaus
   d. Simon Kuznets
   e. Milton Friedman

   ANS: D REF: Section 2.1 TOP: Factual

2. The National Income and Product Accounts provides a system for:
   a. aggregating the production of all goods and services into a single measure of economic activity.
   b. aggregating the production of all goods into a single measure of economic activity.
   c. aggregating the production of all services into a single measure of economic activity.
   d. aggregating the production of most goods and services into a single measure of economic activity.
   e. aggregating the production of all goods and services into two measures of economic activity.

   ANS: A REF: Section 2.1 TOP: Factual

3. The National Income and Product Accounts allows us to relate ___________ to ___________ to ___________.
   a. household income; government income; firm income
   b. total output; total spending; inflation
   c. total output; inflation; total income
   d. household income; household expenditure; total output
   e. total output; total spending; total income

   ANS: E REF: Section 2.1 TOP: Applied

4. The National Income and Product Accounts identity states:
   a. Expenditure = Production + Income.
   b. Production = Expenditure – Income.
   c. Production = Expenditure + Income.
   d. Expenditure = Production – Income.
   e. Production = Expenditure = Income.

   ANS: E REF: Section 2.2 TOP: Applied

5. The difference between *economic* profits and *normal* profits is that:
   a. normal profits are earnings based on the normal competitive return to one’s own labor; economic profits are the above-normal returns associated with prices that exceed competitive prices.
   b. economic profits are earnings based on the normal competitive return to one’s own

labor; normal profits are the above-normal returns associated with prices that exceed competitive prices.
c. normal profits are earnings based on the normal competitive return to one's own labor; economic profits are the above-normal returns associated with prices that exceed monopolistic prices.
d. economic profits are earnings based on the noncompetitive return to one's own labor; normal profits are the above-normal returns associated with prices that exceed competitive prices.
e. None of the above is correct.

ANS: A REF: Section 2.2 TOP: Factual

6. A lesson from microeconomics is that unless there is some market power where firms charge prices above marginal cost, __________ are zero.
a. costs
b. revenues
c. normal profits
d. economic profits
e. variable costs

ANS: D REF: Section 2.2 TOP: Applied

7. A lesson from microeconomics is that under perfect competition, where firms charge prices equal to marginal cost, __________ are zero.
a. revenues
b. economic profits
c. normal profits
d. variable costs
e. wages

ANS: C REF: Section 2.2 TOP: Applied

8. The statistic used by economists to measure the value of economic output is:
a. the unemployment rate.
b. GDP.
c. the CPI.
d. the GDP deflator.
e. the federal funds rate.

ANS: B REF: Section 2.2 TOP: Factual

9. An economy's __________ is equal to its __________.
a. consumption; income
b. expenditure on goods and services; output
c. expenditure on goods; expenditure on services
d. investment; government expenditures
e. taxes; net exports

ANS: B REF: Section 2.2 TOP: Factual

10. According to the expenditure approach, if $Y$ is GDP, $C$ is consumption, $I$ is investment, $G$ is government purchases, and NX is net exports, the national income identity can be written as:
a. $Y = C + I + G$.
b. $Y = C + I + G - \text{NX}$.
c. $Y + C = I + G + \text{NX}$.
d. $Y = (C + I + G)/\text{NX}$.
e. $Y = C + I + G + \text{NX}$.

ANS: E REF: Section 2.2 TOP: Applied

11. According to the expenditure approach, if $Y$ is GDP, $C$ is consumption, $I$ is investment, $G$ is government purchases, and NX is net exports, the national income identity can be written as:
a. $Y + C - G = I + \text{NX}$.
b. $Y - C = I + G - \text{NX}$.
c. $Y - C - G - I = \text{NX}$.
d. $Y = (C + I + G)/\text{NX}$.
e. $Y = C + I + G$.

ANS: C REF: Section 2.2 TOP: Applied

12. According to the expenditure approach, if $Y$ is GDP, $C$ is consumption, $I$ is investment, $G$ is government purchases, and NX is net exports, which of the following is the national income identity?
a. $Y = C + I + G - \text{NX}$
b. $Y = C + I + G + \text{NX}$
c. $Y + C = I + G + \text{NX}$
d. $Y = (C + I + G)/\text{NX}$
e. $Y = C + I + G$

ANS: B REF: Section 2.2 TOP: Applied

*Table 2.1: U.S. 2006 Gross Domestic Product ($billions)*

| | |
|---|---|
| Personal consumption expenditures | 9,269 |
| Goods | 3,785 |
| Services | 5,484 |
| Gross private domestic investment | 2,213 |
| Fixed investment | 2,163 |
| Change in private inventories | 50 |
| Net exports of goods and services | –763 |
| Exports | 1,466 |
| Imports | 2,229 |
| Government expenditures | 2,528 |
| Federal | 927 |
| State and local | 1,601 |

13. Consider Table 2.1, the National Income Accounts for 2006. From the data, total GDP is:
a. $30,951 billion.
b. $13,247 billion.

c. $14,772 billion.
d. $14,009 billion.
e. $10,719 billion.

