**1.** Assume that the long-run aggregate supply curve is vertical at Y= 3,000 while the short-run aggregate supply curve is horizontal at P = 1.0. The aggregate demand curve is Y = 2(M/P) and M = 1,500.

**a.** If the economy is initially in long-run equilibrium, what are the values of P and Y?

**b.** What is the velocity of money in this case?

**c.** Suppose because banks start paying interest on checking accounts, the aggregate demand function shifts to Y = (1.5)(M/P). What are the short-run values of P and Y?

**d.** What is the velocity of money in this case?

**e.** With the new aggregate demand function, once the economy adjusts to long-run equilibrium, what are P and Y?

**f.** What is the velocity now?

**2.** Assume that an economy is described by the IS curve Y= 3,600 + 3G-2T -150r and the LM curve Y= 2(M/P) + 100r [or r= 0.01Y-0.02(M/P)]. The investment function for this economy is 1,000-50r. The consumption function is C = 200 + (2/3)(Y-T). Long-run equilibrium output for this economy is 4,000. The price level is 1.0.

**a.** Assume that government spending is fixed at 1,200. The government wants to achieve a level of investment equal to 900 and also achieve Y = 4,000. What level of r is needed for I= 900? What levels of T and M must be set to achieve the two goals? What will be the levels of private saving, public saving, and national saving? (Hint: Check C +I+ G = Y.)

**b.** Now assume that the government wants to cut taxes to 1,000. With G set at 1 ,200, what will the interest rate be at Y = 4,000? What must be the value of M? What will I be? What will be the levels of private, public, and national saving? (Hint: Check C +I+G= Y.)

**c.** Which set of policies may be referred to as tight fiscal, loose money? Which set of policies may be referred to as loose fiscal, tight money? Which "policy mix" most encourages investment?

**3.**

**a.** Consider the economy of Highland. The consumption function is given by C = 300 + 0.75(Y-T). The investment function is I= 200-25r. Government purchases and taxes are both 200. For this economy, **derive the IS equation first then graph the IS curve**.

**b.** The money demand function in Highland is. (M/P)d = Y-100r. The money supply M is 1,200 and the price level P is 2. For this economy, **derive the LM equation first then graph the LM curve on the same diagram as you have in part a.**

**c.** Find the equilibrium interest rate r and the equilibrium level of income Y.

**d.** Suppose that government purchases are raised from 200 to 250. **Derive the new IS equation first, then graph the new IS curve on the same diagram you have had from part a and part b. What are the new equilibrium interest rate and level of income? What is your economic interpretation?**

**e. Derive and graph an equation for the aggregate demand curve** using the given conditions from part a and part b.