Exercise 1

Introduction to Macroeconomics

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

Four macroeconomic agents: 1. Household 2. Firm 3. Government 4. Rest of the world

Three Markets: 1. Good and service market 2. Labor market 3. Financial market

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

Sticky price is price remaining constant or being resistant to change to the equilibrium.

It occurs due to an employment contract, labor union and minimum wage policy.

3. Explain the four main categories of unemployment.

1. Frictional unemployment: When people choose to change their jobs within labor market
2. Cyclical unemployment: Unemployment rate changes due to a fluctuation of economy
3. Structural unemployment: Happen through structure of economy, for instance, a technological change or labor market rigidities.
4. Seasonal unemployment: People are unemployed at particular times of the year.

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

- Some friends just graduated from college and have been looking for jobs. Frictional
- Christine lost her job as a biologist at a biotech-company when the whole industry went into recession. Cyclical
- Gerhard, who used to be a taxi driver, stopped looking for a job three months after he lost his job. Not being in the labor force
- Dirk used to work as a wooden-doll maker. Now all kids want plastic dolls, so he is out of work. Structural

- The hotel part-timers were laid off during low season. Seasonal
- 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
- A man lost his job as a public reader as literacy has increased in his village. Structural

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?

Unemployment = 40 people, so unemployment rate is equal to 40%

We cannot find labor force participation rate because we need the information of total number of population.

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

Discourage-worker effect is when workers have given up looking for a job because they found no suitable employment options or failed applying for works, which causes the unemployment rate to fall because those people are not include in calculation.

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.

Unemployment rate will increase, and the direct effect is frictional unemployment.

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 when the rate of prices of goods and services increase, and purchasing power declines. Rising inflation will reduce one's purchasing power because the amount of money invested will be worth less when it need to be used. There are cases where inflation is not bad: exchange money, more dollars translates to more spending.

For debtors, they repay their loans with money that is less valuable than the money they borrowed.

9. Who - lender or borrower - is better off, given unanticipated deflation? Explain with example.

Lenders are better because deflation increases their purchasing power, so they can save more money as their income increases compare to their expenses.

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

They will set higher nominal interest rate and sell government bonds on the open market.

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?

$I=r+\pi$ π=inflation rate $\pi=[(150-120)/120]x100 = 25\%$

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

So, the bank's real interest rate is 5%

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

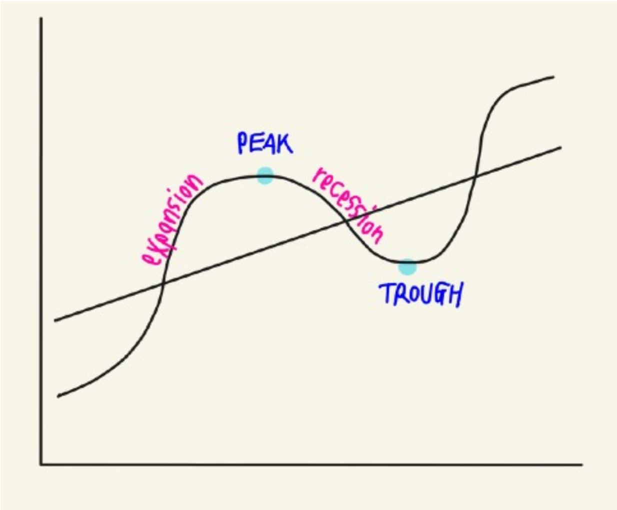
Low inflation is good for the economy because it helps motivate manufacturers to invest in expanding production and have employment which allows the country's economy to expand well

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

Menu cost: the costs from changing menus / price lists frequently

Shoe leather cost: the opportunity cost of holding cash outside banks is high

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



-Which phase do you expect to see inflation? Peak

-Which phase do you expect to see high unemployment? Trough

-Which phase should the government use expansionary policy? Give example.

Trough, for example: during covid pandemic

- Which phase should the government use contractionary policy? Give example.

Peak, for example: during the time of high economic growth

- What factors determine the trend line?

Quality and Quantity of factors of productions: Land, Labor, Capital, Entrepreneuship

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

Because a higher capital stock and labor force increase labor productivity and labor demand, the quantity of capital and labour in the economy rise cause the output in the entire economy to grow. So, it leads to the growth rate of real output.