ANS: B REF: Section 2.2 TOP: Factual

14. In 2005, household expenditures accounted for about ___________ of total GDP.
a. 19 percent
b. 40 percent
c. 16 percent
d. 70 percent
e. 11 percent

ANS: D REF: Section 2.2 TOP: Factual

15. In 2005, investment expenditures accounted for about ___________ of total GDP.
a. 70 percent
b. 40 percent
c. 16 percent
d. 19 percent
e. 11 percent

ANS: C REF: Section 2.2 TOP: Factual

16. In 2005, government expenditures accounted for about ___________ of total GDP.
a. 11 percent
b. 40 percent
c. 16 percent
d. 70 percent
e. 19 percent

ANS: E REF: Section 2.2 TOP: Factual

17. Using the expenditure approach, government expenditures include:
a. defense and nondefense federal, state, and local government expenditures.
b. only nondefense federal government expenditures.
c. only federal government expenditures.
d. only state and local government expenditures.
e. residential investment and state and local government expenditures.

ANS: A REF: Section 2.2 TOP: Factual

18. Using the expenditure approach, consumption expenditures include:
a. household purchases of durable and nondurable goods and services.
b. household purchases of durable and nondurable goods.
c. household purchases of durable and nondurable goods and taxes.
d. household purchases of durable and nondurable goods and residences.
e. household purchases of nondurable goods.

ANS: A REF: Section 2.2 TOP: Factual

19. Using the expenditure approach, investment includes

a. household residential expenditures.
b. firm structures, equipment, and inventories.
c. fixed firm and household structures, equipment, and inventories.
d. government and firm equipment expenditures.
e. government defense and firm equipment expenditures.

ANS: C REF: Section 2.2 TOP: Factual

20. Which of the following are *not* included in the expenditure approach to National Income Accounting?
a. transfer payments
b. taxes
c. Social Security
d. changes in the stock exchange
e. all of the above

ANS: E REF: Section 2.2 TOP: Applied

21. Which of the following are *not* included in the expenditure approach to National Income Accounting?
a. defense expenditures
b. firm expenditures on equipment
c. residential expenditures
d. household service expenditures
e. none of the above

ANS: D REF: Section 2.2 TOP: Applied

22. In 2005, the U.S. GDP was about ___________, and ___________ was the largest share.
a. $5 trillion; consumption
b. $12.5 trillion; government expenditures
c. $10.5 trillion; investment
d. $12.5 billion; consumption
e. $12.5 trillion; consumption

ANS: E REF: Section 2.2 TOP: Factual

23. Which of the following are *not* included in the expenditure approach to National Income Accounting?
a. software
b. taxes
c. defense expenditures
d. a and b
e. none of the above

ANS: B REF: Section 2.2 TOP: Factual

24. United States expenditure shares by households, firms, and the government have been relatively _____ except during ___________.
a. constant; the 1970s
b. variable; the Great Depression

c. constant; World War II
d. constant; Vietnam War
e. variable; the 1990s

ANS: C REF: Section 2.2 TOP: Factual

25. Since about __________, United States expenditure shares by households, firms, and the government have been relatively __________.
a. 1939; constant
b. the Great Depression era; constant
c. 1950; variable
d. 1950; constant
e. 1929 until 1945; constant

ANS: D REF: Section 2.2 TOP: Factual

26. Prior to the late 1970s, the United States __________ about as much as it __________.
a. exported; consumed
b. exported; imported
c. imported; consumed
d. invested; exported
e. imported; invested

ANS: B REF: Section 2.2 TOP: Factual

27. According to the *income* approach to GDP, the largest percentage of GDP comes from:
a. indirect business taxes.
b. firm profits.
c. compensation to employees.
d. depreciation of fixed capital.
e. none of the above

ANS: C REF: Section 2.2 TOP: Applied

*Table 2.2: U.S. 2005 and 2006 GDP, the Income Approach ($billions)*

| | 2005 | 2006 |
|---|---|---|
| Compensation of employees, paid | 7,037 | 7,496 |
| Wage and salary accruals | 5,671 | 6,042 |
| Supplements to wages and salaries | 1,866 | 1,454 |
| Indirect taxes | 865 | 913 |
| Net operating surplus | 2,878 | 3,264 |
| Private enterprises | 2,894 | 3,274 |
| Current surplus of government enterprises | –15 | –10 |
| Depreciation of fixed capital | 1,605 | 1,577 |
| Private | 1,353 | 1,311 |
| Government | 252 | 266 |

28. Consider Table 2.2, National Income Accounts for 2005 and 2006. From this data, total GDP in 2005 was:
   a. $10,780.
   b. $24,884.
   c. $14,073.
   d. $12,385.
   e. Not enough information is given.

