Problem 1:

Version A:
The tax multiplier is \( \frac{0.9}{1-0.9} = 9 \). So output rises by \( 9 \times 10 \) bil = 90 bil.
The gov spending multiplier is \( \frac{1}{1-0.9} = 10 \). So output falls by \( 10 \times 10 \) bil = 100 bil.
So on net, output fall by 10 bil. The policy makers will be disappointed.

Version B:
The tax multiplier is \( \frac{0.75}{1-0.75} = 3 \). So output rises by \( 3 \times 20 \) bil = 60 bil.
The gov spending multiplier is \( \frac{1}{1-0.75} = 4 \). So output falls by \( 4 \times 20 \) bil = 80 bil.
So on net, output fall by 20 bil. The policy makers will be disappointed.

Version C:
The tax multiplier is \( \frac{0.5}{1-0.5} = 1 \). So output rises by \( 1 \times 30 \) bil = 30 bil.
The gov spending multiplier is \( \frac{1}{1-0.5} = 2 \). So output falls by \( 2 \times 30 \) bil = 60 bil.
So on net, output fall by 30 bil. The policy makers will be disappointed.

Problem 2:
The fall in government spending lowers total expenditure and output for a given level of interest rate and price level. This is a leftward shift in the IS curve and AD curve. In the long run, the price falls and raises the real money supply. This requires a rise in Y or a fall in r to maintain equilibrium in the money market. This is a rightward shift in the LM curve.

b) Short run: r falls, I rises, real money demand does not change (fall in r and fall in Y offset each other since you are on the same LM curve), consumption falls, nominal GDP falls (fall in real GDP and no change in price).

c) Long run: real GDP at initial level, r lower, I higher, P lower, nominal GDP lower (just because price is lower). Note this is the same as the result in the Neoclassical model. It says that the recession is temporary, and in the long run, European output will return to normal, and there will be a higher investment level.

Problem 3:
A rise in money supply will force the interest rate down to maintain equilibrium in the money market— to raise money demand to equal the higher money supply. A fall in \( r \) for a given \( Y \) is a downward or rightward shift in the LM curve.

b) \( r \) falls, which raises \( I \), \( Y \) rises, which raises \( C \), real money demand rises (due to fall in \( r \) and rise in \( Y \), and fact real money demand must equal real money supply which rises).

c) The IS curve becomes steeper, with no effect on the slope of the LM curve. So output rises less and interest rate falls more for a given shift in the LM curve.

Version A: 19) b 20) a 21) a 22) a 23) a 24) a 25) c 26) b 27) a

Version B: 19) c 20) b 21) b 22) b 23) b 24) b 25) a 26) c 27) b

Version C: 19) a 20) c 21) c 22) c 23) c 24) c 25) b 26) a 27) c