Economics 227: Intermediate Macroeconomics
Final Exam

Multiple Choice Questions (75 points total, 3 points each)

1. In the long-run equilibrium of the Solow Model with technology, all of the following are constant except
   (a) Capital per effective worker
   (b) The capital-output ratio
   (c) The real wage
   (d) The real interest rate
   (e) None of the above

2. In the short run with fixed prices, what is the effect of a reduction in money demand on output and investment?
   (a) Both output and investment rise
   (b) Output rises, investment falls
   (c) Output falls, investment rises
   (d) Both output and investment fall

3. Which of the following would increase frictional unemployment?
   (a) An increase in the minimum wage
   (b) Sectoral shifts
   (c) A reduction in the generosity of unemployment insurance
   (d) Increased unionization
   (e) None of the above

4. Following the Black Death, we should expect real wages to __________ and the real rental rate of capital to __________
   (a) rise, rise
   (b) rise, fall
   (c) fall, rise
   (d) fall, fall
   (e) Not enough information to determine

5. In the IS-LM model, a tax cut is unlikely to produce a large increase in production if:
   - (a) Autonomous consumption is high
   - (b) The economy is in a liquidity trap
   - (c) Money demand is not very responsive to interest rates.
   - (d) The marginal propensity to consume is very high
   - (e) None of the above

6. During the Volcker Recession, suppose the rate inflation fell from 7% to 3%, the unemployment rate rose from 2% to 10%, and the level of output fell 5%. What was the sacrifice ratio?
   - (a) 0.5
   - (b) 0.625
   - (c) 0.8
   - (d) 1.25
   - (e) 2

7. In the sticky-wage model, the aggregate supply curve is increasing because
   - (a) Leisure is more expensive at a higher wage.
   - (b) At higher than expected prices, workers are less valuable than expected.
   - (c) Unions and firms agree on the real wage that attains full employment.
   - (d) Individuals hold rational expectations.
   - (e) The real wage is lower if prices are high, so firms hire more workers.

8. If investors perceive increased risk associated with investing in a country, then in the Mundell-Fleming model the IS* curve shifts ____________ and the LM* curve shifts ____________
   - (a) right, right
   - (b) right, left
   - (c) left, right
   - (d) left, left
   - (e) None of the above

9. Consider an economy described by the Solow Growth Model with $Y = K^{\frac{1}{4}} (LE)^{\frac{3}{4}}$. The economy is currently in steady state with the Golden Rule capital stock. Aggregate output is growing at 3% per year, the population growth rate is $n = 0.01$, and the rate of depreciation is $\delta = 0.02$. What is the capital-output ratio $\frac{K}{Y}$?

   (a) 1
   (b) 2
   (c) 3
   (d) 4
   (e) 5

10. Recall the simple AD/AS model based on the Quantity Theory of Money. Following a severe drought, the Central Bank should __________ the money supply to maintain constant prices, and __________ the money supply to maintain constant output.

    (a) Increase, increase
    (b) Increase, reduce
    (c) Reduce, increase
    (d) Reduce, reduce
    (e) None of the above

11. All of the following economic variables are procyclical except:

    (a) Prices
    (b) Investment
    (c) Employment
    (d) Labor Hours
    (e) None of the above

12. In the Keynesian cross diagram, if planned expenditures is above the 45-degree line, then:

    (a) There is excess demand in the goods market
    (b) Firms are experiencing unplanned inventory investment
    (c) The economy is on the IS curve
    (d) Individuals are buying bonds
    (e) None of the above.

13. In the Solow Growth Model, if the rate of technological progress increases, then the level of output per effective worker will be ____________, and the growth rate of output per worker will be ____________

    (a) higher, higher
    (b) higher, the same as before
    (c) lower, higher
    (d) the same as before, lower
    (e) None of the above

14. Suppose consumers become pessimistic about the state of the economy, and reduce autonomous consumption spending. If output were initially at its natural level $\overline{Y}$, in the short run with fixed prices, we should expect output to ____________ and investment to ____________.

    (a) fall, rise
    (b) rise, fall
    (c) fall, fall
    (d) rise, rise
    (e) None of the above

Fill in the blanks with your own words.

15. Continuing the previous question, over time GDP will return to its natural level because prices ____________ so the supply of real money balances ____________, hence ____________.

