Handout 4

Upcoming

1. Homework 1 due **this Thursday**, 10/31 (HW scantron + sheet: collected in the first 10 minutes of lecture)

2. Multiple Choices: answer on **scantron F-288**

3. Short answer: answer on **paper** (handwritten, printed-out or typed)

4. Identification: write your **full name** and **student ID**

   - short anser sheet: write on every page
   - scantron: write + bubble in

5. Midterm: Thursday (11/7)

   - Homework + Related articles (required readings) + Ch. 1, 2, 3, 4, 5

Math and Formulas Review

- $a : b = c : d \implies b \times c = a \times d$

- slope $= \dfrac{\triangle y}{\triangle x}$

- GDP (output) = C (consumption) + I (investment) + G (govenement consumption) + X (export) − M (import)

- Nominal GDP $= \displaystyle\sum_{i=1}^{n} P_i^{\text{current year}} \times Q_i$

- Real GDP $= \displaystyle\sum_{i=1}^{n} P_i^{\text{base year}} \times Q_i$

- Price index:

  - GDP Deflator $= \dfrac{\text{nominal GDP}}{\text{real GDP}} \times 100$

  - Consumer Price Index: CPI $= \dfrac{\text{cost of basket in } \textbf{current} \text{ year}}{\text{cost of basket in } \textbf{base} \text{ year}} \times 100$

  - Inflation$_{\text{year } t} = \dfrac{P_{\text{year } t} - P_{\text{year } (t-1)}}{P_{\text{year } (t-1)}}$ where P is the price index. e.g. *CPI* or *GDP Deflator*

- Let g denote the **growth rate**:

  - $x_{t+1} = (1 + g) \times x_t$
  - $g = \dfrac{x_{t+1} - x_t}{x_t}$
  - Percentage grwoth rate: $(g \times 100)\%$

- Unemployment rate $= \dfrac{\text{number of unemployed}}{\text{labor force}} \times 100$

- Labor-force participation rate $= \dfrac{\text{labor force}}{\text{adult population}} \times 100$

Economics terms clarification

- A function (entire curve)

  - Demand Curve = Demand
  - Supply Curve = Supply

- A number (value)

  - Quantity demand, quantity supply

- Law of **Demand**: **negative** relationship between price and quantity (downward slopping curve)

- Law of **Supply**: **postivie** relationship between price and quantity (upward slopping curve)

- Shock:

  - The shock is **on one** of the axies: movement **along** the curve.
  - The shock affects variable that is **not** on either axies: **shifting** of the curve.

Exercises

1. There are three types of unemployment. Define each type of unemployment and explain the cause of each unemployment.

2. Guillaume, a Hollywood actor, is actively seeking new acting opportunities after the release of his debut movie. This is an example of which of the following?

   (a) Structural unemployment

   (b) Frictional unemployment

   (c) Cyclical unemployment

   (d) None of aboce

3. Refer to the following figure:
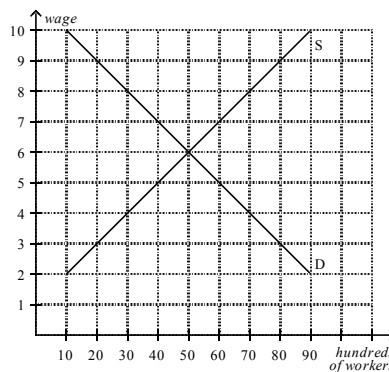
   If the government imposes a minimum wage of $8, then unemployment will increase by

   (a) 0 workers

   (b) 4000 workers

   (c) 2000 workers

   (d) 7000 workers

4. In 2009, based on concepts similar to those used to estimate U.S. employment figures, the Japanese adult non-institutionalized (civilian) population was 110.272 million, the labor force was 65.362 million, and the number of people employed was 62.242 million. According to these numbers, the Japanese labor-force participation rate and unemployment rate were about

(a) 59.3% and 4.8%

(b) 56.4% and 2.8%

(c) 56.4% and 4.8%

(d) 59.3% and 2.8%

5. Which of the following scenarios is an example that illustrates the concept of structural umployment?

    (a) A bio-technician is currently not getting paid due to a labor-management dispute that has resulted in the bio-technicians not working.

    (b) Morgan and Heidi have stayed at home tending their families for the past ten years and they are now both looking to find jobs that match their skills and talents.

    (c) Outdoor swim instructors in Irvine, CA find that they are out of work November through late March.

    (d) Harry and Mary decided to not work due to the increase they recieve in benefits from the new welfare program.

6. Given the following data on unemployment:

Year	2014	2015
Adult population	1500	1600
Number of employed	950	1128
Number of unemployed	50	72

compute the unemployment rate and labor force participation rate in each year, then calculate the percentage change in the unemployment rate and the labor force participation rate from 2014 to 2015.

7. People who are unemployed because wages are, for some reason, set above the level that brings labor supply and demand into equilibrium are best classified as

    (a) cyclically unemployed

    (b) frictionally unemployed

    (c) discouraged workers

    (d) structurally unemployed

8. The table below uses data for the year 2003 provided by the Bureau of Labor Statistics and adjusted to be comparable to U.S. data. All values are in thousands. Fill in the blank entries in the table:

Country	Adult population	Labor force	Employed	Unemployed	Unemployment rate	Labor-foce participation rate
Japan	109,474		62,510	3,500		
France		26,870		2,577		57.41
Germany	70,159	39,591			9.69	

9. The actual rate of unemployment in an economy is currently at 8%. If frictional unemployment is 3.5% and structural unemployment is 2% when this country operates at full employment, then holding everything else constant, the cyclical unemployment rate for this economy is

    (a) 2.5%

    (b) 13.5%

    (c) 6%

    (d) 4.5%

10. Which of the following statements is correct?

    (a) Compared to the consumer price index (CPI), the GDP deflator is the more common gauge of inflation.
    (b) The GDP deflator better reflects the goods and services bought by consumers than does the CPI.
    (c) The percentage change in the CPI is a measure of the inflation rate, but the percentage change in the GDP deflator is not a measure of the inflation rate.
    (d) The CPI can be used to compare dollar figures from different points in time.

11. In 1970, Professor George earned $12,000; in 1980, he earned $24,000; and in 1990, he earned $36,000. If the CPI was 40 in 1970, 60 in 1980, and 100 in 1990, then in real terms, Professor George's salary was highest in

    (a) 1990 and lowest in 1970.
    (b) 1990 and lowest in 1980.
    (c) 1980 and lowest in 1970.
    (d) 1980 and lowest in 1990.

12. Refer to the table below:

Year	Price of Corn	Price of peaches	Price of pork	Price of Pecans
2005	$12	$11	$20	$6
2006	$18	$9	$25	$10

    Suppose a consumer's basket consists of 10 bushels of *peaches* and 15 bushels of *pecans*. If 2006 is the base year, calculate the CPI for 2005.

13. In a competitive market, the quantity of a product produced and the price of the product are determined by

    (a) buyers.
    (b) sellers.
    (c) both buyers and sellers.
    (d) None of the above is correct.

14. If something happens to alter the quantity supplied at any given price, then

    (a) we move along the supply curve.
    (b) the supply curve becomes steeper.
    (c) the supply curve becomes flatter.
    (d) the supply curve shifts.

15. Which of the following represents a transfer payment?

    (a) You transfer $1,000 from your bank account to a mutual fund.
    (b) The government sends your grandfather his Social Security check.
    (c) You make a payment to get legal documents showing you purchased a previously owned home.
    (d) Your employer automatically transfers $100 each month from your wages to a non-taxable medical spending account.