

Name: _____

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AP Macroeconomics — Practice Exam

Instructions: Section I style: 20 multiple-choice questions, each with five answer choices and worth 1 point; choose the one that best answers the question. Section II style: one free-response question with four parts, worth 10 points; show your work for every calculation. 35 minutes. A four-function calculator is allowed, as on the real exam, but the numbers are chosen so that none is needed. Wrong answers are not penalized.

Time Limit: 35 minutes

Multiple Choice (20 questions)

- [1 point] 1. In the simple circular flow model of an economy with only households and firms, the total value of final goods and services sold in the product market equals the total value of wages, rent, interest and profit paid out in the factor market. Which of the following is a direct consequence of this equality?
- A. Measuring GDP by adding up expenditure on final goods and services gives the same total as adding up the incomes earned from producing them
 - B. Household saving must be zero for the economy to be in equilibrium
 - C. Government purchases must be excluded when GDP is measured with the expenditure approach
 - D. The value of intermediate goods must be added to the value of final goods sold in the product market
 - E. A country's exports must always equal its imports
- [1 point] 2. Last year in Lorane, compensation of employees was 600 billion dollars, rental income 40 billion, interest income 60 billion, and corporate and proprietors' profits 100 billion. The government also paid 70 billion in transfer payments, and firms bought 150 billion of intermediate goods from other firms. Assuming no depreciation, no indirect business taxes and no net foreign factor income, GDP measured by the income approach was:
- A. 700 billion dollars
 - B. 800 billion dollars
 - C. 870 billion dollars
 - D. 950 billion dollars
 - E. 1,020 billion dollars

- [1 point]** 3. A logging company cuts timber and sells it to a sawmill for 300 dollars. The sawmill turns the timber into lumber and sells the lumber to a furniture maker for 700 dollars. The furniture maker builds a table and sells it to a household for 1,200 dollars. All three transactions take place in the same year. The total contribution of this chain of production to GDP is:
- A. 500 dollars
 - B. 1,000 dollars
 - C. 1,200 dollars
 - D. 1,900 dollars
 - E. 2,200 dollars
- [1 point]** 4. Which of the following would be counted in this year's gross domestic product of Lorane?
- A. The resale of an apartment that was built in 1995
 - B. A household's purchase of newly issued shares in a Lorane corporation
 - C. Unemployment benefits paid by the government to laid-off workers
 - D. A car assembled in Lorane this year that is still unsold on a dealer's lot at the end of the year
 - E. The meals a parent cooks for the family at home
- [1 point]** 5. Measured GDP is most likely to understate the true amount of production taking place in a country that has a large amount of:
- A. exports of goods and services
 - B. government spending on national defense
 - C. spending by firms on cleaning up pollution
 - D. investment in new factories and equipment
 - E. unpaid household production and unreported market activity
- [1 point]** 6. Kesh reports the following labor market data (millions of people). Working-age population: 50. Employed: 36. Not working but actively searched for a job in the past four weeks: 4. Want a job but stopped searching because they believe no jobs are available: 2. Full-time students not seeking work: 3. Retired: 5. The unemployment rate and the labor force participation rate in Kesh are, respectively:
- A. 8 percent and 80 percent
 - B. 10 percent and 72 percent
 - C. 10 percent and 80 percent
 - D. 11.1 percent and 80 percent
 - E. 14.3 percent and 84 percent

[1 point] 7. Which of the following people is cyclically unemployed?

- A. A ski instructor who is out of work every summer and waits for the resort to reopen
- B. A construction worker who was laid off when a recession cut the demand for new houses and is looking for another job
- C. A nurse who quit her job to move to another city and is interviewing for a new position there
- D. A typist whose job was eliminated by word-processing software and who lacks the skills for the jobs that are available
- E. A father who left his job to care for his children full time and is not looking for work

[1 point] 8. In Brinn the unemployment rate is 7 percent. Economists estimate that frictional unemployment accounts for 3 percentage points of this and structural unemployment for 2 percentage points. Which of the following is correct?

- A. The natural rate of unemployment is 7 percent, and there is no cyclical unemployment
- B. The natural rate of unemployment is 2 percent, and cyclical unemployment is 5 percent
- C. The natural rate of unemployment is 5 percent, cyclical unemployment is 2 percent, and Brinn is producing above its potential output
- D. The natural rate of unemployment is 5 percent, and cyclical unemployment is 7 percent
- E. The natural rate of unemployment is 5 percent, cyclical unemployment is 2 percent, and Brinn is producing below its potential output

[1 point] 9. Which of the following changes would, by itself, cause BOTH the measured unemployment rate and the labor force participation rate to fall?

- A. Unemployed workers find jobs
- B. New college graduates begin searching for their first jobs
- C. Employed workers retire and stop working
- D. Unemployed workers give up searching for work because they believe no jobs are available
- E. Part-time workers move into full-time jobs

[1 point] 10. A country's consumer price index is based on a fixed market basket of 4 pizzas, 10 bus rides and 1 pair of jeans. In the base year a pizza cost 10 dollars, a bus ride 2 dollars and a pair of jeans 60 dollars. This year a pizza costs 12 dollars, a bus ride 2.50 dollars and a pair of jeans 65 dollars. The CPI for this year is:

