

**Name:**  
**ID:**

**Department of Economics**  
**Iowa State University**  
**Principles of Macroeconomics**  
Spring 2013, Midterm 1

**Directions:**

**Do Not Open This Booklet Until Told To Do So.**

- Print your name and University ID number on this page
- Fill in your name, birth date, and ID on the bubble sheet and write exam version 1
- Answer multiple choice questions on the bubble-sheet, and answer the rest of the questions in this book.
- There are 52 points total on the exam.



1. GDP excludes all of the following EXCEPT:
  - A) the value of leisure.
  - B) damage done to the environment.
  - C) the value of housework.
  - D) the value of owner-occupied housing.
  
2. During a recession:
  - A) unemployment and the growth rate of real GDP both decrease.
  - B) unemployment decreases and the growth rate of real GDP increases.
  - C) unemployment increases and the growth rate of real GDP decreases.
  - D) there is no relation between unemployment and the growth rate of real GDP.

Use the following to answer questions 3-4:

**Table: Aggregate Spending**

<b>Real GDP</b>	<b><i>YD</i></b>	<b><i>C</i></b>	<b><i>I<sub>planned</sub></i></b>
0	0	100	600
500	500	500	600
1,000	1,000	900	600
1,500	1,500	1,300	600
2,000	2,000	1,700	600
2,500	2,500	2,100	600
3,000	3,000	2,500	600
3,500	3,500	2,900	600
4,000	4,000	3,300	600

3. (Table: Aggregate Spending) Suppose the economy has no government spending and no foreign trade. With no taxes and transfers, real GDP is equal to disposable income ( $YD$ ). The data in the table show consumption spending ( $C$ ) and planned investment ( $I_{\text{planned}}$ ). The income–expenditure equilibrium real GDP is found at \_\_\_\_\_. If planned investment fell to \$300, the new income–expenditure equilibrium real GDP would fall to \_\_\_\_\_.
- A) \$3,500; \$2,500
  - B) \$3,500; \$2,000
  - C) \$3,000; \$1,500
  - D) \$4,000; \$2,500
4. (Table: Aggregate Spending) Suppose the economy has no government spending and no foreign trade. With no taxes and transfers, real GDP is equal to disposable income ( $YD$ ). The data in the table show consumption spending ( $C$ ) and planned investment ( $I_{\text{planned}}$ ). If real GDP is \$2,500, what is the level of unplanned inventory investment?
- A) \$200
  - B) \$0
  - C) \$2,700
  - D) –\$200

Use the following to answer question 5:

**Scenario: Price Index**

Suppose that in the base period a college student buys 20 gallons of gasoline at \$2 per gallon, 2 CDs for \$13 each, and 4 movie tickets for \$7 each. In the next month, the price of gasoline is \$2.25 per gallon, CDs cost \$12.50 each, and the price of a movie ticket is \$7.50.

5. (Scenario: Price Index) The change in prices from the first to the second month is:
- A) 7.6%.
  - B) 94%.
  - C) 6.4%.
  - D) –6%.

Use the following to answer questions 6-8:

**Table: Investment Projects**

<b>Project</b>	<b>Rate of return on investment</b>	<b>Cost of investment</b>
F	20%	\$ 500
G	18	300
H	16	1,000
I	14	200
J	12	2,000
K	10	1,500
L	8	1,200
M	6	800

6. (Table: Investment Projects) If the market interest rate is 9%, the amount of planned investment spending is:
- A) \$1,800.
  - B) \$2,000.
  - C) \$4,000.
  - D) \$5,500.
7. (Table: Investment Projects) If the market interest rate declines from 15% to 11%, then the amount of investment demanded will increase by:
- A) \$200.
  - B) \$1,000.
  - C) \$2,000.
  - D) \$2,200.
8. (Table: Investment Projects) If the market interest rate is 15%, the last project undertaken is:
- A) F.
  - B) G.
  - C) H.
  - D) I.

