Part A: Take Home Exam (50% of the final exam grade), 6 technical problems. Must be submitted with Part B (in class MC test) Tuesday, December 13, 9:45-11:45 a.m., Industrial Education II 224.

Approach each problem as if you were to prepare a set of lecture notes for that problem. Use graphs, equations and comments as necessary. Very short answers, even if correct, will receive lower grades.

Problem 1 (Based on chapter 10).

Assume the following IS-LM model:

Expenditure sector: money sector:
\[ AD = C + I + G + NX \]
\[ C = 110 + \frac{2}{3}YD \]
\[ YD = Y - TA + TR \]
\[ TA = \frac{1}{4}Y + 20 \]
\[ I = 250 - 5i \]
\[ G = 130 \]
\[ NX = -30 \]
\[ M = 500 \]
\[ P = 1 \]
\[ m_d = \frac{1}{2}Y + 400 - 20i \]

a. Calculate the equilibrium values of private domestic investment (I), real money demand \((m_d)\), and tax revenues (TA).

b. How much of private domestic investment (I) will be crowded out if government purchases are increased by \(\Delta G = 100\)?

Problem 2 (based on chapter 11)

Assume the government wants to increase GDP without changing interest rates. What kind of policy mix would you recommend and how would your policy mix affect the composition of GDP? Explain your answer with the help of an IS-LM diagram.

Problem 3 (based on chapter 11)

"Fiscal policy is more effective when money demand is more interest inelastic." Is this statement true or false? Why?

Problem 4 (based on chapter 12)

"Expansionary fiscal policy cannot change real output under fixed exchange rates and perfect capital mobility." Is this statement true or false? Why?

(Continued)
Problem 5 (based on chapter 5)

Explain the effect of restrictive fiscal policy on the level of output, prices, and interest rates for (i) the Keynesian AS-curve case, (ii) the classical AS-curve case, and (iii) the intermediate case.

Problem 6 (based on chapter 6)

Explain the short-run and long-run effects of an increase in government purchases on output, unemployment, interest rates, prices, and real money balances.