

## ECON 3010 Intermediate Macroeconomics Final Exam

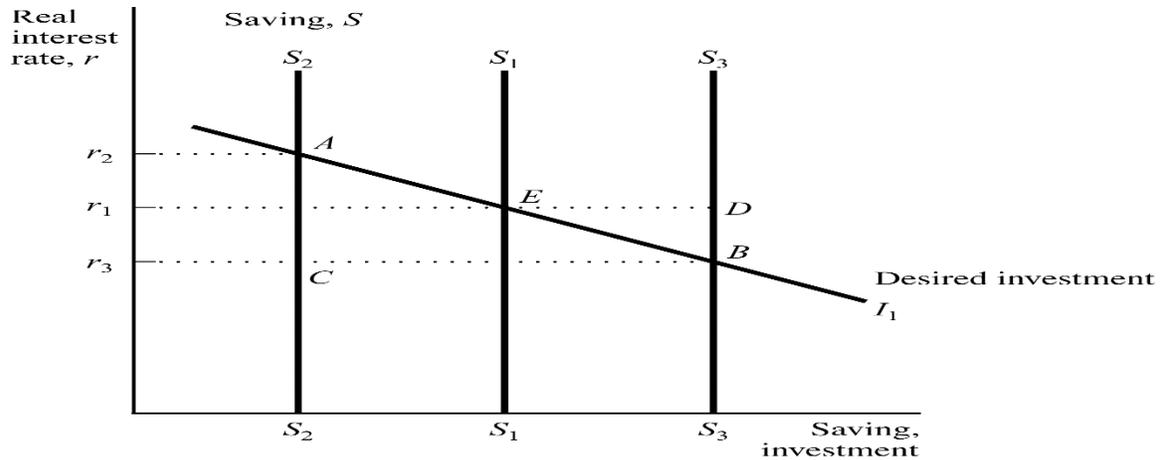
### Multiple Choice Questions. (60 points; 3 pts each)

- #1. How does the distinction between flexible and sticky prices impact the study of macroeconomics?
- a. Flexible prices are typically assumed in the study of the long run, while sticky prices are assumed in the study of the short run.
  - b. The study of flexible prices is confined to microeconomics, while macroeconomics focuses on sticky prices.
  - c. Macroeconomists use flexible prices to explain inflation and sticky prices to explain unemployment.
  - d. Endogenous variables are measured using flexible prices, while exogenous variables are measured using sticky prices.
- #2. The total income of everyone in the economy is exactly equal to the total:
- a. consumption expenditures of everyone in the economy.
  - b. government expenditures.
  - c. expenditures of all businesses in the economy.
  - d. expenditure on the economy's output of goods and services.
- #3. The amount of capital in an economy is a \_\_\_\_\_ and the amount of investment is a \_\_\_\_\_.
- a. intermediate good; final good
  - b. stock; flow
  - c. flow; stock
  - d. final good; intermediate good
- #4. The *real* interest rate is the:
- a. rate of interest actually paid by consumers.
  - b. nominal interest rate minus the rate of inflation.
  - c. rate of interest actually paid by banks.
  - d. rate of inflation minus the nominal interest rate.

#5. In a closed economy, private saving equals:

- $Y - C - G$ .
- $Y - T$ .
- $Y - I - C$ .
- $Y - T - C$ .

#6.



The economy begins in equilibrium at Point E, representing the real interest rate,  $r_1$ , at which saving,  $S_1$ , equals desired investment,  $I_1$ . What will be the new equilibrium combination of real interest rate, saving, and investment if the government cuts taxes, holding other factors constant?

- Point A
- Point B
- Point C
- Point D

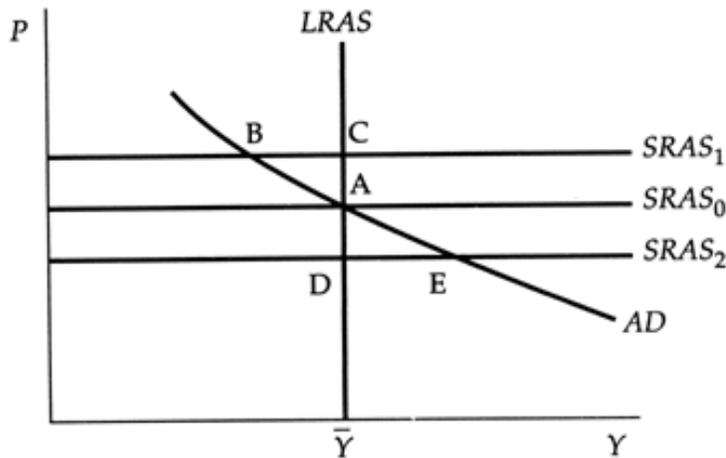
#7. If there is no currency and the proceeds of all loans are deposited somewhere in the banking system and if  $rr$  denotes the reserve–deposit ratio, then the total money supply is:

- reserves times  $rr$ .
- $1/rr$ .
- reserves divided by  $(1 - rr)$ .
- reserves divided by  $rr$ .

