

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

Four macroeconomic agents:

1. Household
2. Firms
3. The government
4. The rest of the world

Three markets in which the agents interact are:

1. The goods - and - services market
2. The labor market
3. The money (financial) market

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

Sticky price is the resistance of market price to change quickly. Sticky prices occur because prices do not react or are slow to react to changes in demand, production costs

3. Explain the four main categories of unemployment.

Four main categories of unemployment:

Frictional unemployment from normal turnover,
Structural unemployment changes in the structure,
Cyclical unemployment fluctuations in business cycles,
Seasonal unemployment changing seasons.

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

- Some friends just graduated from college and have been looking for jobs.
- Christine lost her job as a biologist at a biotech-company when the whole industry went into recession.
- Gerhard, who used to be a taxi driver, stopped looking for a job three months after he lost his job.
- Dirk used to work as a wooden-doll maker. Now all kids want plastic dolls, so he is out of work.
- The hotel part-timers were laid off during low season.
- Aditi, a high-tech engineer, just decided to quit her job; she is being interviewed for a better-paid job in a multinational company.
- A man lost his job as a public reader as literacy has increased in his village.

- Frictional unemployment
- Cyclical unemployment
- Frictional unemployment
- Structural unemployment
- Seasonal unemployment
- Frictional unemployment
- 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?

The rate of unemployment is 40 people. We can't find labor force participation rate because we need working age population rate and population rate

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

The discouraged worker effect means that someone, who is eligible for employment and can work, has given up looking up for a job because they believe there aren't any jobs available. The discouraged worker keep increase on number of unemployment.

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.

In Europe, unemployment rate will increase. Frictional unemployment is the the most directly affected.

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 the rate of increases in prices for goods and services.

If our wages are fixed due to employment contracts, inflation will reduce our purchasing power.

The case where inflation may not be bad is when

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

Borrower is better than lender because when borrower receive the money back; it will have more purchasing power.

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

When inflation rate is high, bank will set higher nominal interest rate.

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?

$$\begin{aligned}i &= r + \pi & \pi &= \text{inflation rate} & r &= i - \pi \\ \pi &= \frac{150 - 120}{120} \times 100 & r &= 30 - 25 \\ & & r &= 5 \\ \pi &= 25\% & & & & \end{aligned}$$

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

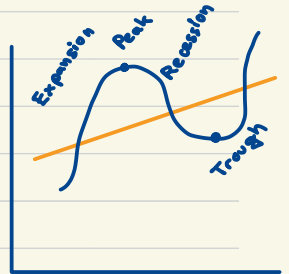
An increase in the supply of money is the root of inflation but moderate inflation levels are needed to drive consumption, assuming that higher level of spending are crucial for economic growth.

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

1. Menu cost - costs from changing menus/price lists frequently
2. Shoe leather cost - when interest rates are high, 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?
- Which phase do you expect to see high unemployment?
- Which phase should the government use expansionary policy? Give example.
- Which phase should the government use contractionary policy? Give example.
- What factors determine the trend line?



- Peak
- Trough
- Trough ex. in Covid pandemic
- Peak ex. during time of high economic growth
- Quality & quantity of factors of productions
 1. Land
 2. Labor
 3. Capital
 4. Entrepreneurship

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.

The real output is growing means the increasing of capital stock and labour force making the greater increase in real output.