Chapter 3
Macro-Economics
Lesson - 1 Introduction to Macro-Economics

1. Define macroeconomics.

Macroeconomics deals not with individual quantities but with aggregate of these quantities, not with individual incomes but with national income, not with individual prices but with price level, not with individual output but with national output.

2. Define Balance of Payments.

The balance of payments (BOP), also known as balance of international payments, is a statement that summarizes all the transactions of a country's individuals, companies, and government bodies with individuals, companies, and government bodies outside the country.

3. Define Closed economy.

Closed economy is an economy which has no transactions or exchange of goods and services with any other countries. In other words neither it exports any goods and services to other countries nor does it import any goods or services from other countries. There are only three sectors in a closed economy - household sector, business sector and government sector.

4. What are macroeconomic variables?

Macroeconomic variables are the indicators that show or indicate the current trend and situation of the economy and help understand, analyze and predict the performance of an economy. Some of the macroeconomic variables are as follows: 1. Balance of payments 2. Inflation 3. Economic growth 4. Unemployment

5. Write any four advantages of closed economy.

Four advantages of a closed economy are as follows:

- Protection of domestic enterprises from foreign competitive enterprises.
- No fear of coercion or interference from foreign countries.
- Easier to regulate the market.
- Closed economy is a self-sufficient economy so it does not have to worry about the global economy.

6. Write any four disadvantages of closed economy.

Four disadvantages of a closed economy are as follows:

- Closed economy is more likely to be less developed if they lack crucial inputs to productions like oils, gas and coil.
- It has less competition compared to open economy so competitive price may not prevail.
- Closed economy countries tend to be less developed than the countries with free trade because of many restrictions.

- A closed economy must also be able to feed itself, so it is highly dependent on agricultural and other farming methods

7. Write any four advantages of an open economy.

Four advantages of an open economy are as follows:

- Consumers can choose from a large variety of goods.
- An open economy increases the opportunity of foreign direct investment.
- Facilitates economic growth
- Increased competition reduces price for consumers

8. Write any four disadvantages of an open economy.

Four disadvantages of an open economy are as follows:

- Open economies are interdependent. This exposes them to certain unavoidable risks like trade cycles (fluctuations in income, prices and employment etc..) originating in one economy that spread to other economies as well.
- Increase the dependency of one country to another.
- Threat to domestic enterprises.
- Can increase the indebtedness of a country due to increase in international capital inflows.

9. Define Economic Growth

Economic growth is defined as the increase in the economy's output over time. It is the increase in goods andServices produced by an economy or nation, for a specific period of time. The most common indicator for measuring the economic growth is real Gross Domestic Product (GDP).

10. What do you mean by open economy?

Open economy is an economy which has transactions or exchange of goods and services with other countries. In other words, it can import as well as export goods and services. There are four sectors in an open economy - household sector, business sector, government sector and foreign sector.

Important Questions and answers

1. Explain the concept of closed and open economy.

A closed economy does not enter into any one of the following activities -

(i) It neither exports goods and services to the foreign countries nor imports goods and services from the foreign countries.
(ii) It neither buys shares, debentures, bonds etc. from foreign countries nor sells shares, debentures, bonds etc. to foreign countries, thus it is financially also as closed economy.
(iii) It neither borrows from the foreign countries nor lends to the foreign countries.
(iv) It neither receives gifts from foreigners nor sends gifts to foreigners.
(v) Normal residents of a closed economy cannot go to other countries to work in their domestic territory. No foreigner is allowed to work in the domestic territory of a closed economy.

An open economy involves itself in the following activities.
(i) It buys shares, debentures, bonds etc. from foreign countries and sells shares, debentures, bonds etc. to foreign countries.
(ii) It borrows from foreign countries and lends to foreign countries.
(iii) It can send gifts and remittances to foreigners and can receive the same from them.
(iv) Normal residents of an open economy can move or be employed and are allowed to work in the domestic territory of other economies.
(v) Due to these reasons, Gross Domestic Product and Gross National Product are not same in an open economy. It is to be noted that at present all economies of the world are open economies.

2. Difference between closed and open economy.

Basis	Closed Economy	Open Economy
Meaning	An economy having on economic relations with other countries is called closed economy.	An economy having economic relation with other countries is called open economy.
Export and import	It is not engaged in export and import of goods and services.	It is engaged in export and import of goods and services.
Lending and borrowing	It does not borrow and lend money to the foreign countries.	It can borrow or lend money to foreign countries.
GDP and GNP	GDP equals to GNP	GDP may not equal GNP
Realistic concept	It is not a realistic concept.	It is a realistic concept.

