

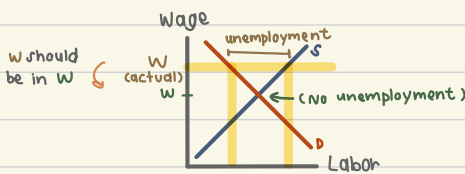
Exercise 1

1 What are the four macroeconomic agents? What are the three markets in which the agents interact?

- 4 macroeconomic agents 1. households 2. firms 3. governments 4. The rest of the world
- 3 markets 1. goods-and-services market 2. The labor market 3. The money market ^(financial)

2 What is sticky price? explain why price may be sticky.

- Sticky price means that the prices of goods and services do not change. They don't go up/down as soon as demand rise or fall.
- There are many reasons why the price is sticky.



due to - minimum wage policy

- employment contract

- labor union

3 explain the four main categories of unemployment

- 1.) Frictional unemployment - a result of the **normal turnover** in the labor market.
e.g. unemployment when people looking / switching jobs. ┌ technological change
└ geographical change
- 2.) Structural unemployment - a result of changes in the **economic structure**.
e.g. newspaper workers are replaced by E-Book workers.
- 3.) Cyclical unemployment - frictional + structural unemployment, due to **fluctuations in business cycles** (recession) e.g. air-hortage
- 4.) Seasonal unemployment - unemployment due to **changing seasons**.
e.g. hotel workers in low season.

4. Classify the following events into the categories of unemployment.

- some friends just graduated from college and have been looking for jobs.

Frictional Unemployment

- Christine lost her job as a biologist at a biotech-company when the whole industry went into recession.

Cyclical unemployment

- Gerhard, who used to be a taxi driver, stopped looking for a job three months after he lost his job.

Not in the labor force (discouraged-worker)

- Dirk used to work as a wooden-doll maker. Now all kids want plastic dolls, so he is out of work.

Structural unemployment

- The hotel part-timers were laid off during low season.

Seasonal unemployment

- Aditi, a high-tech engineer, just decided to quit her job & she is being interviewed for a better-paid job in a multinational company.

Frictional unemployment

- A man lost his job as a public reader as literacy has increased in his village.

Structural unemployment

5. Suppose there are 100 people in labor force and 60 people currently in employment. Find the unemployment rate. Can we find labor force participation rate? If not, what information do we need.

$$\text{unemployment rate} = \frac{\text{unemployed}}{\text{labor force}}$$

$$= \frac{100 - 60}{100} = \frac{2}{5} = 0.4$$

We can't find labor force participation rate.

We need to know working-age population.

6 What is the discouraged-worker effect? How can it affect the unemployment rate?

- Discouraged-worker effect is people who want to work but can't find jobs become discouraged and stop looking for work.
- As a result, the unemployment rate falls.

7 On average, nations in Europe pay higher unemployment benefits for longer periods of time than the US. How would this affect the unemployment rates in these nations? Explain which type of unemployment is most directly affected.

- Paying higher unemployment benefits in longer periods of time will increase the number of unemployed in Europe. Europe will have more unemployment rates more than US.
- The type of unemployment that's most directly affected is frictional unemployment because people will stop working and they will receive the money by doing nothing.

8 What is inflation? It is often said that inflation reduces one's purchasing power, and hence inflation is bad. How can inflation reduce one's purchasing power? Is there a case where inflation may not be bad?

- Inflation is an increase in the overall price level. The goods and services become more expensive, in the same way people also receive higher income, so inflation by itself doesn't necessarily reduce one's purchasing power. However, if our wages are fixed due to employment contracts, then inflation will reduce our purchasing power. The cases that inflation may not be bad are being borrower or saver.

9) who - lender or borrower - is better off, given unanticipated deflation?
Explain with examples.

- lender better off
- borrower worse off

because of deflation, purchasing power is increase. The power of money that you borrowed in the past is less than the power of money in the future. (or when you repay)

10) When inflation is anticipated, what will the central bank do with the interest rate? (Hint: Fisher Equation)

The central bank will charge higher interest rate. The bank can use Fisher equation when deciding the interest rate the should charge.

Fisher equation: $i = r + \pi$

11) The CPI is 120 in year 1 and 150 in year 2. All inflation is anticipated. If the bank charges an interest rate of 30%, what is the bank's real interest rate?

Fisher equation: $i = r + \pi$; $i = 30$, $\pi = ?$ find r

find π ; $\pi = \frac{\text{New-old}}{\text{old}} = \frac{150-120}{120} = 25$

find r ; $r = i - \pi$
 $= 30 - 25 = 5\%$

12) Explain why inflation is necessary to a growing economy with reference to the money supply.

The inflation will slowly increase price level keeps business profitable.

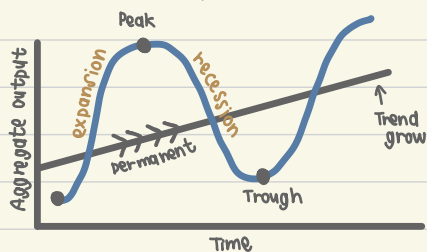
The bank will increase interest rate, then lender will charge interest.

This can prevent consumers from waiting for lower prices before making purchase.

13 What are the two administrative costs of inflation? Explain.

- 1.) **menu cost** - There may be costs associated even with anticipated inflation, such as costs from changing menus/price lists frequently.
- 2.) **shoe leather cost** - Interest rates tend to rise with anticipated inflation, when interest rates are high, the opportunity cost of holding cash outside banks is high.

14 Draw a diagram of business cycles and trend line. Label the four phases of business cycle. Answer the following question.



- which phase do you expect to see inflation?

peak

- which phase do you expect to see high employment?

peak

- which phase should the government use expansionary policy?

Give example.

Trough

- which phase should the government use contractionary policy?

Give example.

peak

- what factors determine the trend line?

determined by quantity and quality of labor and capital.

15 An article states that capital stock and labor force are both increase at an annual rate of 7%. The same article also states that real output is growing by 11%. Explain why this is possible.

The economy is experiencing an increase in technology and productivity growth. If there is a technological improvement leading to higher labor and capital productivity, output can be produce more.