1 Overview of Some Major Topics for Prelim 1

1. Measurement and the macroeconomy
   - GDP, national saving, the current account
   - Price indices and inflation
   - Interest rates

2. The labor market: Determines the real wage
   - Prices from the production function: \( y_t = AK^\alpha (N)^{1-\alpha} \)
     \[ MP_K = \alpha AK^{\alpha-1}N^{1-\alpha} = \frac{\alpha y}{K} = r \]
     \[ MP_N = (1 - \alpha) AK^\alpha N^{-\alpha} = (1 - \alpha) \frac{y}{N} = w \]
   - Growth accounting identity
   - Shares of national income
   - \( N^d(W) = N^s \)
   - Unemployment, labor force, LF participation, and employment ratio
   - Full employment, potential GDP, and deviations: Okun’s Law

3. The goods market: Determines the real interest rate
   - Income-expenditure identity: \( Y = C + I + G + NX \), Saving: \( S = Y - C - G = I \)
   - The Euler equation for consumption-savings behavior (IE, SE, and MPC)
   - Ricardian Equivalence

4. Asset markets: Determines the price level
   - Money supply \( M^s \) and monetary bases (M1, M2, M3): \( M^s = \frac{1+c}{1+\rho} MB \)
   - Money demand: \( M^d = P \times L(y, i) \)
   - Velocity of money: \( V = \frac{py}{M^d} = \frac{y}{L(y,i)} \)
   - Price level from equilibrium \( P = \frac{M^s}{L(y,i)} = \frac{M^d}{L(y,i)} \)
• Inflation expectations and seignorage: $\pi$ vs. $\pi^e$

5. Growth Theory

- Labor productivity vs. total factor productivity, productivity dynamics
- The Solow Model: $Y_t = AK_t^\alpha (E_tN_t)^{1-\alpha}$
- Steady state equilibrium: $k^*$
- The Golden Rule: $k^*_{gold}$

2 Shocks to Equilibrium: Labor, Goods, and Asset Markets

ABE Ch. 7 AP #4

Assume that prices and wages adjust rapidly so that the markets for labor, goods, and assets are always in equilibrium. What are the effects of each of the following on output, the real interest rate, and the current price level?

a) A temporary increase in government purchases.

b) A reduction in expected inflation.

c) A temporary increase in labor supply.

d) An increase in the interest rate paid on money.