9. To be classified as unemployed, a person must be:
- A) not working.
  - B) not working and actively looking for a job in the last four weeks.
  - C) not working or working part-time when he or she wishes to be working full time.
  - D) not working and actively looking for a job in the last four weeks or discouraged and not actually looking for a job.
10. Someone who has to make a choice involving whether to receive \$100 now or \$100 one year from now will probably choose \_\_\_\_\_, since there is a(n) \_\_\_\_\_ in waiting to use money.
- A) one year from now; benefit
  - B) now; opportunity cost
  - C) one year from now; opportunity cost
  - D) now; benefit
11. If a country has a working-age population of 200 million, 135 million people with jobs, and 15 million people unemployed and seeking employment, then its unemployment rate is:
- A) 4%.
  - B) 7.5%.
  - C) 10%.
  - D) 67.5%.
12. When consumers receive more disposable income, their spending:
- A) will increase.
  - B) will decrease.
  - C) will stay the same, but their saving will decrease.
  - D) and their saving will both decrease.

Use the following to answer questions 13-15:

**Scenario: A Small Economy**

Suppose there is no trade and no government in a small economy. The GDP is equal to \$25 trillion, and consumption spending is equal to \$18 trillion this year.

13. (Scenario: A Small Economy) What is the level of investment spending?
  - A) \$18 trillion
  - B) \$7 trillion
  - C) \$25 trillion
  - D) -\$7 trillion
  
14. (Scenario: A Small Economy) What is the level of private saving?
  - A) \$7 trillion
  - B) \$18 trillion
  - C) cannot be determined from the information provided
  - D) -\$7 trillion
  
15. (Scenario: A Small Economy) There is a new government and it imposes taxes on its citizens in order to spend on infrastructure. Taxes are equal to \$2 trillion and government spending is equal to taxes. What is the level of investment spending now?
  - A) \$7 trillion
  - B) \$5 trillion
  - C) \$18 trillion
  - D) -\$4 trillion
  
16. Consider a simple economy:  $MPC = 0.75$ , income = \$400 billion, and aggregate consumption spending = \$400 billion. Autonomous consumption is:
  - A) 0.
  - B) \$100 billion.
  - C) \$300 billion.
  - D) \$200 billion.

17. If a one-year project costs \$100,000 and is expected to return the firm \$105,000, the rate of return of the project is:
- A) 4.8%.
  - B) 5%.
  - C) \$5,000.
  - D) \$105,000.
18. During rapid price inflation, firms must frequently change prices. The cost of changing listed prices is known as the:
- A) menu cost.
  - B) real interest rate cost.
  - C) shoe-leather cost.
  - D) unit-of-account cost.
19. The *MPS* plus the *MPC* must equal:
- A) zero.
  - B) one.
  - C) income.
  - D) saving.
20. Looking at past data, one finds that when the unemployment rate has increased, the annual growth rate of real GDP has usually:
- A) increased.
  - B) decreased.
  - C) not changed.
  - D) no relationship with changes in the unemployment rate.



21. Which of the following is true?
- A) Unexpected inflation benefits lenders and hurts borrowers.
  - B) Unexpected inflation benefits borrowers and hurts lenders.
  - C) Unexpected inflation benefits borrowers but does not affect lenders.
  - D) Unexpected deflation benefits lenders but does not affect borrowers.
22. Suppose the level of planned aggregate expenditure in an economy is \$1,000 and the real GDP is \$800. According to the simple model developed in this chapter, where the aggregate price level is assumed to be constant, we can expect:
- A) inventories will stay the same, since this is part of planned investment.
  - B) inventories will decrease.
  - C) inventories will increase.
  - D) real GDP will fall further.
23. Which of the following is an example of someone who is cyclically unemployed?
- A) an autoworker who is laid off because of a decline in sales caused by a recession
  - B) a geologist who is permanently laid off from an oil company due to a new technological advance
  - C) a worker at a fast-food restaurant who quits work and attends college
  - D) a real estate agent who leaves a job in Texas and searches for a similar, higher-paying job in California
24. When the unemployment rate is high, there is political demand to increase the length of time for which those laid off can receive benefits. In a standard analysis, this will lead to:
- A) reductions in unemployment.
  - B) increases in the unemployment rate.
  - C) more job creation.
  - D) more job destruction.

