ANSWER KEY – FINAL EXAM (VERSION 1)
Economics 402; Income and Employment Theory (Section 2)
Spring 2009; Mr. Vaughan

BARRO (CHAPTERS 12-16)

Assume the economy is <u>at</u> operating at potential output. Suppose the central bank <u>increases</u> in the money supply, other things equal. In the <u>misperception model</u>:

1. The general price level will fall in the short run. **FALSE (price level rises)**

2. The general price level will rise in proportion to the increase in the money supply in the long run. **TRUE**

3. The real wage will rise in the short run. **FALSE (workers confuse increase in nominal wage for increase in real wage and increase labor supply, thereby driving down real wage)**

4. The real wage will rise in the long run. **FALSE (in LR, money is neutral)**

5. Total employment/hours worked will rise in the short run. **TRUE (increase in labor supply increases labor input)**

6. Average product of labor will rise in the short run. **FALSE [increase in labor input for given capital stock and technology level implies decline in marginal product of labor (MPL). Decline in MPL implies decline in average product of labor (APL)]**

7. Real output will rise in the short run. **TRUE**

8. Real output will rise in the long run. **FALSE**

9. Aggregate economic welfare will rise in the short run. **FALSE (while it is true that more goods make households better off, other things equal. Other things are not equal. Households are "fooled" into working more. Absent misperception, they would not have worked more – the additional goods would have been worth the leisure sacrificed.)**

10. Aggregate economic welfare will rise in the long run. **FALSE (welfare will not rise as a result of printing more money – money is neutral)**

Assume the economy is operating at <u>less than</u> potential output. Suppose the central bank <u>increases</u> the money supply, other things equal. In the <u>sticky-wage Keynesian model</u>:

11. The general price level will rise in the short run. **TRUE (increase in money raises prices – short-run aggregate supply curve is positively sloped).**

12. The real wage will rise in the short run. **FALSE (increase in prices, given a sticky wage, implies a fall in real wages).**

13. Average product of labor will rise in the short run. **FALSE (increase in labor input implies decline in MPL and APL)**

14. Real output will rise in the short run. **TRUE (increase in labor input implies, capital and technology constant, implies a rise in real output)**

15. Aggregate economic welfare will rise in the short run. **TRUE (economy is less than fully employed; a rise is output is Pareto improving.)**

Assume the economy is operating at <u>less than</u> potential output. Suppose the central bank <u>increases</u> the money supply, other things equal. In the <u>sticky-price Keynesian model</u>:

16. The general price level will rise in the short run. **[<u>Note</u>: do not grade this question. Mark every student's answer correct.]**

17. The real wage will rise in the short run. **TRUE (an increase in the money supply will increase real output because prices are fixed in the short run. This is depicted in the labor market as an increase in demand for labor, which increases the real wage)**

18. Average product of labor will rise in the short run. **FALSE (increase in demand for labor increases labor input. An increase in labor input – given capital and technology – implies a fall in MPL and APL)**

19. Real output will rise in the short run. **TRUE**

20. Aggregate economic welfare will rise in the short run. **TRUE (more goods to consume when the economy starts at less than full employment implies a higher level of welfare).**

Assume the economy is operating at potential output. Suppose households decide to save a larger fraction of income, other things equal. In the equilibrium model:

21. The general price level will fall in the short run. **FALSE**

22. Aggregate demand will fall in the short run. **FALSE**

23. Real output will fall in the short run. **FALSE**

24. Aggregate economic welfare will fall in the short run. **FALSE**

25. An increase in the money supply (as a policy response to the increase in savings) would increase aggregate welfare in the short run. **FALSE**

Assume the economy is operating at potential output. Suppose households decide to save a larger fraction of income, other things equal. In the sticky-price Keynesian model

26. The general price level will fall in the short run. **[Note: Do not grade this question. Mark every student's answer correct. In the standard AD-AS framework, the answer is "TRUE," but the Barro version of the sticky-price model suggests a different answer. And I promised I would not ask such a question – then forgot.]**