3. Write down the advantages and disadvantages of closed and open economy.

Open economy

Advantages

1. Consumers can choose from a large variety of goods.
2. An open economy increases the opportunity of foreign direct investment.
3. Facilitates economic growth
4. Increased competition reduces price for consumers

Disadvantages

1. Open economies are interdependent. This exposes them to certain unavoidable risks like trade cycles (fluctuations in income, prices and employment etc.,) originating in one economy that spread to other economies as well.
2. Increase the dependency of one country to another.
3. Threat to domestic enterprises.
4. Can increase the indebtedness of a country due to increase in international capital inflows.

Closed Economy

Advantages

1. Protection of domestic enterprises from foreign competitive enterprises.
2. No fear of coercion or interference from foreign countries.
3. Easier to regulate the market.
4. Closed economy is a self-sufficient economy so it does not have to worry about the global economy.

Disadvantages

1. Closed economy is more likely to be less developed if they lack crucial inputs to productions like oils, gas and coil.
2. It has less competition compared to open economy so competitive price may not prevail.
3. Closed economy countries tend to be less developed than the countries with free trade because of many restrictions.
4. A closed economy must also be able to feed itself, so it is highly dependent on agricultural and other farming methods. If the country suffers from any adverse conditions such as too much rain or not enough rain, this will have a direct impact on the economy and people may starve.

Lesson – 2 National Income and Accounting

1. Define GNP.

Gross National Product is the total monetary value of all final goods and services produced in a country plus net income from abroad. GNP = GDP-NFIA

2. Define national income.

National income or net national product at factor cost (NNPFC) is estimated as the sum of earnings received by various factors of production in terms of rent, wages, interest, profits etc. with the domestic territory of a country.

3. What is GDP deflator?

GDP deflator measures relative changes in the current level of prices in comparison to the level of prices in the base year. GDP deflator is the ratio of nominal GDP to the real GDP of the same year.

GDP Deflator: (Nominal GDP /Real GDP)* 100

4. What is meant by net exports?

Net exports mean the difference between export earnings (X) and import expenses (M).

5. What is meant by personal Income?

Personal income is the income earned by the household or individuals during a year. PI = NI - corporate income taxes - undistributed profit social security contribution = transfer payment

6. Write any four difficulties in measuring national income.

a. Problems of double counting

b. Services of House wives

c. Estimation of Depreciation

d. Change in price

7. Write any four importance of NI

a. To compare standard of living

b. To measure growth rate

c. To forecast business activities

d. To examine production possibilities

8. What are the components of expenditure method?

a. Private consumption expenditure (C)

b. Gross private domestic investment (1)

c. Government Expenditure (G)

d. Net Exports (X-M)

Important Questions and answers.

1. Differences between the GDP and (Gross Domestic Product) and GNP (Gross National Product).

GDP	GNP
It is the money value of all final goods and services produced within the domestic territory of a country.	It is the money value of all final goods and services produced by citizens of a country within country and abroad.
It is a narrow concept.	It is a broader concept.
It does not includes net factor income from abroad (NFIA)	It includes net factor income from abroad (NFIA)
It measures the strength of a country's domestic economy.	It measured how the residents are contributing to the country's economy.
The GDP can compute by using following formula. GDP = P1 * Q1 + P2 *Q2 ….. + Pn + Qn	The GNP can compute by using following formula. GNP = P1*Q1 + P2 *Q2 + …. Pn *Qn

2. Write the fisher's Definition of national income with features.

According to the Fisher, " The true national income is that part of annual net produce which is directly consumed during that year."

The Features are :-

- This definition is based on expenditure of net annual product.
- It focuses on human welfare.
- It helps to measure people's standard of living.

3. Define Nominal GDP, Real GDP, and GDP deflator

Nominal GDP :- Nominal GDP is evaluated at current market price. Nominal GDP is the total monetary value of taotal produced products from all productive sectors within the domestic territory in a year.

Real GDP :- Real GDP is measured as one total volume of real output produced with in country for a specific period of time, It is calculated in terms of constant market price, i.e. the prices that prevailed in some specific year in the past. By evaluating current output level on the specific year in the past.

