

## Answer Key

**Economics 1012B**  
**Introduction to Macroeconomics**  
**Spring 2006**  
**Dr. R. E. Mueller**  
**Second Midterm Examination**  
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Answer all of the following questions by selecting the most appropriate answer on your bubble sheet. Be sure to read each question carefully. Each question is worth 2 points (100 points total) and will count as 20 per cent of your final course grade.

**NOTE: The use of calculators and electronic translators is prohibited.**

1. Which of the following statements about national income accounting is *false*?
- A) It provides a way of measuring total, or aggregate, production.
  - B) It provides a way of measuring how much a nation is producing and consuming.
  - C) It did not exist before the 1930s because economists focused on microeconomics before the 1930s.
  - D) It provides a way of measuring social welfare.

Ans: D

Feedback: National income accounting provides a way of measuring aggregate production and consumption, not social welfare.

2. GNI is:
- A) the aggregate output of the citizens and businesses of an economy in a one year period.
  - B) the aggregate final output of the citizens and businesses of an economy in a one year period.
  - C) the total market value of all goods and services produced in an economy in a one year period .
  - D) the total market value of all final goods and services produced in an economy in a one year period.

Ans: B

Feedback: See the definition of GNI in the text.

3. The total market value of all final goods and services produced in a country in a year is:
- A) NNP.
  - B) GNI.
  - C) NDP.
  - D) GDP.

Ans: D

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Feedback: See the definition of GDP in the text.

4. To move from gross domestic product (GDP) to gross national product (GNI), one must:

- A) add depreciation to GDP.
- B) subtract depreciation from GDP.
- C) subtract net foreign factor income from GDP.
- D) add net foreign factor income to GDP.

Ans: D

Feedback: Because GDP measures the market value of the final output produced within a country's borders and GNI measures the market value of the final output produced by a country's citizens, the income earned abroad by domestic factor sources must be added to GDP and the income earned domestically by foreign factor sources must be subtracted from GDP in order to move from GDP to GNI.

5. If substantially more foreign money is invested in Ireland than Irish citizens have invested abroad, then one will likely expect:

- A) Irish net foreign factor income to be positive.
- B) Irish net foreign factor income to be zero.
- C) Irish GDP to exceed Irish GNI.
- D) Irish GNI to exceed Irish GDP.

Ans: C

Feedback: Net foreign factor income is the difference between the foreign income of one's citizens and the income of residents who are not citizens. If more foreign money is invested in Ireland than Irish citizens have invested abroad, it is likely that the income of Irish residents who are not citizens will exceed the foreign income of Irish citizens. That is net foreign factor income will be negative and GDP will exceed GNI in Ireland.

6. Canada produces and sells millions of type of products. To add them up to a single aggregate, each good is weighted by:

- A) its cost of production.
- B) its market price.
- C) its utility to consumers.
- D) its contribution to corporate profits.

Ans: B

Feedback: Each good is weighted by its market price.

7. Which of the following is an example of an intermediate product?

- A) A pair of skis sold by a sporting goods retailer to a skier.
- B) A share of IBM stock.
- C) The lumber produced by Boise Cascade and sold to a builder of new houses.
- D) An antique car sold to the highest bidder.

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Ans: C

Feedback: Intermediate products are products used as inputs in the production of some other product.

8. If a used car dealer buys a car for \$3000 and resells it for \$3300, how much has been added to GDP?

- A) nothing.
- B) \$300.
- C) \$3000.
- D) \$3300

Ans: B

Feedback: Subtract the cost of production (\$3000) from final sales (\$3300) to find the contribution of the services by the dealer to GDP (\$300).

9. Which of the following would increase this year's GDP?

- A) A mother quits her job to take care of her newborn child.
- B) A commission charged by your broker when you sold 100 shares of Nortel stock.
- C) A \$10,000 inheritance from Aunt Mary.
- D) Receipts from a yard sale.

Ans: B

Feedback: The commission that the dealer receives is a part of GDP because that is the value added as a result of an economic activity. The others are nonmarket activities or transfers of financial assets and are not counted in GDP.

10. Which of the following is counted in GDP?

- A) The purchase of 100 shares of IBM stock.
- B) A watch that is produced but not sold.
- C) The leisure time people enjoy.
- D) A used car sale.

Ans: B

Feedback: The watch that is produced but not sold is counted in inventory investment. In national income accounting, it is counted as if it were sold as a final product. Once it is sold to a consumer, it is added to consumer expenditures and subtracted from investment.

11. Which of the following equations is the correct equation for GDP?

- A)  $GDP = C + I + G$ .
- B)  $GDP = C + I + G + X + IM$ .
- C)  $GDP = C + I + G - X - IM$ .
- D)  $GDP = C + I + G + X - IM$ .

