

**ECON 3010 Intermediate Macroeconomics
Final Exam**

Multiple Choice Questions. (60 points; 2 pts each)

- #1. A measure of how fast the general level of prices is rising is called the:
- A) growth rate of real GDP.
 - B) unemployment rate.
 - C) inflation rate.
 - D) market-clearing rate.
- #2. In the national income accounts, net exports equal:
- A) exported goods minus imported goods.
 - B) exported goods and services minus imported goods and services.
 - C) exported goods minus imported services.
 - D) exported goods and services plus imported goods and services.
- #3. To avoid double counting in the computation of GDP, only the value of _____ goods are included.
- A) final
 - B) used
 - C) intermediate
 - D) investment
- #4. In the long run, what determines the level of total production of goods and services in an economy?
- A) the interest rate and the amount of national saving
 - B) the quantity of capital, quantity of labor, and production technology
 - C) consumption, investment, and government spending
 - D) the marginal products of capital and labor, constant returns to scale, and competition
- #5. A competitive firm chooses the:
- A) price at which to sell the product produced.
 - B) wage to pay labor.
 - C) quantity of labor and capital to employ.
 - D) rental price to pay capital.

- #6. The marginal product of labor is:
- A) output divided by labor input.
 - B) additional output produced when one additional unit of labor is added.
 - C) additional output produced when one additional unit of labor and one additional unit of capital are added.
 - D) value of additional output when one dollar's worth of additional labor is added.
- #7. To reduce the money supply, the Federal Reserve:
- A) buys government bonds.
 - B) sells government bonds.
 - C) creates demand deposits.
 - D) destroys demand deposits.
- #8. The size of monetary base is determined by:
- A) the Federal Reserve.
 - B) the Federal Reserve and banks.
 - C) preferences of households about the form of money they wish to hold.
 - D) business policies of banks and the laws regulating banks.
- #9. If domestic saving exceeds domestic investment, then net exports are _____ and net capital outflows are _____.
- A) positive; positive
 - B) positive; negative
 - C) negative; negative
 - D) negative; positive
- #10. If income velocity is assumed to be constant, but no other assumptions are made, the level of _____ is determined by M .
- A) prices
 - B) income
 - C) transactions
 - D) nominal GDP
- #11. Net capital outflow is equal to:
- A) national saving minus the trade balance.
 - B) domestic investment plus the trade balance.
 - C) domestic investment minus national saving.
 - D) national saving minus domestic investment.

#12. An increase in the trade surplus of a small open economy could be the result of:

- A) a domestic tax cut.
- B) an increase in government spending.
- C) an increase in the world interest rate.
- D) the implementation of an investment tax-credit provision.

#13. According to efficiency-wage theories, firms benefit by paying higher-than-equilibrium wages because worker _____ increases.

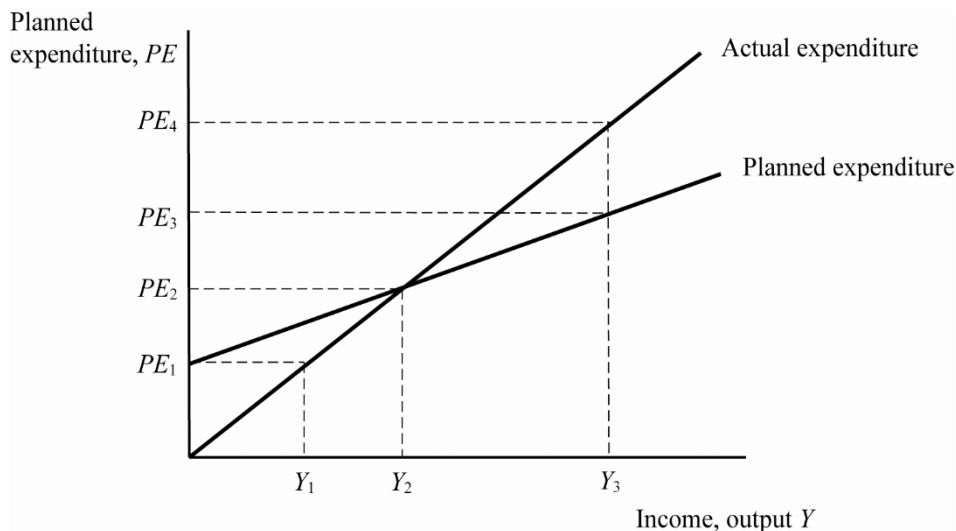
- A) productivity
- B) turnover
- C) unionization
- D) shirking

#14. Okun's law is the _____ relationship between real GDP and the _____.