16. Suppose the production function is $Y = K^{1/3}L^{2/3}$. In this economy there are 27 units of capital, and 560 workers. Suppose the government imposes a minimum wage of $w = \frac{1}{4}$. How much unemployment does this generate?

    (a) 12
    (b) 24
    (c) 36
    (d) 48
    (e) 60

Fill in the blanks with the words rise, fall, or doesn't change.

17. In the Mundell-Fleming model with floating exchange rates, if the government purchases and taxes both rise by the same amount, then net exports ____________ and income ____________

Fill in the blanks with the words shifts left, shifts right, or doesn't change.

18. Following an increase in the world interest rate,the IS* curve ____________ and the LM* curve ____________.

19. Suppose the interest rate is 9% in Lebanon and 15% in Egypt. One Egyptian pound costs LL. 275. Suppose Uncovered Interest Parity holds. Which value below is closest to the future price of Egyptian pounds?

   (a) 220
   (b) 240
   (c) 260
   (d) 280
   (e) 300

20. In the Mundell-Fleming model, following an increase in the perceived riskiness of a country with floating exchange rates, income may fall because

   (a) A speculative attack may deplete the Central Bank's reserves
   (b) Firms find it more expensive to invest
   (c) Monetary policy is ineffective
   (d) Individuals hoard cash
   (e) None of the above

21. In the long-run model with a closed economy, suppose the investment demand function is given by $I(r) = 5000 - 1000r$. If the government increases spending from 400 units to 450 units, what is the change in the interest rate?

   (a) It falls 10%
   (b) It falls 5%
   (c) It doesn't change
   (d) It rises 5%
   (e) It rises 10%.

22. Suppose the simple Keynesian theory is correct, and people on average save 40% of their income. If the government reduces taxes by $3 billion, then how much does output rise?

    (a) $2.5 B
    (b) $3 B
    (c) $3.5 B
    (d) $4 B
    (e) $4.5 B

23. Mongolia is a small open economy with floating exchange rates. The quality of Mongolian exports is suddenly judged superior to those of other countries, so that the world is willing to buy more Mongolian exports given the same price. What happens to Mongolia's level of net exports NX?

    (a) They rise
    (b) They fall
    (c) They stay the same
    (d) Cannot be determined

24. Possible sources of cost-push inflation include all of the following except:

    (a) Oil shocks
    (b) Bad Weather
    (c) Increased unionization
    (d) Increased regulation
    (e) None of the above

25. If money demand doesn't depend on the interest rate, then the LM curve is __________ and __________ policy is ineffective

    (a) vertical, monetary
    (b) vertical, fiscal
    (c) horizontal, monetary
    (d) horizontal, fiscal

Short-Answer Questions: 25 points

1. (15 points) Suppose autonomous consumption rises. In this problem, you will analyze the effect of a change in policy on various endogenous variables using several of the models we studied in class. For each model, write whether the indicated variables rise, fall, or don't change following the rise in autonomous consumption. An arrow is sufficient, you don't need to explain your reasoning

   (a) In the long-run, classical, closed economy model of Ch. 3, what happens to consumption, investment, output, the real interest rate, national saving, and private saving?

   (b) In the long-run, small open economy of Ch. 5, what happens to consumption, investment, net exports, output, the real interest rate, and the real exchange rate?

   (c) In the short-run closed-economy IS/LM model with fixed prices, what happens to consumption, investment, output, and the real interest rate?

   (d) In the Mundell-Fleming model under floating exchange rates, what happens to consumption, investment, net exports, output, the real interest rate, and the nominal exchange rate?

   (e) In the Mundell-Fleming model under fixed exchange rates, what happens to consumption, investment, net exports, the real interest rate, and the nominal exchange rate?

2. (10 points) Macroeconomists have studied the Great Depression from 1929–1939 extensively. Competing explanations are the *money hypothesis* and the *spending hypothesis*.

   (a) Both interest rates and aggregate output were very low during the Depression. Does this support or contradict the spending hypothesis? Describe some events that took place during the Depression which support the spending hypothesis.

   (b) There was a 25% decline in the money supply, a 29% decrease in the price level, a 4% increase in real money balances, and an 83% decrease in the interest rate from 1929–1933. Does this support or contradict the money hypothesis?

   (c) Severe deflation occurred throughout the Depression, illustrated by the 29% decrease in the price level. Explain why expected deflation may be relevant.