Econ 304

Fall 2014

Final Exam Review Questions

1. TFU: Many Americans derive great utility from driving Japanese cars, yet imports are excluded from GDP. Thus GDP should not be used as a measure of economic well-being.

2. Which is the least-flawed measure of well-being and why are the others worse? (a) Nominal GDP, (b) Real GDP, (c) Real GDP per capita, (d) Real GDP per hour worked

3. TFU: A zero rate of increase in the Consumer Price Index is an appropriate target for monetary policy.

4. Based on the available evidence, does an increase in per-capita income make people happier?

5. What is the growth rate of each of the following variables in the steady state of the Solow growth model with technological progress? (a) GDP, (b) GDP per capita, (c) Capital stock, (d) Labor force, (e) Real wages, (f) Interest rate, (g) Capital/labor ratio, (h) Capital/output ratio.

6. TFU: An increase in the saving rate permanently raises the output growth rate in the Solow model.

7. The Solow model assumes diminishing returns to capital, which means that the $f(k)$ function increases at a decreasing rate. Describe the equilibrium behavior of the model if we suspend diminishing returns and allow $f(k) = Bk$, where B is a positive constant. (Assume that sB is larger than $n + a + \delta$ and explain why this assumption is important.) Is this model able to generate "endogenous growth" if $n + a = 0$?

8. Would your answer to question 6 be different for the production function of question 7? Explain.

9. Are people always better off when they save more in the Solow model? Explain.

10. What is the Solow residual and how is it interpreted and used?

11. TFU: The Solow model predicts that it is only a matter of time before Madagascar's per-capita GDP matches that of the United States.

12. Ignoring dynamics, explain the income and substitution effects on labor supply of an increase in the real wage.

13. TFU: A temporary wage increase will have a more positive effect on hours worked than a permanent increase.

14. How (if at all) and why might each of the following affect the natural rate of unemployment? (a) Increase in the minimum wage, (b) Increase in unionization of the labor force, (c) Increase in the cost of monitoring the quality of workers' effort, (d) Change in the sectoral composition of GDP, (e) Increase in the replacement rate of unemployment-insurance benefits, (f) Increase in the proportion of young workers in the labor force, (g) Increase in aggregate demand.

15. Why is money neutral in the long run but not in the short run?

16. Make an argument for excluding savings accounts from the definition of the money supply. Make an argument for including them.

17. In the quantity theory of money, $M = kPY$. Explain the meaning of k and its reciprocal. What are the units of measure of each and how do they relate to its meaning? Would you expect k to be large or small in a country undergoing hyperinflation? Why? What effect would this change in k have on prices?

18. Suppose that the money supply in Urania is initially growing at 7% per year and inflation is 3%. The Uranian currency (the curie) is stable against the US dollar. Now suppose that the Uranian central bank increases the growth rate of the supply of curies to 12%. In the new steady state, what will be the values of (a) Uranian inflation, (b) the rate of appreciation or depreciation of the curie against the dollar, (c) the growth rate of GDP in Urania?

19. Does absolute purchasing power parity hold when comparing gold prices across countries? How about wheat prices? How about the price of homes? Why are the answers different?

20. Define the real exchange rate. What are its units and what does it measure? Why is the real exchange rate the relevant one for imports and exports?

21. Suppose that Jane is able to borrow and lend at a real interest rate of 3%. She lives two years and earns a real income of 40,000 goods in the first year and 60,000 goods in the second year. What is the slope of her budget line (with second-year consumption on the vertical axis)? What is the horizontal intercept? What is the vertical intercept?

22. Suppose that the current value of the Parker House is $1.5m, the current real interest rate is 2%, and the annual cost of maintenance on the house is $15,000. Assume no depreciation if the house is properly maintained. At what (annual) price should Reed be willing to rent the house? How (and why) would this change if the interest rate rose to 3%? What if the cost of maintenance increased to $30,000? What if the value of the house were expected to appreciate 1% faster than the rate of inflation?

23. Explain the difference between diversifiable and non-diversifiable risk. Which will cause changes in the rate of return required to persuade investors to buy an asset? Why?

24. TFU: According to the Modigliani-Miller Theorem, the opportunity cost of capital to a firm should be the same whether the investment is financed by borrowing, issuing new equity, or using internal retained earnings.

25. Explain why a deficit-financed decrease in taxes would lead to an equivalent increase in saving (and no change in consumption) under the Ricardian equivalence hypothesis. What assumptions are necessary for this result to hold?

26. TFU: Willy Wager will waste Wednesday's winnings if he is confident that his betting system is foolproof, but save them if he thinks he was just lucky.

27. TFU: For a utility-maximizing consumer, an increase in the real interest rate always raises future consumption.

28. TFU: According to the accelerator model of investment, the flow of investment should be proportional to the change in output.

29. What happens to Tobin's q during a stock-market decline? What effect would this have on real investment and why? The interest rate is very low right now; is this reducing q or propping it up?

30. TFU: Gold held by the central bank is not part of the money supply.

30.5. TFU: Vault cash held by banks is not part of the money supply.

31. If the central bank buys $1m worth of domestic securities, the money supply usually increases by more than $1m. Why?

32. Explain the difference between illiquidity and insolvency of a bank. In which case is it better to close the bank down and why? In which case is it better for the central bank to provide lender of last resort services and why?