   ANS: D REF: Section 2.2 TOP: Factual

29. Since about 1970, __________ income share of GDP has been __________.
   a. labor’s; rising
   b. labor’s; falling
   c. profits’; falling
   d. indirect business taxes’; rising
   e. the health sector’s; falling

   ANS: B REF: Section 2.2 TOP: Factual

30. When the city of Los Angeles hires more police officers, __________ may rise, but it may be due to the ___________ associated with crime.
   a. GDP; costs
   b. revenues; costs
   c. taxes; benefits
   d. interest rates; costs
   e. prices; costs

   ANS: A REF: Section 2.2 TOP: Conceptual

31. When a state builds a new penitentiary, __________ rise(s), but that does not imply that __________ improve(s).
   a. income; welfare
   b. GDP; taxes
   c. GDP; transfers
   d. GDP; welfare
   e. taxes; costs

   ANS: D REF: Section 2.2 TOP: Conceptual

32. Which of the following counts toward changes in the current GDP?
   a. A student buys another year of tuition.
   b. You purchase a used stereo from a friend.
   c. The government builds a new highway.
   d. You fix your own sink.
   e. a and c

   ANS: E REF: Section 2.2 TOP: Conceptual

33. Which of the following does *not* count toward changes in the current GDP?
   a. A student buys another year of tuition.
   b. You buy a used car from your parents.

c. The local police station buys new squad cars.
d. The Pentagon buys gasoline.
e. b and c

ANS: B REF: Section 2.2 TOP: Conceptual

34. By how much does the current GDP rise in the following scenario? A real estate agent sells a house for $250,000 that the previous owners had purchased 10 years earlier for $90,000. The real estate agent earns a commission of $10,000.
a. $160,000
b. $250,000
c. $10,000
d. $90,000
e. $260,000

ANS: C REF: Section 2.2 TOP: Factual

35. By how much does GDP change between 2004 and 2005 in the following scenario? In 2004, a rich woman has a butler and pays him $50,000 to perform butler services. In 2005, she marries the butler but he continues to perform butler services.
a. GDP rises by $50,000.
b. GDP is unchanged.
c. GDP falls by $50,000.
d. GDP rises by $25,000.
e. Not enough information is given.

ANS: C REF: Section 2.2 TOP: Factual

36. Nominal GDP is the __________ of all goods and services produced in a period of time using __________ prices.
a. value; 1945
b. summation; current
c. value; a previous year's
d. value; current
e. summation; base year

ANS: D REF: Section 2.3 TOP: Applied

37. Real GDP is the __________ of all goods and services produced in a period of time using __________ prices.
a. summation; current
b. value; base year
c. value; 1970
d. value; 1945
e. summation; base year

ANS: B REF: Section 2.3 TOP: Factual

38. Nominal GDP is given by __________ where the price level is the __________.
a. Nominal GDP = Price level × Real GDP; GDP deflator
b. Nominal GDP = Price level ÷ Real GDP; GDP deflator

c. Nominal GDP = Price level + Real GDP; CPI
d. Nominal GDP = Price level – Real GDP; GDP deflator
e. Nominal GDP = Price level × Real GDP; CPI

ANS: A REF: Section 2.3 TOP: Factual

39. Real GDP is given by __________, where the price level is the __________.
a. Real GDP = Nominal GDP × Price level; CPI
b. Real GDP = Nominal GDP ÷ Price level; GDP deflator
c. Real GDP = Nominal GDP + Price level; GDP deflator
d. Real GDP = Nominal GDP – Price level; GDP deflator
e. Real GDP = Nominal GDP ÷ Price level; CPI

ANS: B REF: Section 2.3 TOP: Factual

40. The price level can be derived as __________ and is called the __________.
a. Price level = Nominal GDP ÷ Real GDP; CPI
b. Price level = Nominal GDP × Real GDP; CPI
c. Price level = Real GDP × Nominal GDP; GDP deflator
d. Price level = Real GDP ÷ Nominal GDP; GDP deflator
e. Price level = Nominal GDP ÷ Real GDP; GDP deflator

ANS: E REF: Section 2.3 TOP: Factual

41. The percent change in the nominal GDP is given as:
a. percent change in the price level + percent change in Real GDP.
b. percent change in the price level – percent change in Real GDP.
c. percent change in the price level × percent change in Real GDP.
d. percent change in the price level ÷ percent change in Real GDP.
e. price level × percent change in Real GDP.

