Midterm 2 Solutions
Economics 101 - Fall 2002

Multiple Choice:
1) b  2) a  3) d  4) c  5) d  6) a  7) c  8) c  9) b  10) c

Problem 1:

a) The tax multiplier is \(\frac{0.8}{(1-0.8)} = 4\). So output falls by \(4 \times 10\text{ million} = 40\text{ million}\).
A tax rise lowers disposable income, lowering consumption initially by the marginal propensity to consume. But this fall in consumption lowers planned expenditure and lowers income for someone else. So consumption falls yet further. This cycle repeats over and over. In equilibrium, output will fall by the tax multiplier times the tax change.
b) In the short run, output rises, no change in the price level.
c) In the long run, output falls (returns to its original level) and the price level rises.

Problem 2:

a) The government spending multiplier here is \(\frac{1}{(1-0.8)} = 5\).
To counteract the 40 million fall in output, we need a change in G that would raise output 40 million: 
\(40 \text{ million} = 5 \times (\Delta G)\). So G must rise 8 million.

Problem 3:

a) b) r falls, Y rises
b) r falls, Y rises

Problem 4: Given that investment is a function only of the interest rate, the only thing that could cause investment to fall despite a fall interest rates is a shock that lowers investment. Each of the other choices would imply either a rise in the interest rate or a rise in the investment level. All the shocks imply a fall in consumption level, given that output is falling.