33. Explain why the central bank can only set one variable as an instrument of monetary policy. What three variables are the most common choices?

34. TFU: An increase in GDP leads to an increase in the demand for money, and it is empirically plausible that these increases are of equal proportion.

35. TFU: The demand for money depends on the real interest rate, not the nominal rate, so an increase in inflation expectations that raises nominal interest rates should leave money demand unchanged.

36. In the Keynesian cross diagram (with the *DD* curve and the 45° line), what is on each axis? What is the economic significance of the vertical gap between the two curves at any point? Interpret equilibrium in terms of this gap.

37. TFU: The Keynesian expenditure multiplier will be small if consumers spend most of an increment to their income on imports.

38. TFU: A higher average income-tax rate reduces the size of the Keynesian multiplier, acting as an automatic stabilizer when there are exogenous shocks to spending.

39. In the *IS/TR* diagram, what variables are on the vertical and horizontal axes? Explain exactly what it means (in terms of equilibrium) for a point to be on, above, or below the *IS* curve. Explain exactly what it means for a point to be on, above, or below the *TR* curve.

40. What assumption about monetary policy leads naturally to the *LM* curve? What assumption leads to the *TR* curve? Which is more appropriate for the United States over the 1990s and early 2000s?

41. What is the form of the equation for the Taylor Rule? What variable is on the left-hand side? What variables are on the right-hand side and what effects do they have?

42. Explain and demonstrate the effects of each of the following exogenous shocks on output and interest rates in the *IS/TR* framework (other exogenous variables held constant and starting from equilibrium): (a) Increase in exports, (b) Appreciation of the exchange rate, (c) Tightening of monetary policy to fight inflation, (d) Increase in tax rates, (e) Increasing optimism in the stock market.

43. What is a liquidity trap? Are we in one right now? Why is a liquidity trap more likely when prices are falling than when they are rising? What are the implications of the liquidity trap for the effectiveness of monetary policy and fiscal policy?

44. TFU: Under fixed exchange rates with perfect capital mobility, domestic equilibrium must be at the intersection of the *TR* and *IFM* curves.

45. What determines the position and slope of the *IFM* curve if capital mobility is perfect?

46. TFU: Under floating exchange rates with perfect capital mobility, the central bank cannot pursue an independent monetary policy.

47. TFU: Under floating exchange rates with perfect capital mobility, an increase in government spending will increase the current-account deficit, but not stimulate domestic aggregate demand.

48. Explain the differences in assumptions that lead to the short-run and long-run aggregate-supply curves. How are these differences manifested in the nature of the curves?

49. Phillips found a fairly stable relationship between inflation and unemployment for 1860–1960 in the United Kingdom; since 1970, there has been no stable relationship. Using the modern theory of the Phillips curve, why was the curve stable for so long and why did it come unglued after 1970?

50. Why does the aggregate-demand curve (with π on the vertical axis) slope downward?

51. Use the *AD/AS* diagrams to show the short-run and long-run effects on output and inflation of an increase in government spending. How does the short-run evolve into the long run?

52. Use the *AD/AS* diagrams to show the short-run and long-run effects on output and inflation of an increase in money growth under floating exchange rates. How does the short-run evolve into the long run?

53. If long-term interest rates are lower than short-term rates, what does that tell us about expected future short-term rates? Why?

54. If you had high uncertainty about future inflation, would you rather hold short-term bonds or long-term bonds? Why?

55. TFU: The value of a share of stock should equal the present value of the firm's expected future dividend payments on that share.

56. TFU: The higher the expected future price of an asset, the higher will be the price today.

57. TFU: It can be rational for an individual investor to contribute to an asset-price bubble by buying the asset.

58. Ignoring the presence of a bid-ask spread, if $2 can be exchanged for £1, and £1 trades for €1.5, then what must be the exchange rate between the dollar and the euro? What will assure that this exchange rate holds?

59. Briefly explain the difference between covered and uncovered interest parity. Which must hold more closely and why?

60. TFU: Under perfect capital mobility and relative purchasing-power parity, real interest rates should be the same in Japan and Europe.

61. What are appropriate goals for monetary policy in the short run and the long run? Are these goals ever in conflict?

62. What are appropriate goals for fiscal policy in the short run and the long run? Are these goals ever in conflict?

63. Why is monetary policy hard to do well? Do you think it is worth attempting, given the difficulties?

64. How does real-business-cycle theory differ from conventional models? How is the prescription for demand-side policies different and why? What historical examples support the RBC framework?

65. What is the inflation tax? How is it collected by governments? How is it paid and by whom? What are the advantages and the disadvantages of the inflation tax relative to other taxes?

66. TFU: An increase in government spending on National Science Foundation grants would have no effect in the long run because fiscal policy has only short-run effects.

67. TFU: High income-tax rates probably lower real potential output in the long run.

68. Explain how a current-account deficit would be corrected in the long run under the classical gold standard.

69. Why did the Bretton Woods system break down? Who was at fault? What policy changes might have prolonged it?

70. What are the advantages and disadvantages of monetary union for the nations of Europe?