- #8.** If currency held by the public equals \$100 billion, reserves held by banks equal \$50 billion, and bank deposits equal \$500 billion, then the money supply equals:
- a.** \$100 billion.
  - b.** \$650 billion.
  - c.** \$150 billion.
  - d.** \$600 billion.
- #9.** “Inflation tax” means that:
- a.** as the price level rises, taxpayers are pushed into higher tax brackets.
  - b.** in a hyperinflation, the chief source of tax revenue is often the printing of money.
  - c.** as the price level rises, the real value of money held by the public decreases.
  - d.** as taxes increase, the rate of inflation also increases.
- #10.** If net capital outflow is positive, then:
- a.** the trade balance must be positive.
  - b.** the trade balance must be negative.
  - c.** exports must be positive.
  - d.** exports must be negative.
- #11.** If the real exchange rate is high, foreign goods:
- a.** and domestic goods are both relatively cheap.
  - b.** are relatively expensive and domestic goods are relatively cheap.
  - c.** and domestic goods are both relatively expensive.
  - d.** are relatively cheap and domestic goods are relatively expensive.
- #12.** Unemployment caused by the time it takes workers to search for a job is called \_\_\_\_\_ unemployment.
- a.** insider
  - b.** frictional
  - c.** efficiency
  - d.** structural

- #13. Discouraged workers are individuals who:
- have jobs that do not match their skills (e.g., a Ph.D. driving a taxi cab).
  - want a job but have given up looking for one.
  - have been unemployed for more than 26 weeks.
  - call themselves unemployed but are not seriously looking for a job.

#14.

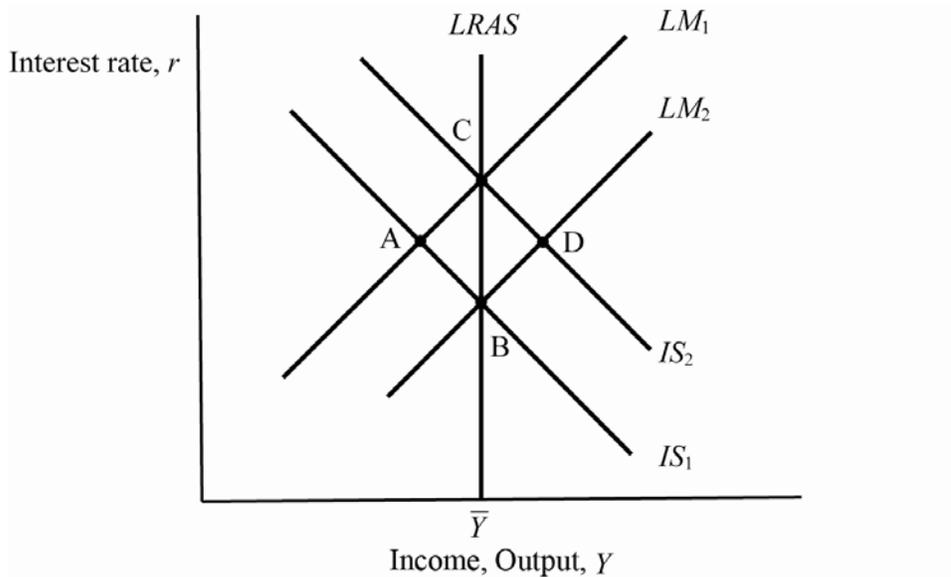


Assume that the economy starts at point A and there is a drought that severely reduces agricultural output in the economy for just one year. In this situation, point \_\_\_\_\_ represents the short-run equilibrium immediately following the drought and point \_\_\_\_\_ represents the eventual long-run equilibrium.

- D; A
  - E; D
  - B; C
  - B; A
- #15. Along any given *IS* curve:
- government spending is fixed, but tax rates vary.
  - tax rates are fixed, but government spending varies.
  - both government spending and tax rates vary.
  - both government spending and tax rates are fixed.

- #16. If the  $LM$  curve is vertical and government spending rises by  $G$ , in the  $IS-LM$  analysis, then equilibrium income rises by:
- zero.
  - $G$ .
  - more than zero but less than  $G/(1 - MPC)$ .
  - $G/(1 - MPC)$ .

#17.