25. Suppose that the market basket for the University Student Price Index (USPI) consists of 4 textbooks and 100 gallons of gasoline. In 2010, the base year for this index, textbooks cost \$50 each and gas costs \$1 per gallon. In 2011, textbooks still cost \$50 each and gasoline costs \$4 per gallon. The USPI for 2011 is:
- A) 250.
  - B) 200.
  - C) 150.
  - D) 100.
26. If Mega Corp. borrows \$8,000 and agrees to pay the lender \$9,000 in one year, the annual interest rate on the loan is approximately:
- A) 9.0%.
  - B) 10.5%.
  - C) 12.5%.
  - D) There is not enough information given to determine the rate.
27. Goods that are produced in a particular period but NOT sold in that period:
- A) go into inventory and are called consumption.
  - B) end up in inventory and are included in investment.
  - C) are finally included in depreciation when they are sold.
  - D) are classified as intermediate goods.
28. The life-cycle hypothesis of consumer spending says that consumers plan their spending:
- A) based only on current disposable income.
  - B) based on interest rates.
  - C) over their lifetime.
  - D) according to fluctuations in the stock market.

29. Businesses will undertake projects if the rate of return is:
- A) positive.
  - B) greater than or equal to the interest rate levied on the loan.
  - C) greater than 1.
  - D) less than the cost of borrowing for the project.
30. Assume that the CPI for 2009 was 103.9 and for 2010 was 107.6. What was the inflation rate between the two years?
- A) 0.97%
  - B) 1.04%
  - C) 3.56%
  - D) -3.70%
31. Anticipated inflation affects:
- A) borrowers only.
  - B) lenders only.
  - C) all aspects of the economy.
  - D) only business firms involved in investment spending.
32. Actual investment spending is equal to:
- A) the difference between unplanned investment spending and planned investment spending.
  - B) the difference between planned investment spending and unplanned investment spending.
  - C) the sum of planned investment spending and unplanned investment spending.
  - D) the ratio of planned investment spending to unplanned investment spending.

33. In the income–expenditure model, inventories are:
- A) fixed and therefore provide little insight into the direction of the economy.
  - B) a long-run event which aids forecasters in understanding where long-run real GDP is.
  - C) constantly changing and provide insight into the future state of the economy.
  - D) often positive, suggesting that additions to inventory stocks are a long-run goal.

Use the following to answer questions 34-35:

**Table: Disposable Income and Consumption**

Disposable Income (in Billions)	Consumer Spending (in Billions)
\$0	\$100
200	220
400	340
600	460
800	580
1,000	700

34. (Table: Disposable Income and Consumption) Refer to the table Disposable Income and Consumption. Autonomous consumer spending is:
- A) 200.
  - B) 100.
  - C) 120.
  - D) 0.
35. (Table: Disposable Income and Consumption) Refer to the table Disposable Income and Consumption. The *MPC* is equal to:
- A) .8.
  - B) 2.
  - C) 1.2.
  - D) 0.6.

36. The Bureau of Labor Services calculates  $U_6$ . This measures the:
- A) underutilization of labor that includes discouraged workers, marginally attached workers, and underemployed workers.
  - B) utilization of labor based on different demographics.
  - C) labor force participation rate in a more comprehensive way.
  - D) rate of overutilization of labor when workers hold multiple jobs.
37. The rate of unemployment that exists when the economy is at full employment is:
- A) zero.
  - B) the natural rate of unemployment.
  - C) the structural rate of unemployment.
  - D) less than full employment rate of unemployment.
38. If during 2011, the country of Sildavia recorded a GDP of \$65 billion, interest payments of \$15 billion, imports of \$13 billion, profits of \$7 billion, exports of \$15 billion, and rent of \$7 billion, wages during 2011 in Sildavia were:
- A) \$36 billion.
  - B) \$38 billion.
  - C) \$51 billion.
  - D) \$64 billion.
39. Analysts believe that generous unemployment benefits in Europe are associated with:
- A) low unemployment rates in Europe.
  - B) high unemployment rates in Europe.
  - C) weak labor unions in Europe.
  - D) relatively constant levels of unemployment in Europe.