Ans: D

Feedback: The sum of consumption (C), investment (I), government expenditure(G), and net exports (X-IM) equals total expenditure or GDP.

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	In billions of dollars
Consumption	5100
Investment	1100
Transfer payments	1050
Government expenditures	1400
Exports	850
Imports	950
Net foreign factor income	20

12. Calculate GDP using the information above.

- A) 6400
- B) 7500
- C) 9400
- D) 10470

Ans: B

Feedback:  $GDP = C + I + G + (X - IM) = 5100 + 1100 + 1400 + 850 - 950$

13. For the purposes of calculating GDP, gross private domestic investment includes:

- A) the value of new residential construction.
- B) purchases of stock.
- C) purchases of new automobiles.
- D) purchases of government bonds.

Ans: A

Feedback: Investment does not include the purchase of stocks or bonds, which are considered saving, not investing.

14. The largest component of national income is:

- A) interest.
- B) rents.
- C) employee compensation.
- D) profits.

Ans: C

Feedback: See Table 6-3.

15. In comparing the per capita GDPs of two countries, purchasing power parity adjusts for differences in:

- A) exchange rates.
- B) non-market activities.
- C) populations.
- D) relative prices.

Ans: D

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Feedback: See the definition of purchasing power parity in the text.

16. The distinction between nominal GDP and real GDP is that:

- A) Real GDP is calculated at existing prices, while nominal GDP is adjusted for inflation.
- B) Nominal GDP is calculated at existing prices, while real GDP is adjusted for inflation.
- C) Real GDP is calculated by assuming product quality constant while nominal GDP is not.
- D) Nominal GDP is calculated by assuming product quality constant while real GDP is not.

Ans: B

Feedback: See the definitions of real and nominal GDP in the text.

17. If a woman divorces her house spouse (who has been cleaning the house) and hires him to continue cleaning her house for \$20,000 per year, GDP will:

- A) remain constant.
- B) increase by \$20,000 per year.
- C) decrease by \$20,000 per year.
- D) remain unchanged.

Ans: B

Feedback: GDP measures market transactions.

18. The Rule of 72 implies that a country with a growth rate of 8 percent will double its income in:

- A) 4 years.
- B) 6 years.
- C) 9 years.
- D) 12 years.

Ans: C

Feedback: The Rule of 72 says that a country's income will double in the number of years equal to 72 divided by the country's growth rate (9 in this case.)

19. Markets help to promote growth by:

- A) increasing specialization and the division of labour.
- B) reducing specialization and the division of labour.
- C) encouraging self-sufficiency.
- D) undermining a nation's comparative advantage.

Ans: A

Feedback: By increasing specialization and the division of labour, markets make it possible for a country to focus its production more heavily on its comparative advantage. This increases efficiency and productivity.

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20. Economic growth has made the poor:

- A) better off in relative terms.
- B) worse off in absolute terms.
- C) better off in absolute terms but possibly worse off in relative terms.
- D) worse off in relative terms but possibly better off in absolute terms.

Ans: C

Feedback: Growth has increased the living standards of the poor in the sense that they are better off than the poor in previous generations. Relative to the improvements in the living standards of the rich, however, the poor may have failed to keep pace.

21. In 1997, Finland's population was about 5 million and its output was about 125 billion so its per capita output was:

- A) \$2,500.
- B) \$4,000.
- C) \$25,000.
- D) \$40,000.

Ans: C

Feedback: Per capita output is obtained by dividing output by the population.

22. If output increases by 2 percent and population growth is 3 percent, per capita output:

- A) falls by 5 percent.
- B) falls by 1 percent.
- C) grows by 1 percent.
- D) grows by 5 percent.

Ans: B

Feedback: Growth in per capita output equals the difference between the growth rate of output and the growth rate of population.

23. If per capita income grows, median income:

- A) increases.
- B) does not change.
- C) decreases.
- D) may increase, decrease, or not change.

Ans: D

Feedback: If per capita income increases, that means that income divided by the population has increased. Median income, which is the income level that divides the population in half, could rise or fall in this case depending on how growth affects the distribution of income.

24. Which of the following would tend to inhibit growth?

- A) Private property.

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- B) Limited liability for corporate owners.
- C) Government approval of all economic activity.
- D) Freedom from regulation.

Ans: C

Feedback: Government approval of all economic activity slows growth through bureaucracy and corruption.

25. Greater labour force participation by women increases measured growth most directly by:

- A) stimulating new technologies.
- B) increasing capital accumulation.
- C) increasing the availability of resources.
- D) altering the nature of growth enhancing institutions.

Ans: C

Feedback: As more women have participated in the labour force, more labour has been made available to the economy, increasing the quantity of this resource.

26. Suppose the quantities of labour, land, and capital each increase by 10 percent and output also increases by 10 percent. In that case, returns to scale are:

- A) decreasing.
- B) constant.
- C) increasing.
- D) not defined since more than one input is changing.