ANS: A REF: Section 2.3 TOP: Applied

42. If the percent change in the price level is __________ than the percent change in __________, __________.
a. smaller; nominal GDP; real GDP shrinks
b. greater; nominal GDP; real GDP shrinks
c. greater; real GDP; nominal GDP shrinks
d. greater; real GDP; nominal GDP stays the same
e. Not enough information is given.

ANS: B REF: Section 2.3 TOP: Applied

43. Nominal gross domestic product is defined as:
a. the value of *all* goods and services produced by an economy, within its borders, over a period of time, at base-year prices.
b. the value of *all* goods produced by an economy, within its borders, over a period of time, at current prices.
c. the value of *all* goods and services produced by an economy, within its borders, over a period of time, at current prices.
d. the value of *all* goods and services produced by an economy’s citizens, regardless

of where they live, over a period of time, at current prices.
e. the value of *all* goods and services produced by an economy's citizens, regardless of where they live, over a period of time, at base-year prices.

ANS: C REF: Section 2.3 TOP: Factual

44. Nominal gross national product is defined as:
a. the value of *all* goods and services produced by an economy's citizens, regardless of where they live, over a period of time, at current prices.
b. the value of *all* goods and services produced by an economy, within its borders over a period of time, at current prices.
c. the value of *all* goods produced by an economy, within its borders, over a period of time, at current prices.
d. the value of *all* goods and services produced by an economy, within its borders, over a period of time, at base-year prices.
e. the value of *all* goods produced by an economy, within its borders, over a period of time, at base-year prices.

ANS: A REF: Section 2.3 TOP: Factual

45. Real gross domestic product is defined as:
a. the value of *all* goods and services produced by an economy, within its borders, over a period of time, at base-year prices.
b. the value of *all* goods and services produced by an economy, within its borders, over a period of time, at current prices.
c. the value of *all* goods produced by an economy, within its borders, over a period of time, at current prices.
d. the value of *all* goods and services produced by an economy's citizens, regardless of where they live, over a period of time, at current prices.
e. the value of *all* goods and services produced by an economy's citizens, regardless of where they live, over a period of time, at base-year prices.

ANS: A REF: Section 2.3 TOP: Factual

46. Real gross national product is defined as:
a. the value of *all* goods and services produced by an economy's citizens, regardless of where they live, over a period of time, at base-year prices.
b. the value of *all* goods and services produced by an economy's citizens, regardless of where they live, over a period of time, at current prices.
c. the value of *all* goods and services produced by an economy, within its borders, over a period of time, at current prices.
d. the value of *all* goods produced by an economy, within its borders, over a period of time, at current prices.
e. the value of *all* goods and services produced by an economy, within its borders, over a period of time, at base-year prices.

ANS: A REF: Section 2.3 TOP: Factual

*Table 2.3: National Income Accounting*

| | 2004 | 2005 |
|---|---|---|
| Quantity of almonds | 1,000 | 1,100 |
| Quantity of DVDs | 500 | 500 |
| Price of almonds | $1.00 | $1.50 |
| Price of DVDs | $15.00 | $14.75 |

47. Consider Table 2.3. Using the Laspeyres index, the real GDP in 2004 is:
a. $8,900.
b. $8,500.
c. $1,500.
d. $15,500.
e. $9,150.

ANS: B REF: Section 2.3 TOP: Factual

48. Consider Table 2.3. Using the Laspeyres index, the real GDP in 2005 is:
a. $9,025.
b. $8,500.
c. $8,600.
d. $9,150.
e. $8,475.

ANS: C REF: Section 2.3 TOP: Applied

49. Consider Table 2.3. Using the Paasche index, the real GDP in 2005 is:
a. $9,150.
b. $8,500.
c. $8,600.
d. $9,025.
e. $8,475.

ANS: D REF: Section 2.3 TOP: Applied

50. Consider Table 2.3. Using the Paasche index, real GDP in 2004 is:
a. $8,475.
b. $8,500.
c. $8,600.
d. $9,150.
e. $8,875.

ANS: E REF: Section 2.3 TOP: Applied

51. Consider Table 2.3. Using the Laspeyres index, inflation between 2004 and 2005 was about:
a. 0 percent.
b. 5 percent.
c. 1 percent.
d. 6 percent.
e. Not enough information is given.

ANS: B REF: Section 2.3 TOP: Applied

52. Consider Table 2.3. Using the Laspeyres index, the percent change in real GDP was about:
    a. 6 percent.
    b. 5 percent.
    c. 0 percent.
    d. 1 percent.
    e. Not enough information is given.