- A) negative; unemployment rate
- B) negative; inflation rate
- C) positive; unemployment rate
- D) positive; inflation rate

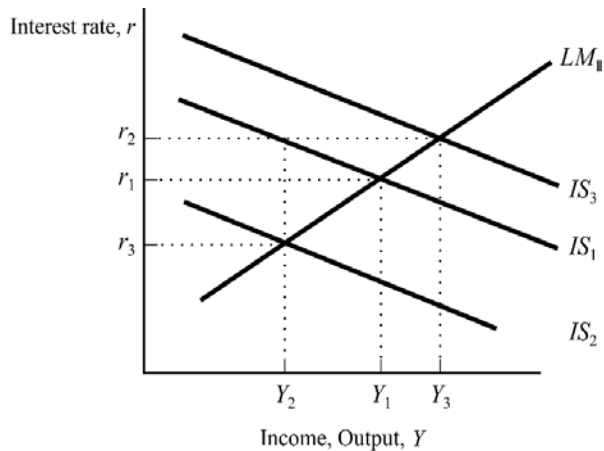
#15. Most economists believe that prices are:

- A) flexible in the short run but many are sticky in the long run.
- B) flexible in the long run but many are sticky in the short run.
- C) sticky in both the short and long runs.
- D) flexible in both the short and long runs.



#16. In the graph above, if firms are producing at level Y_1 , then inventories will _____, inducing firms to _____ production.

- A) rise; increase
- B) rise; decrease
- C) fall; increase
- D) fall; decrease



#17. Based on the graph above, starting from equilibrium at interest rate r_1 and income Y_1 , a tax cut would generate the new equilibrium combination of interest rate and income:

- A) r_2, Y_2
- B) r_3, Y_2
- C) r_2, Y_3
- D) r_3, Y_3

#18. Based on the graph above, starting from equilibrium at interest rate r_1 and income Y_1 , a decrease in government spending would generate the new equilibrium combination of interest rate and income:

- A) r_2, Y_2
- B) r_3, Y_2
- C) r_2, Y_3
- D) r_3, Y_3

#19. A decrease in the price level shifts the _____ curve to the right, and the aggregate demand curve _____.

- A) IS ; shifts to the right
- B) IS ; does not shift
- C) LM ; shifts to the right
- D) LM ; does not shift

- #20. According to the Phillips curve, other things being equal, inflation depends positively on:
- A) expected inflation.
 - B) the unemployment rate.
 - C) the rate of technological change.
 - D) the quantities of capital and labor.
- #21. If the short-run aggregate supply curve is steep, the Phillips curve will be:
- A) flat.
 - B) steep.
 - C) backward-bending.
 - D) unrelated to the slope of the short-run aggregate supply curve.
- #22. Increasing government spending when the economy is in a recession is an example of:
- A) active monetary policy.
 - B) active fiscal policy.
 - C) passive monetary policy.
 - D) passive fiscal policy.
- #23. Because monetary and fiscal lags are long and variable:
- A) stronger policies must be used.
 - B) successful stabilization policy is completely impossible.
 - C) attempts to stabilize the economy are often destabilizing.
 - D) policy must be completely passive.
- #24. The amount by which government spending exceeds government revenues is called the _____, and the accumulation of past government borrowing is called the _____.
- A) deficit; debt
 - B) debt; deficit
 - C) devaluation; deflation
 - D) deflation; devaluation

- #25. The debt of the United States government is underreported in the view of many economists because *all* of the following liabilities are excluded *except*:
- A) future pensions of government employees.
 - B) debt owed to foreigners.
 - C) future Social Security benefits.
 - D) government guarantees of student loans.
- #26. The short-run Phillips curve:
- A) shifts upward if expected inflation increases.
 - B) shifts upward if expected inflation decreases.
 - C) shifts downward if expected inflation increases.
 - D) is vertical.
- #27. In the Keynesian-cross model, actual expenditures equal:
- A) GDP.
 - B) the money supply.
 - C) the supply of real balances.
 - D) unplanned inventory investment.
- #28. In the short run an adverse supply shock causes:
- A) both prices and output to rise.
 - B) prices to rise and output to fall.
 - C) prices to fall and output to rise.
 - D) both prices and output to fall.
- #29. The natural rate of unemployment in the U.S. since 1950 has averaged between ____ and ____ percent.
- A) 0; 1
 - B) 1; 3
 - C) 5; 6
 - D) 10; 15
- #30. If a country has a high rate of inflation relative to the United States, the dollar will buy:
- A) less of the foreign currency over time.
 - B) more of the foreign currency over time.
 - C) the same amount of the foreign currency over time.
 - D) an amount of foreign currency determined by the real exchange rate.

