

Course: ECO 204 Macroeconomics - I  
Midterm Exam

February 22, 2019

1. Use the neoclassical theory of distribution to predict the impact on the real wage and the real rental price of capital of each of the following events:
  - (a) A wave of immigration increases the labor force. [5]
  - (b) An earthquake destroys some of the capital stock. [5]
  - (c) A technological advance improves the production function. [5]

2. Consider an economy described by the following equations:

$$Y = C + I + G;$$

$$Y = 5,000$$

$$G = 1,000$$

$$T = 1,000$$

$$C = 250 + 0.75(Y - T)$$

$$I = 1,000 - 50 * r$$

- (a) In this economy, compute private saving, public saving, and national saving. [2+2+2]
  - (b) Find the equilibrium interest rate. [2]
  - (c) Now suppose that  $G$  rises to 1,250. Compute private saving, public saving, and national saving. [1+1+1]
  - (d) Find the new equilibrium interest rate. [1]
  - (e) If consumption depended on the interest rate, how would that affect your results - Comment. [3]
3. Explain what happens to consumption, investment, and the interest rate when the government increases the tax rate (assuming a proportional instead of lumpsum taxation ). [15]
  4. In the Banana Republic, the velocity of money is constant. Real GDP grows by 5 % per year, the money stock grows by 14 % per year, and the nominal interest rate is 11 %. What is the real interest rate? [5]