Econ 522: Intermediate Macroeconomics, Fall 2017 – Test # 1

Name: _

Instructions: This is a closed-book, closed-note exam. You may use a calculator (but not on a phone or on a device capable of connecting to the internet). Do not look at any other students' paper or attempt to communicate with any other students during the exam. Failure to comply with these instructions will result in a grade of zero on this exam.

1. Identify two different price level measures (at least four were identified in class), at least one difference between the two you identify, and for at least one of the two, identify the name of the agency that creates/calculates it (or if you don't remember the agency name, describe how it is created/calculated).

2. List the three components of aggregate demand in the closed economy classical model.

3. What three things do households use income for in the classical model?

4. Consider the following numbers: (they are the actual numbers per 1,000 for the U.S. for August 2017)

Category	Number of People
Have a job	153,439
No job, but looking for one	7,132
No job, and <u>not</u> looking for one	94,785

If those numbers include everyone in the adult civilian noninstitutionalized population, then

- 1. How many people are unemployed (U)?
- 2. How many people are in the labor force (LF)?
- 3. What is the labor force participation rate (LFPR)?
- 4. What is the unemployment rate (UR)?

- 5. The supply of loanable funds is given by:
 - A. total savings.
 - B. private savings.
 - C. public savings.
 - D. investment.
- 6. The demand for loanable funds is given by:
 - A. total savings.
 - B. private savings.
 - C. public savings.
 - D. investment.

7. Indicate what happens (increase, decrease, or no change) in the Classical Model to each of the following variables when government purchases G decrease, holding all else constant. No explanation is required, however partial credit may be given based on explanations.

Output/Income, Y

Consumption, C

Investment, I

Private Saving, Priv S

Public Saving, Pub S

Total Saving, Tot S

Taxes, T

Labor, L

Real Interest Rate, r

Marginal Product of Capital, MPK

- 8. A production function is a technological relationship between:
 - A. factor prices and the marginal product of factors.
 - B. factors of production and factor prices.
 - C. factors of production and the quantity of output produced.
 - D. factor prices and the quantity of output produced.
- 9. If bread is produced using a constant returns to scale production function with only workers and equipment as inputs, then if the:
 - A. number of workers is doubled, twice as much bread will be produced.
 - B. amount of equipment is doubled, twice as much bread will be produced.
 - C. amounts of equipment and workers are both doubled, twice as much bread will be produced.
 - D. amounts of equipment and workers are both doubled, four times as much bread will be produced.

10. Consider an economy described by the following equations:

$$Y = C + I + G$$

$$Y = 5,000$$

$$G = 1,000$$

$$T = 1,000$$

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

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

- (a) Compute private saving, public saving, and total savings.
- (b) Find the equilibrium interest rate.
- (c) If the government increases G to 1,250, what are the new levels of private saving, public saving, and total savings?

11. What rule will profit maximizing competitive firms follow in deciding how much labor to hire? If you don't remember the rule, explain the logic behind or criteria used in their decisions.

12. Using the Classical Model, predict the impact on the real wage and the real rental price of capital that might occur if a wave of immigration increases the labor force.