Problem Solving / Essay / Matching Questions. (140 points)

#31. (30 pts) Consider an economy that produces 4 goods. Unless otherwise stated, 2017 is the base year.

Product	Quantity		Price	
	2017	2018	2017	2018
A	5	7	\$30	\$40
B	6	4	\$20	\$40
C	8	12	\$15	\$20
D	3	5	\$100	\$110

- (a) (15 pts) Calculate nominal and real GDP for 2017 and 2018. What is the GDP deflator in 2017 and 2018? What is the corresponding annual growth rate of the economy and the annual inflation rate?
- (b) (15 pts) Assume that the typical consumer's basket of goods is given by the **average of the quantities between 2017 and 2018**. Calculate the CPI for 2017 and 2018, as well as the annual CPI inflation rate. Why is GDP deflator inflation rate lower?

#32. (30 pts) This question focuses on the labor market and unemployment using the most recent U.S. data. The adult population (N) of the U.S. is approximately 259 million. The labor force is approximately 162.5 million and the number of employed workers (E) is approximately 156.5 million.

(a) (15 pts) What is the unemployment rate? What is the labor force participation rate? Both are lower than 2010 U.S. values. Give a plausible reason why each labor market indicator is lower in 2018.

(b) (15 pts) The rate of job finding (f) is 0.1. Calculate the rate of job separation (s) that is consistent with a 5% natural rate of unemployment? How many people are finding and losing their job each month? Using the given value of f and the calculated value of s , will the unemployment rate in part (a) go up or down next month? Explain.

#33. (40 pts) Consider the following short-run, open-economy model of the economy.

Goods Market	Money Market
$C = 50 + 0.5(Y - T)$	$M = 20,000$
$I = 150 - 10r; NX = -200$	$P = 100$
$G = 150; T = 100$	$L(Y, r) = Y - 50r$

(a) (10 pts) Graph the IS and LM equations and find the equilibrium values of r and Y . Show the equilibrium values on the graph and make sure to clearly label everything.

(b) (10 pts) Assume the natural rate of output is $\bar{Y} = 210$, individuals do not hold currency ($cr = 0$), and the reserve requirement is 10% ($rr = 0.1$). If the Fed desires to return the economy to its natural level, what should they do with reserves (R) and the money supply (M)? Show the effect in an IS-LM diagram.

(c) (10 pts) Ignore part (b). Policymakers plan to balance the budget by decreasing G . What is the size of the Keynesian-cross government spending multiplier and the horizontal shift in the IS curve? Show this on your graph in part (a). What are the resulting IS-LM equilibrium values of r and Y after the shift? What is the size of the effective IS-LM government spending multiplier? Why is it smaller?

(d) (10 pts) If you did parts (b) and (c) correctly, then $r_* < 0$. Is this possible? If so, explain how.

- #34. (30 pts) AD-SRAS-LRAS model of the economy. Assume the SRAS curve is upward sloping.
- (a) (15 pts) Assume the Mueller investigation finds hard evidence of Russian collusion in our elections. The actions to follow create political and economic uncertainty, which in turn causes consumers to reduce their consumption. Use the AD-SRAS-LRAS diagram to discuss the predicted short- and long-run impacts on the price level, real GDP and unemployment. Clearly label your graph and write a concise paragraph to accompany your graph.
- (b) (15 pts) Discuss the possible fiscal and monetary responses to the adverse consumption shock described in part (a). Use an AD-SRAS-LRAS diagram to support your discussion.

#35. (10 pts) Draw a line to match the best answer (right column) to the question (left column).

Current U.S. debt (held by public) to GDP ratio	76%
Fed inflation target	66%
Current U.S. unemployment rate	2.0%
Share of GDP going to workers: $Y = K^{1/3}L^{2/3}$	4.2%
2 nd Quarter 2018 U.S. real GDP growth	3.7%

Scratch paper.