GDP deflator :- GDP deflator measures relative changes in the current level of prices in comparison to the level of prices in the base year. GDP deflator is the ratio of nominal GDP to the real GDP of the same year.

GDP Deflator: (Nominal GDP /Real GDP)* 100

4. Mention the difficulties of national income measurement.

1. Problems of double counting

While calculating national income, only final goods and services should be included, but some goods may be final for one sector and intermediate for another sector. For example, sugarcane is final goods for the agricultural sector but it may be intermediate goods in the industrial sector for producing sugar. Thus, there is a very high possibility of double counting.

2. Existence of non-monetized sector

In a developing country, there is still a barter system in backward areas. Thus, all agricultural outputs do not reach to the market. Either it is consumed at home or exchange for other goods in the village. Hence, it is difficult to calculate the national income accurately.

3. Illegal income

Different people can earn income through illegal activities, such as black marketing, dacoits, gambling, smuggling, etc. But these incomes are not included in national incomes which make national income less than the actual amount.

4. Calculation of depreciation

Capital depreciation should be deducted to find net national income. But present depreciation rate of capital goods cannot be accurately measured because of having a long life.

5. Transfer payment

Transfer payment like pension, unemployment allowances, disable allowances, etc. are apart of individual income but these are also a part of government expenditure. So, it creates problem whether it should be included in N.I. or not.

5. Explain the expenditure method of measuring national income.

The expenditure method measures the national income from the side of expenditure on final products in an economy during an accounting year. The total income generated in the economy can be spent either consumption goods or investment goods. In this method, we can calculate national income by summing up all consumption expenditure, investment expenditure made by all individuals, the government expenditure and net foreign investment within a year. Further, net exports also include while computing national income by expenditure method. It is the net value of difference between export earnings and import expenses.

The calculation of national income by this method involves following steps:

GDPC+I+G+(X-M) Where,
C= Private consumption expenditure
I = Private investment expenditure
G= Government expenditure
X = Export
M = Import
X-M = Net export (difference between value of export (X) and value of import (M).

GNP = GDP+NFIA

NNP = GNP - depreciation

NI (NNPFC)= NNP - net indirect taxes

The components of national income in expenditure method are as follows:

a. Private Consumption Expenditure (C): It includes the consumption expenditure made by individual consumer for both durable goods and non durable goods and services.

b. Gross Private Domestic Investment (I): It includes expenditure incurred by private enterprises on new investment and replacement of old capital.

c. Government Expenditure (G): It includes government expenditure on national defence and non-defence expenditure. But transfer payments are not added because these payments are not made in exchange for goods and services produced during the period.

d. Net Exports (X M): Net exports mean the difference between export earnings (X) and import expenses (M). The imported goods are not produced within the country and hence cannot be included in national income but exported goods are included in GDP as they are produced in the country.

6. Explain National Income. Define its concepts. Define the income and expenditure method of national income.

National Income of any country means the complete value of the goods and services produced by any country during its financial year. It is thus the consequence of all economic activities that are running in any country during the period of one year. It is valued in terms of money. In short one can say that the national income of any country is the total amount of income that is accrued by it through various economic activities in one year. It is also helpful in determining the progress of the country.

It includes wages, interest, rent, profit, received by factors of production like labour, capital, land and entrepreneurship of a nation.

National Income: Concept

There are various concepts of National Income including GDP, GNP, NNP, NI, PI, DI, and PCI which explain the facts of economic activities.

a. GDP at market price: Is money value of all goods and services produced within the domestic domain with the available resources during a year.

GDP = (P*Q)

Where,

GDP = gross domestic product

P = Price of goods and services

Q= Quantity of goods and services

GDP is made up of 4 Components

- consumption
- investment

- government expenditure
- net foreign exports of a country

GDP = C+I+G+(X-M)

Where,

C=Consumption

I=Investment

G=Government expenditure

(X-M) =Export minus import

b. Gross National Product (GNP): Is market value of final goods and services produced in a year by the residents of the country within the domestic territory as well as abroad. GNP is the value of goods and services that the country's citizens produce regardless of their location.

GNP=GDP+NFIA or,

GNP=C+I+G+(X-M) +NFIA

Where,

C=Consumption

I=Investment

G=Government expenditure

(X-M) =Export minus import

NFIA= Net factor income from abroad.

c. Net National Product (NNP) at MP: Is market value of net output of final goods and services produced by an economy during a year and net factor income from abroad.