ANS: D REF: Section 2.3 TOP: Applied

53. Consider Table 2.3. Using the Laspeyres index, the percent change in nominal GDP was about:
    a. 5 percent.
    b. 1 percent.
    c. 6 percent.
    d. 0 percent.
    e. Not enough information is given.

ANS: C REF: Section 2.3 TOP: Applied

54. If we calculate the real GDP using the __________ index, we use the __________ period's prices.
    a. Laspeyres; final
    b. Paasche; final
    c. Paasche; initial
    d. chain-weighted; current
    e. chain-weighted; final

ANS: B REF: Section 2.3 TOP: Factual

55. If we calculate the real GDP using the initial period's prices, we are using a __________ index. If, instead, we use the final period's prices, we are using a __________ index.
    a. Paasche; chain-weighted
    b. Laspeyres; chain-weighted
    c. Laspeyres; Paasche
    d. Paasche; Laspeyres
    e. chain-weighted; Paasche

ANS: C REF: Section 2.3 TOP: Factual

56. The chain-weighted measure of real GDP uses prices from:
    a. a constant base year.
    b. a constantly changing base year.
    c. a base year that changes every five years.
    d. a base year that changes every ten years.
    e. none of the above

ANS: B REF: Section 2.3 TOP: Factual

57. Suppose we calculate the percent change in real GDP from year 1 to year 2 using both the Laspeyres and the Paasche indices. With the Laspeyres index we get 12 percent and with the Paasche index we get 9 percent. The chain-weighted growth of real GDP is:
    a. 1.5 percent.
    b. 9.75 percent.
    c. 1.33 percent.
    d. 9.5 percent.
    e. 10.5 percent.

    ANS: E REF: Section 2.3 TOP: Applied

58. If NGDP is nominal GDP and RGDP is real GDP, which of the following can be used to calculate inflation?
    a. percent change in NGDP + percent change in RGDP
    b. percent change in NGDP – percent change in RGDP
    c. percent change in NGDP × percent change in RGDP
    d. percent change in RGDP + percent change in NGDP
    e. percent change in RGDP – percent change in NGDP

    ANS: B REF: Section 2.3 TOP: Factual

59. If NGDP is nominal GDP and *P* is the price level, which of the following can be used to calculate the growth of the real GDP?
    a. percent change in NGDP – percent change in *P*
    b. percent change in NGDP + percent change in *P*
    c. percent change in NGDP × percent change in *P*
    d. percent change in *P* + percent change in NGDP
    e. percent change in *P* – percent change in NGDP

    ANS: A REF: Section 2.3 TOP: Factual

60. If the nominal GDP rises by 3 percent and the price level rises by 5 percent, then the real GDP __________ by __________.
    a. rises; 8 percent
    b. falls; 8 percent
    c. rises; 2 percent
    d. falls; 2 percent
    e. none of the above

    ANS: D REF: Section 2.3 TOP: Applied

61. If the nominal GDP rises by 6 percent and the price level rises by 3 percent, then the real GDP __________ by __________.
    a. falls; 3 percent
    b. rises; 9 percent
    c. rises; 3 percent
    d. falls; 9 percent
    e. none of the above

    ANS: C REF: Section 2.3 TOP: Applied

62. To get a more accurate view of the size of countries' economies, we first need to convert each country's GDP to the dollar using __________ and then adjust for __________.
  a. the interest rate; the exchange rate
  b. the exchange rate; price level differences
  c. price level differences; the interest rate
  d. the exchange rate; fiscal policy
  e. fiscal policy; the exchange rate

ANS: B REF: Section 2.3 TOP: Conceptual

63. If we want to calculate the Mexican real GDP in U.S. dollars but adjusted for prices, we use the following:
  a. $\text{Real GDP}\ \dfrac{\text{U. S. prices}}{\text{MEX}} = \dfrac{\text{Price level}_{\text{U.S}}}{\text{Price level}_{\text{MEX}}} \times \text{Nominal GDP}_{\text{MEX}}$
  b. $\text{Real GDP}\ \dfrac{\text{U. S. prices}}{\text{MEX}} = \dfrac{\text{Price level}_{\text{MEX}}}{\text{Price level}_{\text{U.S}}} \times \text{Nominal GDP}_{\text{MEX}}$
  c. $\text{Real GDP}\ \dfrac{\text{U. S. prices}}{\text{MEX}} = \dfrac{\text{Price level}_{\text{U.S}}}{\text{Price level}_{\text{MEX}}} \times \text{Nominal GDP}_{\text{U.S.}}$
  d. $\text{Real GDP}\ \dfrac{\text{U. S. prices}}{\text{MEX}} = \dfrac{\text{Price level}_{\text{U.S}}}{\text{Price level}_{\text{MEX}}} \div \text{Nominal GDP}_{\text{U.S.}}$
  e. none of the above