27. Aggregate demand will fall in the short run. **TRUE**

28. Real output will fall in the short run. **TRUE**

29. Aggregate economic welfare will fall in the short run. **TRUE**

30. An increase in the money supply (as a policy response to the increase in savings) would increase aggregate welfare in the short run. **TRUE**

Assume the economy is operating at potential output. Suppose government permanently increases its real purchases of goods. Further suppose these purchases have no impact on factor productivity. The equilibrium model predicts in the current period (i.e., short run):

31. Real gross investment spending will fall. **FALSE**

32. Real consumption spending will fall. **TRUE**

33. Real output will rise. **FALSE**

34. The general price level will fall. **FALSE**

35. The interest rate will rise. **FALSE**

Assume the economy is operating at potential output. Suppose government temporarily increases its real purchases of goods. Further suppose these purchases have no impact on factor productivity. The equilibrium model predicts in the current period (i.e., short run):

36. Real gross investment spending will fall. **TRUE**

37. Real consumption spending will fall. **TRUE**
38. Real output will rise. **FALSE**
39. The general price level will fall. **FALSE**
40. The interest rate will rise. **FALSE**

Assume the economy is operating <u>at</u> potential output. Suppose government <u>cuts the marginal tax rate on labor income</u>. The equilibrium model predicts in the current period (i.e., short run):

41. Total employment/hours worked will rise. **TRUE**
42. The real rental price of capital will fall. **FALSE**
43. The capacity utilization rate will rise. **TRUE**
44. Real output will fall. **FALSE**
45. The price level will rise. **TRUE**

Assume the economy is operating <u>at</u> potential output. Now, suppose government <u>cuts</u> real lump-sum taxes <u>for a given time path of real government spending</u>. Assume all agents can borrow and lend at the same real interest rate (i.e., perfect credit markets), and households plan consumption for "n" periods (i.e., they care about the welfare of future generations). The equilibrium model predicts the tax cut will:

46. Raise the real interest rate. **FALSE**
47. Increase current real consumption spending. **FALSE**
48. Reduce current real gross investment spending. **FALSE**
49. Raise real output. **FALSE**
50. Raise aggregate welfare. **FALSE**

Assume the economy is operating at <u>less than</u> potential output. Now, suppose government <u>cuts</u> real lump-sum taxes <u>for a given time path of real government spending</u>. Assume credit markets are imperfect. The sticky-wage Keynesian model predicts the tax cut will:
51. Increase current real consumption spending. **TRUE**
52. Increase the general price level. **TRUE**
53. Raise real output. **TRUE**
54. Raise aggregate welfare. **TRUE**

Assume the economy is operating <u>at</u> potential output. Now, suppose government <u>cuts</u> real lump-sum taxes <u>for a given time path of real government spending</u>. Assume credit markets are imperfect. The New Keynesian model predicts the tax cut will:
55. Reduce current real gross investment spending. **TRUE**
56. Raise real output. **FALSE**
57. Raise aggregate welfare. **FALSE**

Assume the economy is operating <u>at</u> potential output. Now, suppose the central bank <u>reduces</u> the money supply by 50%. The <u>equilibrium</u> model predicts:
58. The price level will fall by 50% in the short run. **TRUE**
59. The price level will fall by 50% in the long run. **TRUE**
60. Nominal wages will fall by less than 50% in the short run. **FALSE**

GENERAL BARRO QUESTIONS (CHAPTERS 12-16 AND SGM)

61. Apart from advanced countries with real per capita growth rates of roughly 2% for the past 100+ years, the evidence suggests poorer countries tend to grow faster than rich countries. **TRUE**

62. Counties that spend more on research and development, other things equal, tend to grow faster. **TRUE**

63. Countries with more protectionist trade policies, other things equal, tend to grow faster. **FALSE**

64. Countries with higher fertility rates, other things equal, tend to grow faster. **FALSE**

65. Countries with lower average inflation rates, other things equal, tend to grow faster. **TRUE**

66. Countries with smaller government consumption purchases, other things equal, tend to grow faster. **TRUE**

67. Post World War II U.S. data indicate the general price level is, on average, pro-cylical. **FALSE**

68. Post World War II U.S. data indicate the real wage rate is, on average, pro-cylical. **TRUE**

69. Post World War II U.S. data indicate the average product of labor is, on average, counter-cylical. **FALSE**

70. The behavior of the general level of prices in the current recession is consistent with the equilibrium model of business cycles. **FALSE**