NNP=GNP-Depreciation

or, **NNP=C+I+G+(X-M) +NFIA- IT-Depreciation**

Where,

C=Consumption

I=Investment

G=Government expenditure

(X-M) =Export minus import

NFIA= Net factor income from abroad.

IT= Indirect Taxes

d. National Income (NI): Is also known as National Income at factor cost which means total income earned by resources for their contribution of land, labour, capital and organisational ability. Hence, the sum of the income received by factors of production in the form of rent, wages, interest and profit is called National Income.

Symbolically or as per the formula

NI=NNP +Subsidies-Interest Taxes

or, GNP-Depreciation +Subsidies-Indirect Taxes

or, NI=C+G+I+(X-M) +NFIA-Depreciation-Indirect Taxes +Subsidies

e. Personal Income (PI): Is the total money income received by individuals and households of a country from all possible sources before direct taxes. Therefore, personal income can be expressed as follows:

PI=NI-Corporate Income Taxes-Undistributed Corporate Profits- Social Security Contribution +Transfer Payments.

Measurement of National Income

There are three methods to calculate National Income:

- Income Method
- Product/ Value Added Method
- Expenditure Method

Income Method

In this National Income is measured as flow of income.

We can calculate NI as:

Net National Income = Compensation of Employees+ Operating surplus mixed (w +R +P +I) + Net income + Net factor income from abroad.

Where,

W = Wages and salaries

R = Rental Income

P = Profit

I = Mixed Income

Product/ Value Added Method

In this National Income is measured as flow of goods and services.

We can calculate NI as:

NATIONAL INCOME = G.N.P – COST OF CAPITAL – DEPRECIATION – INDIRECT TAXES

Expenditure Method

In this National Income is measured as flow of expenditure.

We can calculate NI through Expenditure method as:

National Income=National Product=National Expenditure.

Lesson - 3 Money and Inflation

1. Define money.

Money is anything that is generally accepted as a medium of exchange and for the discharge of debts. In a narrow sense, money means the metallic coins only but in a wider sense, it includes not only metallic coins but also each and every form of medium of exchange, viz., gold, silver, copper, paper notes, cheques etc.

2. Define value of money.

Value of money is the purchasing power of the money. It is defined in terms of the quantity of goods and services that a unit of money can buy. It is inversely related to the price level. Value of money=p where P = price level.

3. Define inflation:

Inflation is the rise in general price level. But every rise in general price level is not inflation. It is the persistent and appreciable rise in general price level. Inflation causes the decrease in value of money or the purchasing power of money. Hence, the cost of living increases during inflation.

4. What is demand-pull inflation?

It occurs when there is increase in aggregate demand for goods and services keeping the aggregate supply constant. When aggregate demand increases, the available aggregate supply cannot meet the increased demand so the price of goods and services will rise and demand-pull inflation occurs.

5. What do you mean by cost-push inflation?

When there is rise in prices of factors of production there will be increase in cost of production. This will lead to a decrease in aggregate supply and hence the rise in price level called cost-push inflation.

6. Define Money supply.

Supply of money is only that part of total stock of money which is held by the public at a particular point of time. It includes, coins, currency held by the public and demand deposits of commercial banks.

7. List the importances of money.

Importances of money are as follows:

1. Consumption
2. Production
3. Exchange
4. Distribution
5. Public finance

8. List out four main functions of money.

The four main functions of money are:

a. Medium of exchange

b. Measure of value

c. Store of value

d. Transfer of value

9. State the equation of Fisher's quantity theory of money.

Fisher's equation of quantity theory of money can also be expressed as: MV=PT .
The extended form of his equation is MV+M'V' = PT. Here, M'V' represents the total credit money. .. MV=M'V'

10. What are the types of money?

Following are the types of money

a. Commodity money

b. Metallic money

 i. Standard or full-bodied coin

 ii. Token coin

c. Paper money

d. Credit money

11. What are the causes of deflation?

Following are the causes of deflation:

a. Reduction in money supply

b. Increase in rate of interest

c. Increase in tax rate

d. Increase in production

e. Other policies of credit control

12. What are the consequences of deflation?

Following are the consequences of deflation:

a. Effects on different sections of society

 i. Producers.