ANS: A REF: Section 2.4 TOP: Applied

64. If we want to calculate the U.S. real GDP in Mexican pesos, we would use the following:
  a. $\text{Real GDP}\ \dfrac{\text{U. S. prices}}{\text{MEX}} = \dfrac{\text{Price level}_{\text{MEX}}}{\text{Price level}_{\text{U.S}}} \times \text{Nominal GDP}_{\text{U..S.}}$
  b. $\text{Real GDP}\ \dfrac{\text{U. S. prices}}{\text{MEX}} = \dfrac{\text{Price level}_{\text{U.S}}}{\text{Price level}_{\text{MEX}}} \times \text{Nominal GDP}_{\text{U..S.}}$
  c. $\text{Real GDP}\ \dfrac{\text{U. S. prices}}{\text{MEX}} = \dfrac{\text{Price level}_{\text{U.S.}}}{\text{Price level}_{\text{MEX}}} \div \text{Nominal GDP}_{\text{U..S.}}$
  d. $\text{Real GDP}\ \dfrac{\text{U. S. prices}}{\text{MEX}} = \dfrac{\text{Price level}_{\text{U.S.}}}{\text{Price level}_{\text{MEX}}} \div \text{Nominal GDP}_{\text{U..S.}}$
  e. none of the above

ANS: B REF: Section 2.4 TOP: Applied

65. Define *E* = \$/£ as the dollar/pound exchange rate and $\text{NGDP}_{\text{UK}}$ as the United Kingdom's nominal GDP; then $\text{NGDP}\dfrac{\text{U.S}}{\text{UK}}$, the United Kingdom's nominal GDP in dollars, is given by:
  a. $E = \text{NGDP}_{\text{UK}}\text{NGDP}\dfrac{\text{U.S.}}{\text{UK}}$ .

b. $NGDP\frac{U.S.}{UK} = E \div NGDP_{UK}$.

c. $NGDP_{UK} = E \times NGDP\frac{U.S.}{UK}$ .

d. $NGDP\frac{U.S.}{UK} = E \times NGDP_{UK}$.

e. none of the above

ANS: D REF: Section 2.4 TOP: Conceptual

66. Nominal GDP means that the value of all goods and services is measured in __________ prices.
a. average
b. last year's
c. the base year's
d. current
e. constant

ANS: D REF: Section 2.3 TOP: Factual

67. Consider the data in Table 2.4. The value of Eurozone nominal GDP in U.S. dollars is:
a. $9,797 billion.
b. $9,304 billion.
c. $10,886 billion.
d. $7,536 billion.
e. $6,441 billion.

ANS: C REF: Section 2.4 TOP: Applied

68. Consider the data in Table 2.4. The value of the Eurozone nominal GDP in U.S. dollars adjusted for price differences is:
a. $6,441 billion.
b. $9,304 billion.
c. $10,886 billion.
d. $7,536 billion.
e. $9,797 billion.

ANS: E REF: Section 2.4 TOP: Applied

69. Consider the data in Table 2.4. When we convert the Eurozone's nominal GDP into dollars and adjust for price differences, the U.S. economy is about __________ times __________ than the Eurozone economy.
a. 1.35; smaller
b. 1.35; bigger
c. 1.22; bigger
d. 1.22; smaller
e. Not enough information is given.

ANS: B REF: Section 2.4 TOP: Applied

70. Consider the data in Table 2.4. When we convert the Eurozone's nominal GDP into dollars but do not adjust for price differences, the U.S. economy is about __________ times __________ than the Eurozone economy.
    a. 1.22; smaller
    b. 1.35; smaller
    c. 1.35; bigger
    d. 1.22; bigger
    e. Not enough information is given.

    ANS: D REF: Section 2.4 TOP: Applied

71. Which macroeconomic variables has the text *not* yet discussed in much detail?
    a. the unemployment rate
    b. interest rates
    c. exchange rates
    d. all of the above
    e. none of the above

    ANS: D REF: Section 2.4 TOP: Factual

72. Which macroeconomic variables has the text *not* yet discussed in much detail?
    a. nominal GDP
    b. real GDP
    c. GDP deflator
    d. all of the above
    e. none of the above

    ANS: E REF: Section 2.4 TOP: Factual

**TRUE/FALSE**

1. The largest GDP expenditure share historically has been government expenditure.

    ANS: F
    FEEDBACK: It is consumption expenditure.

