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

Problem 1: Keynesian cross
a) The tax multiplier is \((-0.9/(1 - 0.9)) = -9\). So output rises by \((-9)*(-100) = 900\).
   A tax cut raises disposable income, raising consumption initially by the marginal propensity to
   consume. But this rise in consumption raises planned expenditure and raises income for someone
   else. So consumption rises yet further. This cycle repeats over and over. In equilibrium, output
   will rise by the tax multiplier times the tax change.

b) The government spending multiplier here is \((1/(1 - 0.9))= 10\). So output rises by \(10*100 = 1000\).
   Output rises more for government spending changes because there is a direct effect of \(G\) on
   expenditure, which does not exist for tax cuts, so the multiplier is larger.

c) For no effect on the budget deficit (\(G-T\)), the change in spending and taxes must be the same:
   \(\Delta T = \Delta G\). The effect on output will be: \(\Delta Y = 10\Delta G + (-9) \Delta T = 10\Delta G + (-9) \Delta G = \Delta G\). For
   output to rise 200, \(G\) and \(T\) each must rise by 200.

Problem 2: IS-LM short run
a) The excess money supply in the money market causes the interest
   rate to be bid down for any level of income -- this is a downward or
   rightward shift in the LM curve

b) As the interest rate falls, this stimulates investment and raises
   expenditure and income in the goods market. Since consumption is
   a function income, it rises also.

c) The investment component of demand rises less, so output is stimulated less. In the money
   market, this means that money demand rises less, so the interest rate needs to fall more to make
   money demand equal the higher money supply. One way to see all this, is to note that the IS
   curve will be steeper. Since income rises less, consumption rises less.

Problem 2: IS-LM short run
a) The rise in taxes lowers consumption and lowers demand for any
   given level of the interest rate or price level: this is a leftward shift in
   the IS and AD curves. In the long run, prices fall, which raises real
   money supply and shifts the LM curve right. The fall in output is a
   recession.

b) In the short run, taxes lower consumption expenditure and lower
   output. As income falls, money demand falls, which lowers the
   interest rate in the money market. This stimulates some extra
   investment expenditure. Prices are fixed by assumption in the short
   run.

c) In the long run prices fall. This raises the real money supply and
   lowers the interest rate even further. This stimulates investment even
   further, enough so that total expenditure and output are the same as in
   the initial equilibrium. While income is restored, the higher taxes mean
   disposable income is permanently lower, so consumption is lower.
   Note that \(r\) is lower and resources have been reallocated from

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