 ii. Traders

 iii. Investors

 iv. Salaried and labour classes

 v. Creditors and debtors

b. Effects on the economy

13. What are the causes of demand pull inflation?

Following are the causes of demand pull inflation:

1. Increase in money supply and bank credit
2. Decrease in interest rate
3. Increase in government expenditure

4. Decrease in tax rate
5. Increase in export
6. Currency devaluation

14. What are the causes of cost-push inflation?

Following are the causes of cost-push inflation:

1. Increase in wage
2. Increase in profit margin
3. International reason
4. Natural disasters
5. War
6. Hoarding

15. What are the consequences of inflation?

Following are the consequences of inflation:

a. Effects on Production
b. Effects on Distribution
c. Effects on Society
d. Effects on Moral
e. Effects on Politics

16. What is deflation?

Deflation is a sustained decrease in the general price level in an economy. It is the situation of falling general price level or rising value of money.Deflation is a situation where prices are falling with the fall in income, output and employment.

17. What do you mean by broad money supply?

Broad money supply is the monetary aggregate that includes M_1 aggregate and other forms of money or assets which are less liquid than that of M_1. It consists of time deposits (TD) like saving deposits, fixed deposits, margin deposits etc. M2 = M1 + TD

18. List four main functions of money.

The four main functions of money are:

a. Medium of Exchange
b. Measure of value
c. Store of value
d. Transfer of value

19. What do you mean by narrow money supply (M_1)?

Narrow money supply is the monetary aggregate that includes most liquid forms of money or assets. An asset is liquid if it can immediately, conveniently, and cheaply be used for making payment. It consists of currency held by the public (C), demand deposits held at commercial banks (DD).

Important answers and questions.

1. Define money. What are is functions

Money is a concept which we all understand but which is difficult to define in exact terms.

Money is anything serving as a medium of exchange. Most definitions of money take 'functions of money' as their starting point. 'Money is that which money does.' According to Prof. Walker, 'Money is as money does.'

Primary functions

Medium of Exchange: Money act as a medium of exchange. It has the quality of general acceptability. In modern days, exchange is the basis of entire economy and money makes this exchange possible. It was on account of the difficulties and inconveniences (lack of double coincidence of wants) of Barter system the money came into existence.

Measure of Value: Money act a unit of measure of value. In other words, it acts as a yardstick of standard measure of value to which all other things can be measured. Value of all goods and services is expressed in terms of money.'

Secondary Functions

Standard of Deferred Payments : Money has proved to be a suitable standard of deferred payment as it is more durable and stable compared to values of other commodities . It has the quality of general acceptability. Hence it is always desirable.

Store of Value : Money can be stored for future use. It has this merit because its utility is never lost. It serves as an excellent store of wealth, as it can be easily converted into other marketable assets , such as land, machinery , plant etc.

Transfer of Value : Money is a liquid means of exchange . Hence purchasing power of money can easily be transfered from one person to another and from one place to another.

Contingent functions

Basis of Credit : At present credit is used as money on the basis of money, Bank and Financial institutions create credit on the basis of money.

Basis of Distribution of Social Income : Total output of the country is jointly produced with the help of different factors of production (Land, Labor, Capital and Enterprises).So, the output should be distributed among them. Money helps in the distribution of the national product in the form of Rent, Wage, Interest and Profit, , which are expressed in money terms.

Basis of Maximum Satisfaction and Production : A Consumer maximizes his satisfaction by equating the prices of each commodity(in terms of money) with its marginal utility. Similarly, a Producer maximizes his satisfaction by equating the marginal productivity of a factor with price of that factor.

Guarantee of Solvency : Money acts as a guarantee of solvency for an individual or institution. Every individual or institution prefers to keep some money ready as cash deposits. Money deposits serve as a guarantee against solvency.

2. Define importance of money.

The importance of money can be easily realized from the fact that almost all the economic, social, and other activities are carried and completed through the use of money. The importance of money is increasing day by day with the rapid changes in economic development and other overall requirements of humans.

Peoples do almost anything for money and money also do anything for people. Money is said to be the master key for the solution of all economic difficulties. However, the main importance of money is discussed are as under:-

Production

Money has made mass production possible. The large scale production is necessary to meet the growing demand of the consumers. Mass production is possible with a division of labor that depends upon money.