Ans: B

Feedback: If output rises by the same proportion as all inputs, then constant returns to scale exist.

27. Use the following table to answer the question. According to the table, production is characterized by:

Units of Capital	Units of Labour	Output
3	2	6
3	3	11
3	4	15
3	5	18

- A) diminishing marginal productivity.
- B) decreasing returns to scale.
- C) constant returns to scale.
- D) increasing returns to scale.

Ans: A

Feedback: Since capital is held constant while labour is increased, and since the increase

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in output is smaller with each increase in labour, diminishing marginal productivity is present.

28. According to Malthus, a fixed quantity of land and a growing population combined to produce:

- A) continuous but variable economic growth.
- B) accelerating economic growth.
- C) a stationary state in which growth ceased.
- D) a stationary state in which the economy grew, but at a fixed and unchangeable rate.

Ans: C

Feedback: Malthus argued that the law of diminishing marginal productivity would eventually set in, causing growth to slow and eventually stop.

29. Which of the following factors made the most important contribution to growth between 1928 and 1998?

- A) Technology.
- B) Human capital.
- C) Physical capital.
- D) Labour.

Ans: A

Feedback: At 35 percent, technology contributed more to growth than any other factor.

30. A positive externality is the positive effect that:

- A) an action has on the decision maker.
- B) an action has on others that is not taken into account by the decision maker.
- C) external forces have on society as a whole.
- D) external forces have on a decision maker.

Ans: B

Feedback: See the definition of a positive externality in the text.

31. All of the following policies encourage per capita growth *except*:

- A) policies that encourage saving and investment.
- B) policies that reduce population growth.
- C) policies that improve education.
- D) policies that shelter important domestic industries from international competition.

Ans: D

Feedback: By undermining competition and reducing specialization, these policies undermine per capita growth.

32. Which organization lends money to developing countries?

- A) EU.
- B) NAFTA.



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- C) World Bank.
- D) WTO.

Ans: C

Feedback: This organization extends credit to countries in need of financial assistance.

33. The most likely explanation for clusters of innovating firms is:
- A) comparative advantage.
  - B) increasing returns to scale.
  - C) positive externalities.
  - D) diminishing marginal productivity.

Ans: C

Feedback: Positive externalities imply that the benefits from an innovation positively affect surrounding firms not directly responsible for the innovation.

34. Supply side policies regarding economic growth are weakest when
- A) labour supply is very elastic.
  - B) the income effect of a tax cut (or increase) is very weak.
  - C) the labour supply curve is very flat.
  - D) the substitution effect of a tax cut (or increase) is very strong.

Ans: C

Feedback: See discussion in textbook.

35. The aggregate expenditure model makes it possible to estimate how a change in autonomous expenditures affects:
- A) the price level.
  - B) the aggregate supply curve.
  - C) investment.
  - D) equilibrium output.

Ans: D

Feedback: The purpose of the aggregate expenditure model is to explain how changes in autonomous expenditures affect aggregate demand and equilibrium output assuming the price level is constant.

36. Laissez-faire economists believe:
- A) government policies do not affect economic activity.
  - B) government can implement policy proposals that can positively impact the economy.
  - C) most government policies would probably make things worse.
  - D) government intervention in the market is necessary for a smoothly operating economy.

Ans: C

Feedback: Laissez-faire economists believe that government intervention in the economy

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will make things worse, and thus do not favour government intervention.

37. At all points on the aggregate production curve:

- A) income equals production.
- B) income exceeds production.
- C) production exceeds income.
- D) production and expenditure are equal.

Ans: A

Feedback: Since the AP curve reflects the fact that production creates an equal amount of income, along the AP curve, income equals output.

Income	Expenditures
\$ 0	\$ 500
1000	1167
1500	1500
2000	1833
2500	2167

38. Given the accompanying table, what is the level of autonomous expenditures?

- A) \$500
- B) \$667
- C) \$1167
- D) \$2167

Ans: A

Feedback: Autonomous expenditures are expenditures that occur when income is zero.

39. Given the table above, what is the level of induced expenditures if income is \$2000?

- A) \$500
- B) \$833
- C) \$1333
- D) \$1833

Ans: C

Feedback: Induced expenditures equal the difference between aggregate expenditures (\$1833) and autonomous expenditures (\$500)

40. Induced expenditures are defined as expenditures that:

- A) occur in equilibrium.
- B) do not depend on income.
- C) occur even when income is zero.
- D) change as income changes.

Ans: D

## Answer Key

Feedback: See the definition of induced expenditures in the text.

41. According to the expenditures function, what happens to expenditures as income rises?

- A) They stay the same.
- B) They decrease.
- C) They increase by the same amount as income.
- D) They increase by less than the increase in income.