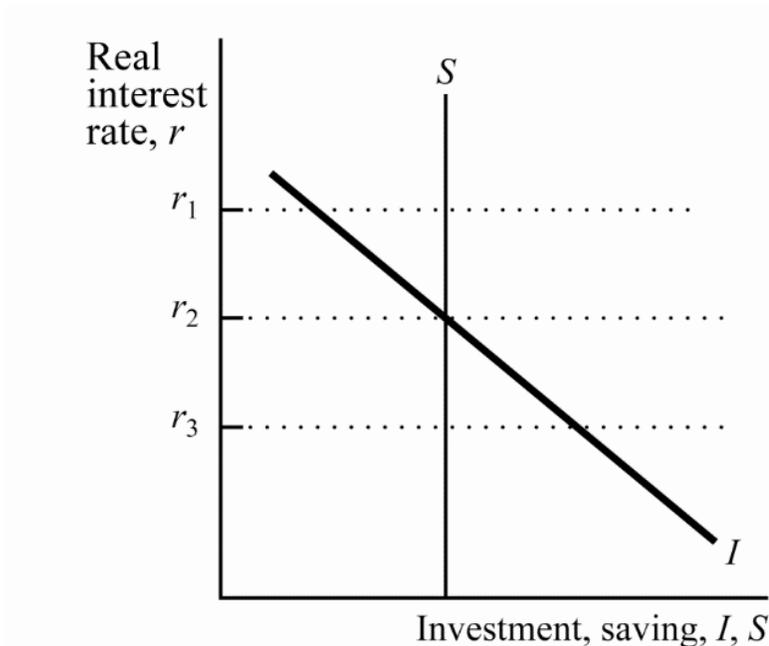


Based on the graph, if the economy starts from a short-term equilibrium at A, then the long-run equilibrium will be at \_\_\_\_ with a \_\_\_\_ price level.

- C; lower
  - C; higher
  - B; higher
  - B; lower
- #18. If the short-run aggregate supply curve is steep, the Phillips curve will be:
- unrelated to the slope of the short-run aggregate supply curve.
  - backward-bending.
  - steep.
  - flat.

- #19. According to the traditional viewpoint of government debt, a tax cut without a cut in government spending:
- has no effect on consumer spending but reduces private saving.
  - has no effect on consumer spending but reduces national saving.
  - stimulates consumer spending in the short run and reduces private saving.
  - stimulates consumer spending in the short run and reduces national saving.

#20.



In a small open economy, if the world interest rate is  $r_1$ , then the economy has:

- a trade deficit.
- negative capital outflows.
- balanced trade.
- a trade surplus.

**Problem Solving / Essay Questions. (120 points)**

#21. (30 pts) Consider a macroeconomy that produces three goods.

Product	Quantity		Price	
	2017	2018	2017	2018
A	10	12	\$5	\$6
B	20	20	\$1	\$1
C	5	4	\$10	\$12

- (a) (10 pts) Calculate nominal and real GDP for 2017 and 2018 using 2017 as the base year. What is the GDP deflator in 2017 and 2018?
- (b) (10 pts) Assume that the typical consumer's basket of goods is given by the combination (A=2, B=1, C=3). Calculate the CPI for 2017 and 2018, as well as the CPI inflation rate.
- (c) (10 pts) Comment on the growth rate of output and the price level in the macroeconomy. Which measure – CPI or GDP deflator – is a better measure of inflation? Defend your answer.

#22. (30 pts) Assume that currency ( $C$ ) is \$10 billion and reserves ( $R$ ) are \$10 billion. The reserve-deposit ratio ( $rr$ ) and the currency-deposit ratio ( $cr$ ) are both equal to 0.2.

(a) (10 pts) What is the monetary base? What is the amount of demand deposits? What is the money multiplier? What is the money supply?

(b) (10 pts) Assume the Fed increases reserves to \$11 billion. If real GDP and velocity remain constant, what is the implied rate of inflation?

(c) (10 pts) Continue to assume that the velocity of money and real GDP are constant. If the Fed wishes to instead target a 10% inflation rate, how would they accomplish their goal?

#23. (30 pts) Consider the following short-run model of the economy.

Goods Market	Money Market
$C = 100 + 0.5(Y - T)$	$M = 4000$
$I = 50 - 2r$	$P = 10$
$G = 200; T = 100$	$L(Y, r) = Y - 6r$

(a) (10 pts) Graph the IS and LM equations. Be sure to label the axes and curves.

(b) (5 pts) Find the equilibrium values for  $r$  and  $Y$ . Show these values on the graph.

(c) (15 pts) Assume the federal government reduces spending to balance the budget. Show the shift on your graph in (a), the new equilibrium, and the Keynesian-cross multiplier. Calculate the 'effective' IS-LM multiplier and explain why the equilibrium reduction in output was less than the value implied by the Keynesian-cross multiplier.

#24. (30 pts) AD-SRAS-LRAS model of the economy. Assume the SRAS curve is upward sloping.

(a) (15 pts) After years of quantitative easing, the Fed has gradually been moving toward a more normal level of interest rates and money growth. Describe in words how the FOMC has accomplished this and how the new policy is predicted to impact the price level, real GDP and unemployment both in the short and long run. Use a diagram to support your explanation.

(b) (15 pts) Now assume you are an economic advisor to President Trump, such as Treasury Secretary Mnuchin. The most recent labor market figures have the unemployment rate at 4.4%. The 'contractionary' monetary policy described above may cause unemployment to rise and will make it difficult to achieve a 2% inflation target. What policy would you recommend to the President? Use an AD-AS diagram to support your recommendation.

#25. (20 pts) True or False. If “False”, correct the statement to make it true.

(a) (5 pts) “The overall level of federal debt is approximately 10% of GDP.”

(b) (5 pts) “Robots and automation are the main cause of the recent decline in the U.S. labor force participation rate.”

(c) (5 pts) “Active monetary policy is an effective means to guide both short-run and long-run aggregate production.”

(d) (5 pts) “Mexico is one of the top two international holders of U.S. federal debt.”

Scratch Paper.