    REF: Section 2.2 TOP: Factual

2. In 2005, consumption expenditures accounted for about 70 percent of the total GDP.

    ANS: T REF: Section 2.2 TOP: Factual

3. The value added for a good produced is equal to the value of the firm's output *plus* the value of the intermediate goods used to produce that output.

    ANS: F
    FEEDBACK: It is equal to the value of the firm's output *minus* the value of the intermediate goods used to produce that output.

    REF: Section 2.2 TOP: Applied

4. According to the expenditure approach to GDP, household expenditures include purchases of residential housing.

   ANS: F
   FEEDBACK: Residential housing is included in investment expenditures.

   REF: Section 2.2 TOP: Applied

5. According to the expenditure approach to GDP, investment expenditures include purchases of residential housing.

   ANS: T REF: Section 2.2 TOP: Applied

6. According to the income approach to GDP, the largest portion of GDP is compensation to employees.

   ANS: T REF: Section 2.2 TOP: Applied

7. According to the income approach to GDP, the largest portion of GDP is net operating surplus.

   ANS: F
   FEEDBACK: It is compensation to employees.

   REF: Section 2.2 TOP: Applied

8. In the income approach to GDP, fixed capital depreciation is defined as the after-tax profits of a firm.

   ANS: F
   FEEDBACK: It is the decline in the value of capital due to wear and tear.

   REF: Section 2.2 TOP: Factual

9. GDP measures *all* economic activity.

   ANS: F
   FEEDBACK: It measures only *market* activity.

   REF: Section 2.2 TOP: Factual

10. When you cook yourself dinner, you are contributing to economic activity, but it is not measured in GDP.

    ANS: T REF: Section 2.2 TOP: Conceptual

11. When you buy a car from your brother, which he bought new in 2000, the purchase adds to the current GDP.

ANS: F
FEEDBACK: It added to 2000's GDP.

REF: Section 2.2 TOP: Conceptual

12. GDP often is used as a "measure" of economic welfare; it includes all factors that contribute to economic wellbeing.

ANS: F
FEEDBACK: It does not include costs like pollution, crime, depletion of resources, and environmental degradation.

REF: Section 2.2 TOP: Conceptual

13. If the percent change in prices is greater than the percent change in the nominal GDP, the real GDP shrinks.

ANS: T REF: Section 2.3 TOP: Applied

14. If the percent change in prices is greater than the percent change in the nominal GDP, the real GDP rises.

ANS: F
FEEDBACK: It shrinks: $g_{NGDP} = g_{NGDP} \ \pi < 0$.

REF: Section 2.2 TOP: Applied

15. When calculating the real GDP using the Laspeyres index, we use the final period's prices.

ANS: F
FEEDBACK: We use the initial period's prices.

REF: Section 2.3 TOP: Factual

16. When calculating the real GDP using the Paasche index, we use the final period's prices.

ANS: T REF: Section 2.3 TOP: Factual

17. If the nominal GDP rises by 5 percent and the price level falls by 2 percent, the real GDP falls by 7 percent.

ANS: F
FEEDBACK: The real GDP *rises* by 7 percent.

REF: Section 2.3 TOP: Applied

18. If Croatia's price level is higher than the U.S. price level, Croatia's dollar-denominated GDP, calculated using price adjustments, will appear smaller than if simply calculated with the exchange rate.

    ANS: T REF: Section 2.4 TOP: Applied

19. To get an accurate view of how GDPs differ across countries, we simply need to convert all countries' GDPs into dollars using the prevailing exchange rate.

    ANS: F
    FEEDBACK: We also need to account for price level differences.

    REF: Section 2.4 TOP: Factual

20. If the percent change in real GDP is found to be 4 percent using the Laspeyres index and 3 percent using the Paasche index, the chain-weighted price index will give us a growth rate of 3.5 percent.

    ANS: T
    FEEDBACK: 3.5 = (1/2)(4% + 3%).

    REF: Section 2.3 TOP: Conceptual

**SHORT ANSWER**

1. What is real GDP? Why do we calculate real GDP? What are the shortcomings of real GDP?

   ANS:
   Real GDP is the value of all goods and services produced within an economy's borders over a period of time, at constant prices. It is calculated to measure overall economic activity and aggregate income. This is used as a measure of welfare as higher income connotes higher consumption, health, leisure, etc. However, there are shortcomings. First it misses unreported output (i.e. "under the table" output of goods and services), output that is done in day-to-day life (e.g. making yourself a sandwich); and it assumes more output leads to more welfare. However, "defensive" output (for example, walls built to buffer noise pollution) increase GDP but may not improve welfare. Also it does not account for other costs of production, e.g., pollution, crime, resource depletion, etc.