Ans: D

Feedback: In the expenditures function, a \$1 increase in income leads to an increase in expenditures equal to the mpc times the \$1 increase in income, so expenditures rise but by less than the increase in income.

42. If autonomous expenditures are \$500, income is \$750 and the marginal propensity to consume is  $1/3$ , then total expenditures according to the expenditures function will be:

- A) \$250
- B) \$500.
- C) \$750.
- D) \$1500.

Ans: C

Feedback: According to the expenditures function,  $AE = AE_0 + mpc Y = \$500 + (1/3) \times \$750 = 500+250$ .

Income	Expenditures
\$ 0	\$1,000
1,000	1,800
2,000	2,600
3,000	3,400
4,000	4,200
5,000	5,000

43. The expenditures function that reflects the table above is:

- A)  $AE = 1000 + 0.8Y$ .
- B)  $AE = 0.8Y$ .
- C)  $Y = 100 + 0.8AE$ .
- D)  $Y = 0.8AE$ .

Ans: A

Feedback: The expenditures function is  $AE = AE_0 + mpcY$  where  $AE_0$  is autonomous expenditures and the mpc is the change in expenditures divided by the change in income.

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Income	Expenditures
\$ 0	\$ 500
1,000	1,167
1,500	1,500
2,000	1,833
2,500	2,167

44. In the table above, if income rises from \$2,000 to \$2,500, autonomous expenditures:
- A) remain equal to \$500.
  - B) remain equal to \$1,833.
  - C) rise by \$334.
  - D) rise to \$2,167.

Ans: A

Feedback: Autonomous expenditures do not vary with income so they must equal \$500 since this is the level of expenditures when income is zero.

45. If a family's expenditures increase from \$25,000 to \$30,000 per year when its income increases from \$30,000 to \$37,500, its induced expenditures:
- A) do not change.
  - B) increase by \$5,000.
  - C) increase by \$7,500.
  - D) change by an amount that cannot be determined without more information.

Ans: B

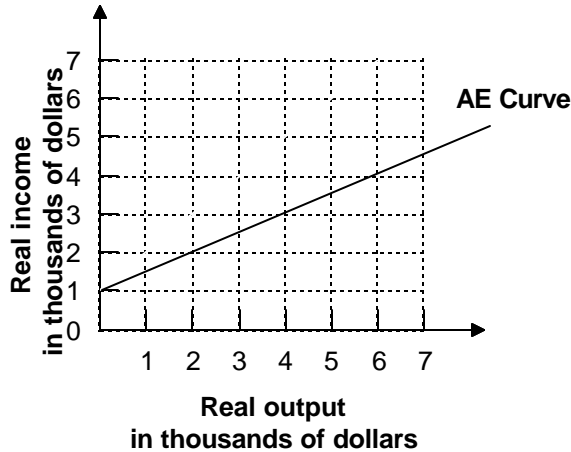
Feedback: Induced expenditures rise by \$5,000 because this is the increase in expenditures resulting from the increase in income.

46. The slope of the aggregate expenditures function:
- A) is the marginal propensity to consume.
  - B) is the marginal propensity to save.
  - C) depends on the level of autonomous expenditures.
  - D) depends on the level of induced expenditures.

Ans: A

Feedback: Since the slope of the AE curve is the ratio of the change in expenditures to the change in income, the slope of the AE curve is the mpc.

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47. Refer to the graph above. The *mpc* equals:

- A) 0.5
- B) 0.9
- C) 1
- D) 2

Ans: A

Feedback: The slope (rise over run) of the AE curve is the *mpc*. Here that is  $1,000/2,000 = 0.5$ .

48. If real wealth increases because the stock market is booming, we might expect the expenditures function to:

- A) become steeper.
- B) become flatter.
- C) shift up.
- D) shift down.

Ans: C

Feedback: A higher level of real wealth should lead to a higher level of autonomous consumption and hence a higher level of aggregate expenditure at each income level.

49. Given  $AE = 6000 + 0.5 Y$ , equilibrium income will be:

- A) \$3000.
- B) \$4000.
- C) \$8000.
- D) \$12,000.

Ans: D

Feedback: Autonomous expenditure is \$6000 and the multiplier is 2, so equilibrium income is  $(6000)(2) = \$12,000$ .

50. Suppose autonomous expenditures equal 1000 and the *mpc* is 0.6. Now suppose the *mpc* rises to 0.8. Using the multiplier equation, we know that equilibrium income will:

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- A) increase by 200.
- B) decrease by 200.
- C) increase by 800.
- D) increase by 2,500.

Ans: D

Feedback: Using the multiplier equation, we know that equilibrium income is 2,500 when the  $mpc = 0.6$  and 5000 when the  $mpc = 0.8$ .