- A. 87
- B. 110
- C. 115
- D. 118
- E. 138

- [1 point] 11. The consumer price index in Lorane was 120 in year 1, 132 in year 2 and 138.6 in year 3. The inflation rate in year 3 (from year 2 to year 3) was:
- A. 5 percent
 - B. 5.5 percent
 - C. 6.6 percent
 - D. 10 percent
 - E. 15.5 percent
- [1 point] 12. Between year 1 and year 2 a worker's nominal salary rose from 60,000 dollars to 66,000 dollars, while the consumer price index rose from 120 to 132. Which of the following is correct?
- A. The worker's real salary rose by 10 percent
 - B. The worker's real salary rose by 6,000 dollars
 - C. The worker's real salary was unchanged
 - D. The worker's real salary fell by 10 percent
 - E. The worker's real salary fell, because the CPI rose by 12 points while the salary rose by only 10 percent
- [1 point] 13. A saver keeps money in a one-year deposit paying a nominal interest rate of 5 percent. Over the year the consumer price index rises from 200 to 206. The real interest rate the saver earned was approximately:
- A. -1 percent
 - B. 2 percent
 - C. 3 percent
 - D. 5 percent
 - E. 8 percent
- [1 point] 14. At the start of the year, borrowers, lenders, workers and firms in Kesh all expected inflation of 6 percent and wrote their contracts accordingly. Actual inflation turned out to be 2 percent. Which of the following groups gained from inflation being lower than expected?
- A. Borrowers who took out fixed-rate loans at the start of the year
 - B. Firms that agreed to pay their workers a fixed nominal wage for the year
 - C. The government, which is a net borrower with fixed-rate debt
 - D. Retirees whose pensions are fully indexed to the consumer price index
 - E. Lenders who made fixed-rate loans at the start of the year
- [1 point] 15. Which of the following is a cost of inflation that occurs even when the inflation is fully anticipated by everyone?
- A. The resources that firms use up by frequently changing their listed prices
 - B. An arbitrary redistribution of wealth from lenders to borrowers
 - C. A fall in real GDP below its potential level
 - D. A decrease in nominal interest rates
 - E. An increase in the purchasing power of the money that people hold as cash

- [1 point]** 16. In year 5, nominal GDP in Kesh was 1,650 billion dollars and the GDP deflator was 125 (base year = 100). Real GDP in year 5, measured in base-year dollars, was:
- A. 1,237.5 billion dollars
 - B. 1,320 billion dollars
 - C. 1,525 billion dollars
 - D. 1,775 billion dollars
 - E. 2,062.5 billion dollars
- [1 point]** 17. Tarsa produces only two goods, apples and haircuts. In year 1 it produced 100 apples at 1 dollar each and 50 haircuts at 10 dollars each. In year 2 it produced 110 apples at 1.20 dollars each and 55 haircuts at 12 dollars each. Using year 1 as the base year (base year = 100), the GDP deflator for year 2 is:
- A. 1.2
 - B. 83
 - C. 110
 - D. 120
 - E. 132
- [1 point]** 18. Last year in Marovia, GDP was 2,400 billion dollars, household consumption was 1,600 billion, gross private investment 400 billion and government purchases of goods and services 500 billion. Marovia's net exports last year were:
- A. -100 billion dollars
 - B. 100 billion dollars
 - C. 300 billion dollars
 - D. 400 billion dollars
 - E. 800 billion dollars
- [1 point]** 19. In Brinn, potential (full-employment) real GDP is 2,500 billion dollars and actual real GDP is 2,400 billion dollars. Which of the following correctly describes Brinn's economy?
- A. A positive output gap of 4 percent, with unemployment below its natural rate
 - B. A negative output gap of 4 percent, with unemployment below its natural rate
 - C. A negative output gap of about 4.2 percent of potential output
 - D. A positive output gap of 100 billion dollars, because potential output exceeds actual output
 - E. A negative output gap of 4 percent, with unemployment above its natural rate
- [1 point]** 20. Real GDP in Lorane has fallen for two consecutive quarters. Which of the following has most likely also occurred over this period?
- A. The natural rate of unemployment has fallen
 - B. Potential real GDP has fallen by the same amount as actual real GDP
 - C. The labor force participation rate has risen
 - D. Cyclical unemployment has risen
 - E. The inflation rate has risen sharply

Calculations (1 question)

- [10 points]** 21. Economic indicators in Marlow. The table shows national income data for the economy of Marlow for two years; year 1 is the base year. In year 2 the working-age population of Marlow was 100 million people, of whom 55.5 million were employed, 4.5 million were not working but had actively looked for work in the previous four weeks, 2.5 million wanted a job but had stopped searching because they believed none was available, and 37.5 million were retired, in full-time education or otherwise not seeking work. The natural rate of unemployment in Marlow is 5 percent, and potential (full-employment) real GDP in year 2 is estimated at 1,000 billion year-1 dollars. Under contracts signed at the start of year 2, when workers and firms both expected inflation of 3 percent, nominal wages rose by 3 percent during year 2.

	Year 1 (base year)	Year 2
Nominal GDP (billions of dollars)	1,000	1,008
GDP deflator	100	105

- [3 points]** (a) (i) Calculate real GDP in year 2, measured in year-1 dollars. Show your work. (ii) Calculate the growth rate of real GDP between year 1 and year 2. Show your work. (iii) Using the GDP deflator, calculate the inflation rate between year 1 and year 2. Show your work.

- [3 points]** (b) (i) Calculate the unemployment rate in Marlow in year 2. Show your work. (ii) Calculate the labor force participation rate in year 2. Show your work. (iii) Calculate what the unemployment rate would be if the 2.5 million people who have stopped searching were counted as unemployed. Show your work.

- [2 points]** (c) (i) Using the inflation rate you calculated in part (a)(iii), calculate the approximate percentage change in real wages in Marlow during year 2. Show your work. (ii) Did workers or firms gain from the difference between expected and actual inflation? Explain.

- [2 points]** (d) (i) Calculate the output gap in year 2 as a percentage of potential real GDP, and identify whether it is positive or negative. Show your work. (ii) Calculate the cyclical unemployment rate in year 2, and identify the phase of the business cycle that Marlow is in.