Use the following to answer questions 40-46:

**Table: Price and Output Data**

Year	Output	Price per Unit
1	2	\$2
2	3	4
3 = base period	4	5
4	6	6
5	7	9

40. (Table: Price and Output Data) The value of year 4's output in nominal dollars is:
- A) \$6.
  - B) \$24.
  - C) \$30.
  - D) \$36.
41. (Table: Price and Output Data) According to the accompanying table, the value of year 3's output in nominal dollars is:
- A) \$5.
  - B) \$5.20.
  - C) \$20.
  - D) \$36.
42. (Table: Price and Output Data) According to the accompanying table, the value of year 4's output in real dollars is:
- A) \$5.20.
  - B) \$6.
  - C) \$30.
  - D) \$36.

43. (Table: Price and Output Data) According to the accompanying table, the price index for year 4 is:  
A) 80.  
B) 120.  
C) 0.  
D) 6.
44. (Table: Price and Output Data) Between years 4 and 5, nominal GDP increased by:  
A) 33%.  
B) 75%.  
C) 50%.  
D) 13%.
45. (Table: Price and Output Data) Between years 4 and 5, real GDP:  
A) decreased by 14%.  
B) did not change.  
C) increased by 3%.  
D) increased by 17%.
46. (Table: Price and Output Data) Between years 4 and 5, \_\_\_\_\_ of the increase in nominal GDP was due to inflation.  
A) none  
B) 58%  
C) 92%  
D) all

Use the following to answer questions 47-49:

**Table: Labor Force Data**

Total population	200 million
Population age 16 and older	150 million
Employed	97 million

47. (Table: Labor Force Data) Using the data from the accompanying table, suppose the labor force participation rate is 70%. The labor force is equal to:
- A) 1,200 million.
  - B) 50 million.
  - C) 105 million.
  - D) 400 million.
48. (Table: Labor Force Data) Using the data from the accompanying table, suppose the labor force participation rate is 70%. The number of unemployed adults is:
- A) 8 million.
  - B) 53 million.
  - C) 103 million.
  - D) 50 million.
49. (Table: Labor Force Data) If the labor force participation rate in this economy is 70 percent, the unemployment rate is:
- A) 7.6%.
  - B) 5%
  - C) 4%.
  - D) 3%.

Use the following to answer questions 50-52:

**Scenario: A Country's Consumption Function**

A country is closed. It has no government sector, and its aggregate price levels and interest rate levels are fixed. Furthermore, the marginal propensity to consume is constant and the country's consumption function is as follows:  $C = 200 + 0.75YD$ , where  $YD$  is disposable income and  $C$  is consumption. Assume that planned investment equals 75.



50. (Scenario: A Country's Consumption Function) Given this consumption function, if this country experienced an increase in income of \$10,000, consumption would increase by:
- A) \$10,000.
  - B) \$7,500.
  - C) \$200.
  - D) \$7,700.
51. (Scenario: A Country's Consumption Function) When real GDP equals \$900:
- A) planned investment equals \$900.
  - B) unplanned inventory investment is negative.
  - C) autonomous consumption equals \$900.
  - D) the economy is in income–expenditure equilibrium.
52. (Scenario: A Country's Consumption Function) What is the income–expenditure equilibrium for this country?
- A) \$900
  - B) \$1,100
  - C) \$275
  - D) \$200

## **Answer Key**

1. D
2. C
3. B
4. D
5. C
6. D
7. D
8. C
9. B
10. B
11. C
12. A
13. B
14. A
15. B
16. B
17. B
18. A
19. B
20. B
21. B
22. B
23. A
24. B
25. B
26. C
27. B
28. C
29. B
30. C
31. C
32. C
33. C
34. B
35. D
36. A
37. B
38. A
39. B
40. D
41. C
42. C
43. B
44. B

- 45. D
- 46. D
- 47. C
- 48. A
- 49. A
- 50. B
- 51. B
- 52. B