71. In both New Keynesian and equilibrium models, money is neutral in the long run. **TRUE**

72. One attractive feature of the sticky-wage Keynesian model is that it correctly predicts the cyclical pattern in real wages for post-World War II U.S. data. **FALSE**

73. In the equilibrium model, observed declines in real output during recessions represent market failure. **FALSE**

74. The equilibrium model predicts an increase in real government purchases will have a positive multiplier effect only if it boosts factor productivity. **TRUE**

75. Ricardian equivalence implies a deficit resulting from a temporary increase in real government purchases will have no impact on tomorrow's capital stock and real output. **FALSE**

76. Acceptance of Keynesian business-cycle models implies support for discretionary monetary and fiscal policy to stabilize the economy. **FALSE**

77. In the U.S., monetary policy can be conducted entirely free of political considerations. **FALSE**

78. Equilibrium economists tend to favor policy rules. **TRUE**

79. Unlike fiscal policy, monetary policy is not subject to lag problems. **FALSE**

80. Other things equal, central banks bound by credible monetary rules will produce lower inflation rates than central banks with discretion to set policy in each period. **TRUE**

FRIEDMAN AND SCHWARTZ QUESTION (F&S, CHAPTERS 11-13)

81. The year-over-year growth rate of the money stock from 1948 to 1960 was less volatile than during any other period of comparable length in the F&S sample. **TRUE**

82. Other things equal, an increase in real money demand implies an increase in velocity. **TRUE**

83. Between 1948 and 1960, velocity declined an average of 1 percent per year. **FALSE**

84. According to F&S, the behavior of velocity between 1948 and 1960 can be explained by the growth of savings-and-loan shares. **FALSE**

85. Between 1867 and 1960, velocity was on average pro-cylical—that is, rising relative to trend in expansions and falling relative to trend in contractions. **TRUE**

86. According to F&S, observed year-to-year changes in velocity were relatively modest (less than 10 percent) for the overwhelming majority of their sample years. **TRUE**

87. Other things equal, a rise in excess reserves in the banking system will cause the money supply to contract. **TRUE**

88. Money and prices rose significantly during World War I and II – first because of gold inflows and later because of Federal Reserve policies to support bond sales by the Treasury. **TRUE**

89. According to F&S, year-to-year changes in the money stock were more variable from 1914 to 1960 under the Federal Reserve than from 1879 to 1914 under the gold standard. **TRUE**

90. According to F&S, the segments of their 93-year sample with the highest degree of economic stability were marked by the highest degree of stability in year-to-year changes in the money stock. **TRUE**

91. According to F&S, federal deposit insurance succeeded, where the Federal Reserve Act did not, in making sure public loss of confidence in some banks did not mushroom into banking panics. **TRUE**

92. According to F&S, the rate of monetary growth tends to accelerate prior to expansions and decelerate prior to contractions. **TRUE**

93. According to F&S, the Great Contraction of the early 1930s was an inevitable consequence of unsustainable growth and inflation in the 1920s. **FALSE**

94. According to F&S, an unintended effect of silver agitation in the 1890s was additional deflation. **TRUE**

95. The Federal Reserve provoked a serious recession in 1920-21 by doubling reserve requirements. **FALSE**

96. According to F&S, the principal factor responsible the decline in the money stock between 1929 and 1933 was high-powered money. **FALSE**

97. The Fed began to conduct independent monetary policy (i.e., no longer fashioned policy to support the prices of Treasury securities) in the early 1950s. **TRUE**

98. According to F&S, all observed correlation between money and real economic activity between 1867 and 1960 was the result of causation running from money to real output. **FALSE**

99. According to F&S, if the pre-1914 banking system rather than the Federal Reserve System had been in place in 1929, the money stock would not have contracted as much as it did in subsequent years. **TRUE**

100. Between 1867 and 1960, the stock of high-powered money was the major factor accounting arithmetically for changes in the money stock. **TRUE**