   REF: Section 2.2 TOP: Applied

2. Using the expenditure approach to national income accounting, when discussing government expenditures, do we include transfer payments? Why or why not?

   ANS:
   No. The expenditure approach concentrates on *purchases of goods and services* only. Transfer payments are income transfers and are not directly used to buy things. They are a form of negative tax and would therefore be a form of income for recipients of the transfer enhancing disposable income: Disposable income = Income – (taxes –transfers).

REF: Section 2.2 TOP: Applied

3. What are the components which make up the *income approach* to calculating GDP? What are the components which make up the *expenditure approach* to calculating GDP?

ANS:

(a) Income approach: compensation to employees; indirect business taxes; net operating surplus of business (profits); and depreciation of fixed capital
(b) Expenditure approach: household consumption; fixed private investment; net exports; government expenditures

REF: Section 2.2 TOP: Factual

4. Identify which of the following goods are part of the current year's U.S. GDP and which are considered current year's U.S. GNP; explain.
(a) a Ford produced in Mexico
(b) a Toyota produced in California
(c) a meal you make for a dinner party
(d) an American made vintage T-shirt from LedZeppelin's 1971 North American Tour you bought online last week

ANS:

(a) Part of U.S. GNP but not GDP as it's not produced within U.S. borders; it's part of Mexico's GDP.
(b) Part of U.S. GDP but not GNP as it's not produced by a U.S. firm; it's part of Japan's GNP.
(c) Neither; it's "under the table" production and is not included in the national accounts.
(d) Neither, as it's not current production. The Tshirt is not counted in current GDP; it was part of 1971's GDP, however.

REF: Section 2.2 TOP: Conceptual

5. Consider the data in the following table, which represents the total production of the country Tucommodatia. They produce only consumer goods.

| | 2007 | 2008 | 2009 |
|---|---|---|---|
| Quantity of y | 100 | 105 | 103 |
| Quantity of x | 5 | 3 | 4 |
| Price of y | $5 | $5 | $4.5 |
| Price of x | $100 | $105 | $110 |

(a) Calculate Real GDP for all three years.
(b) Calculate the Consumer Price Index (CPI), using 2007 as the base year. Identify whether or not there was inflation from the previous year.

ANS:

Real GDP is a form of the Paasche Index, so for each year we use the current year's prices and that year's quantities:
*2007: RGDP = 100 ¥ $5 + 5 ¥ $100 = $1,000
*2008: The equation for the CPI is:

$$\text{CPI} = \frac{P_x^C \cdot Q_x^B + P_y^C \cdot Q_y^B}{P_x^B \cdot Q_x^B + P_y^B \cdot Q_y^B} \times 100$$

where the C/B superscript denotes the current/base year.
To make it easier, the denominator is equal to $1,000.
*2007: Since the base and current year are the same: $CPI_{07} = 100$;
*2008: $\frac{815}{1000} \times 100 = 81.5$, prices fell 19.5 percent from 2007 to 2008;
*2009: $\frac{903.5}{1000} \times 100 = 90.35$, prices are 9.65 percent lower in 2009 than in 2007, but are about 11 percent higher than in 2008.

REF: Section 2.3 TOP: Conceptual

6. You are a staff economist for your local bank and the bank manager claims that in 2008 the Chinese economy is bigger than in the United States. To prove him wrong you decide to put your economics training to work for you and decide to show him China's GDP in U.S. dollars, and to show him how smart you are, you also decide to calculate PPP GDP in China and compare that to the United States as well. You have the following data: In 2007 China's nominal GDP was 26.324 trillion ( = Chinese yuan); the yuan-dollar exchange rate was ¥7.35/$1; nominal GDP in the United States was $13.741 trillion; the price level in the United States was 1.00 and the price level in China was 0.32. How big is China's economy?

ANS:
The first part of the question is straight-forward. Just convert Chinese nominal GDP to dollars by dividing it by the yuan-dollar exchange rate (conversely, this is the same as multiplying it by the dollar-yuan exchange rate):
$\$NGDP_{CH} = 26.324 tril(7.35 / \$1) = \$3.581 tril$.
Thus the Chinese economy is about 26 percent the size of the U.S. economy. But to get a more accurate view we need to look at GDP adjusted for price differences, PPP adjusted Chinese GDP. So we use the equation:
$PPPGDP_{CH} = P_{U.S.} P_{CH} \times \$NGDP_{CH} = 10.32 \times \$3.581 tril = \$12.034$.
Thus, once we take price differences into consideration, the Chinese economy is only about $1.5 trillion smaller than the U.S. economy.

REF: Section 2.4 TOP: Conceptual