Consumption

Money helps the consumer to spend his income in such a way so that he can get maximum satisfaction. Money has generalized purchasing power. The consumer can buy the necessary goods at reasonable rates to get maximum utility.

Distribution

At present the production process is not simple. The production is made through the various factors of production like land, labor, capital and organization. The raw material is purchased to make new things. But each factor does not contribute equally to the product. Therefore, the distribution of products equally among the factors of production is unjust.

Exchange

Another thing that can elaborate on the importance of money in better ways is the exchange of values through money. The exchange of goods and services is done through money. When goods are exchanged for goods even then money is used as a measure of value.

Revenue

Public finance means rising of money through taxes by the government. The amount of taxes and other dues are collected in the form of money. The government provides social justice to the poor people by taxing the rich and spending it on the poor.

Industries

The industrial progress is linked with money, which is the lifeblood of a business. Promotion of big companies, arrangement of loans to expand the business and the establishment of stock exchange markets depend upon money. All such thing enhances the importance of money more for us.

Banks

Money is the basis of credit in the banking system of the country. The economic development and material progress of a nation depend upon the sound banking and credit system. So money is necessary for financial progress. The main business of the banks and other institutions is to collect savings of the people and lend such collection for earning the profit.

Trade

Money helps both local and foreign trade. Money is a means of making payments for the goods and services purchased. Money is the basis of the money market and capital market. Also in the trade, we need to hire people for promoting our business and money is required to make the payment against their services.

Government

Money is important to the government. The taxes, fee and penalty are collected in money. The government can take loans in the shape of money. The development of the economy requires the establishment of schools, hospitals, bridges, roads, dams, energy resources, communication, etc which is only possible through money.

Wages

The laborers wages are paid in money. The workers are free to work at a place where they can get maximum wages. The freedom of contract mobility and division of labor is due to money. It really enhances the importance of money for us and for the business world.

3. Define cost-push inflation. Explain its causes.

Cost-push inflation is a purported type of inflation caused by increases in the cost of important goods or services where no suitable alternative is available. As businesses face higher prices for underlying inputs, they are forced to increase prices of their outputs.

Causes of inflation are defined below:-

1. Increase in wage: Existence of strong trade union exercises its union power to increase the real wage rate of the labour. The cost-push inflation originating from the increased wage rage is called wage-push inflation.

2. Increase in Profit Margin: When the producers increase their profit margin, price will definetly rise. The inflation originating from the increased profit margin is called profit-push inflation.

3. International Reason: The economy of a country is linked with other countries. If the price of consumer goods raw materials and capital goods increase in foreign countries the price of goods and services also increases in the country. This leads to cot-push inflation.

4. Natural Disasters: The occurance of natural disasters like earthquake flood, and draughts has adverse effect on the productivity. This reduces the output and thus reduces the supply relative to demand. Thus, price level rises.

5. War: When there is war between the countries or within a country then the productive resources of a country are diverted towards the productive of arms and ammunitions. This causes the production of necessary goods to fall. Hence, the supply decreases and price level rises.

4. Define demand-pull inflation. Explain its causes.

Demand-pull inflation is asserted to arise when aggregate demand in an economy is more than aggregate supply. It involves inflation rising as real gross domestic product rises and unemployment falls, as the economy moves along the Phillips curve. This is commonly described as "too much money chasing too few goods."

Causes of demand pull inflation are discussed below:

1. Increase in Money Supply and Bank Credit:

Due to the increase in supply and bank credit, investment, income and consumption also increases. This leads to increase in aggregate demand, which increase the price level. Thus increase in money supply and bank credit causes the demand-pull inflation. Money

2. Decrease in Interest Rate:

Decrease in interest rates causes a rise in consumer spending and higher investment. This will lead a rise in aggregate demand and inflationary pressures.

3. Increase in Government Expenditure:

When there is increase in government expenditures in the form of regular and development expenditure, there will be directly increase in demand for goods and services. Further, it will increase the income of the people of the country. Hence, there will be increase in aggregate demand which causes demand-pull inflation.

4. Decrease in Tax Rate:

The low rate of taxes increases disposable income and hence the purchasing power of people which makes the aggregate demand high. This leads to demand-pull inflation.

5. Increase in Export:

Due to increase in export, there will be increase in aggregate demand. If supply of goods cannot be increased accordingly then demand-pull inflation arises.

6. Currency Devaluation:

Currency devaluation is the intentional fall in the value of the money of a nation against another currency. The main aim to devaluate a currency is to increase exports relative to import. Increase in exports leads to increase in the demand for domestic goods relative to its supply. This causes the price level to rise.

5. Differentiate between inflation and deflation

Inflation	Deflation
Definition	
Inflation is defined as the increase in the price levels of goods and services in an economy	Deflation is termed as the decrease in price levels of goods and services in an economy
Impact on demand	
Demand for products and services increase in inflation	Demand for products and services decrease in deflation.
Impact on National Income	
No impact on national income	National income declines as a result of deflation
Consequences seen	
Distribution of income is not equal as a result of inflation	There is a rise in level of unemployment in the nation as a result of deflation
Is it beneficial?	
Moderate levels of inflation is considered good for the economy	Calculated based on only the amount that is availed
Impact on Purchasing Power of Money	
Decreases the purchasing power of money	Increases the purchasing power of money

6. Critically explain the Fisher's quantity theory of money.

According to Fisher, thing remaining unchanged, as quantity of money in circulation increases, the price level also increases in direct proportion and the value of money decreases and vice-versa."

Thus, this theory states that price level varies directly and the value of money varies inversely with the change in money supply. If the quantity of money is doubled, the price level will also double and the value of money will be one half. On the other hand, if the quantity of money is reduced by one half, the price level will also be reduced by one half and the value of money will be twice.

Fisher has explained his theory in terms of his equation of exchange:

MV = PT

Where, M = Money in circulation ,V = Velocity of money (i.e. number of times an unit of money is used to purchase commodity in a time period), P= Price level ,T= Total volume of transactions.

In the above equation, MV represents total money supply and PT represents the total money value of all transactions or total money demand in the country. This theory holds the view that demand for money equals to supply of money in an economy during a given period of time. The above equation can also be expressed as:

P= MV/ T

This equation does not include credit money. But with the growing importance of credit money, Fisher later on extended his equation of exchange to include credit money. The extended form of his equation is MV+M'V' = PT. Here, M'V' represents the total credit money.

P= (MV + M'V)'/ T

It shows that the price level (P) is directly related to M, V, M' and V' and inversely related to T.

For Example:-

Fisher's quantity theory of money can be explained with the help of an example. Suppose M = Rs. 1000. M' = Rs. 500, V = 3, V' = 2, T = 4000 goods.

$$P = \frac{MV + M'V'}{T}$$

$$P = \frac{(1000 \times 3) + (500 \times 2)}{4000}$$

$$= \text{Re. 1 per good}$$

Value of money (1/P) = 1

If the supply of money is doubled

$$P = \frac{(2000 \times 3) + (1000 \times 2)}{4000}$$

$$= \text{Rs. 2 per good}$$

Value of money (1/P) =1/2

Thus, when money supply in doubled, i.e., increases from Rs. 4000 to 8000, the price level is doubled. i.e., from Re. 1 per good to Rs. 2 per good and the value of money is halved, i.e., from 1 to 1/2.

If the supply of money is halved

$$P = \frac{(500 \times 3) + (250 \times 2)}{4000} = \text{Rs. 1/2 per good}$$

Value of money (1/P) = 2

Thus, when money supply is halved, i.e., decreases from Rs. 4000 to 2000, the price level is halved, i.e., from 1 to 1/2, and the value of money is doubled, i.e., from 1 to 2.

Figure Explanation

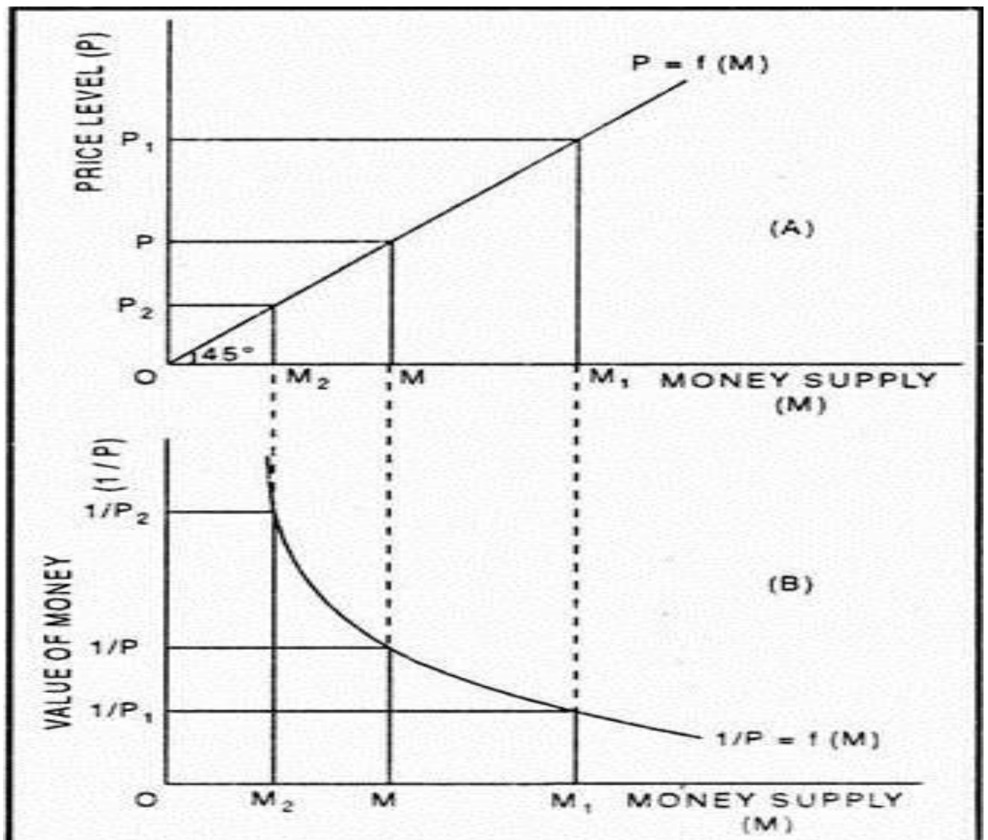

Fig. 1A & B.

The effects of a change in money supply on the price level and the value of money are graphically shown in Figure 1-A and B respectively:

(i) In Figure 1-A, when the money supply is doubled from OM to OM_1, the price level is also doubled from OP to OP_1. When the money supply is halved from OM to OM_2, the price level is halved from OP to OP_2. Price curve, P = f(M), is a 45° line showing a direct proportional relationship between the money supply and the price level.

(ii) In Figure 1-B, when the money supply is doubled from OM to $OM_{1;}$ the value of money is halved from O1/P to O1/P_1 and when the money supply is halved from OM to OM_2, the value of money is doubled from O1/P to O1/P_2. The value of money curve, 1/P = f (M) is a rectangular hyperbola curve showing an inverse proportional relationship between the money supply and the value of money.

Assumptions of the Theory

- Price level (P) is the passive factor.
- T and V are constant and independent factors.
- Ratio of MV and M'V' remains constant
- Money is the medium of exchange only
- There is a full employment in the economy in the long – run.

Criticism of Quantity Theory of Money

The main criticisms of Fisher's quantity theory of money are as follows:

1. Transaction Volume and Velocity of Money may not be Constant in Reality:

According to this theory, T and V are constant. But rise in price level increases profit margin which gives incentives to business expansion. This may cause an increase in transaction and velocity of money.

2. Unrealist Assumption:

This theory is based on the unrealistic assumptions of full employment and long-run analysis. There is never full employment because it may not be practically possible to eliminate all unemployment from all sources. And it fails to explain short-run phenomenon.

3. No Direct and Proportionate Relationship between Money Supply and Price Level:

There is not always a direct and proportionate relationship between money supply and the price level. For example, during the German hyperinflation the general price level rose at a rate higher than the increase in money supply. This was caused by the rapid increase in the velocity of the German mark.

4. Undue Emphasis on Quantity of Money:

This theory assumes money supply as the only factor that determines the general price level. Whereas, there are other factors that affects price level such as change in income, expenditure, investment, saving, consumption, population, tax rate etc.

5. Fails to Explain Cyclical Fluctuations in Prices:

This theory fails to explain the cyclical fluctuations in prices. It fails to explain why price level falls in depression while the monetary authority increases the money supply. It is by the fall in the velocity of circulation of money and this theory assumes it as a constant parameter.

6. Assumes Money as a Medium of Exchange Only:

It considers money as a medium of exchange only and ignores its other functions such as store of value and transfer of value, standard deferred payment, etc.

XX The End XX