Navgujarat

Commerce

College

Affiliated to Gujarat University

Reading Material:

Fundamentals of Business Economics – II

(For internal use and reading purpose only)

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Index

F.Y.B.COM
ECONOMICS
SEMESTER - II
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FUNDAMENTALS OF BUSINESS ECONOMICS – II

Objective: The main objective of this paper is to introduce the students of commerce to the basic concepts and tools of macro economics.

Outcome: The student, after studying this paper, will get a clear understanding of various concepts used in macroeconomic. He will be able to understand the importance and relevance of various macroeconomic aggregates used for measuring economic development.

Unit : 1 National Income Accounts

Concepts of GDP and NDP- Sectoral Composition of National Income - GDP at Factor Price and Constant Prices- Concept of GNP and NNP, Factor Cost and National Income-Per Capita income, Disposable Income and Personal Disposable Income- Measurement of National Income – Difficulties in measuring National Income- Trends in India's GDP and Per capita GDP since Independence- Concept of GDP Deflator (Basic concept only).

Unit :2 Money and Credit.

Meaning and Evolution of Money- Commodity to Fiat Money - Definition of Money- Functions of Money – Demand for Money - Quantity Theory of Money- Fisher's Equation of Exchange- Cambridge Theory. Supply of Money – Determinants of Money Supply-Components of Money Supply- RBI's Approach-M1, M2, M3, M4. High Powered Money - Concepts of Credit- Types of Credit–Instruments of Credit Control-Bank Rate, Repo Rate, Reverse Repo Rate, CRR and SLR(Meaning and their importance).

Unit : 3 Keynesian Economic Theory

Say's Law of Market and its criticism by Keynes. Simple Keynes Model of Income Determination. Concepts of Consumption Function, Saving Function and Investment Function. Investment Multiplier–Marginal Efficiency of Capital and factors affecting MEC.

Unit : 4 Business Cycle and Inflation

Concepts of Business cycle – Four phases of Business Cycle – Interest rate –Loan able fund Theory and Liquidity preference theory- Motives for liquidity preference--Transaction Motive, Precaution Motive, Speculative Motive. Factors affecting interest Rate. Inflation--Meaning, Types, Causes, Effects-Inflation and Investment.

Suggested Readings:
- H. L. Ahuja, " Macro Economics" S. Chand Publication
- H. L. Ahuja, "Macro Economics Theory and Policy", S. Chand Publication
- D. M. Mithani, "A Course in Macro Economics", Himalaya Publication House
- Mishra and Puri, "Principles of Macro Economics" Himalaya Publishing House
- S. M. Mithani, "Macro Economics"Himalaya Publishing House
- K. K. Dewett, "Macro Economics" S. Chand Publication.

Unit: 1 National Income Accounts

Q-1 Explain the concept of GDP (Gross Domestic Product).
Ans:
Introduction:
For production of any goods or service four factors of production viz. (namely) land, labour, capital and entrepreneur are required. Over the period of time an economy wants to know how much progress they have made so far in production activity. In order to know the development or increase in production the concept of GDP is used.

Definition:
Gross Domestic product (GDP) is the monetary value of all the finished goods and services produced within a country's borders in a specific time period.

Characteristic of GDP:
Based on the definition following are the features of GDP:
1. **Monetary measure:** We add up the market value of final goods and services produced domestically. Because to calculate GDP we have to considers a large number of dissimilar goods and services such as mobile phones and cars, entertainment and holiday trips, fruits and computers etc. So in order to combine them all into a single number it is necessary to value every goods and services in money terms.
2. **Finished Goods and services:** While compiling GDP figures we take into account only final or finished goods and services. Final goods and services are those which are purchased by the ultimate users.
3. **Specific time period:** GDP is calculated during certain time period. Generally it is calculated for one year but sometimes it can be calculated quarterly also.
4. **Domestic (ઘરગથ્થુ, દેશનું) Production:** GDP is calculated on the basis of production done within the boundaries of a nation. Income earned by citizens working in foreign countries is not considered.

Conclusion:
Though GDP is usually calculated on an annual basis, it can be calculated on a quarterly basis as well. GDP includes all private and public consumption, government outlays, investments and exports minus imports that occur within a defined territory. Put simply, GDP is a broad measurement of a nation's overall economic activity.

Q-2 Explain the concept of NDP (Net Domestic Product) (4 Marks, 2015)
Ans:
Introduction:
In order to maintain current level of output in an economy over and above raw-materials machinery is also used. GDP does not take into account the cost of wear and tear of machinery so it is called gross while NDP considers the same.

Definition:
"Net domestic product (NDP) represents the net book value of all goods and services produced within a nation's geographic borders over a specified period of time."
Book value of goods means deduction of depreciation.

Formula:
For calculating NDP we need to know two variables: GDP and depreciation. By subtracting depreciation from GDP we can get NDP
NDP = Gross Domestic Product – Depreciation

Explanation:
Net domestic product accounts for capital that has been consumed over the year in the form of housing, vehicle, or machinery deterioration. The depreciation accounted for is often referred to as "capital consumption allowance" and represents the amount of capital that would be needed to replace those depreciated assets. If the country is not able to replace the capital stock lost through depreciation, then GDP will fall.

Conclusion:
Thus, we can say that the net domestic product (NDP) equals the gross domestic product (GDP) minus depreciation on a country's capital goods.

Q-3 Explain Sectoral composition of National Income. (4 Marks, 2013, 2014)
Ans:
Introduction:
To understand the structure and level of any economy and the change in it over time, it is essential to know about its GDP. Net domestic product shows the flow of goods and services in the economy. Sectoral composition shows contribution of agriculture, industry and services in GDP.

Structure of Indian Economy:
Occupational structure in any economy is divided into three sectors viz. primary sector, secondary sector and tertiary sector.
- **Primary sector:** Primary sector refers to agriculture and allied activities. Allied activities include fishing, mining, cattle breeding, forestry, poultry etc. Output of primary sector largely depends on natural factors.
- **Secondary sector:** Secondary sector or industrial sector includes firms which convert raw materials into finished goods. It includes heavy industries, small scale industries, building and construction, electricity, gas etc. Both capital and manpower are necessary for production.
- **Tertiary sector:** Delivery of services is included in tertiary sector. Services are intangible and non-material in nature. Service provider and service receiver needs to be present at same time for its delivery. Service sector includes warehousing, transportation, banking, insurance, communication, advertising, finance, education, health, management services etc.

Sectoral composition:
Following table shows contribution of different sectors in GDP.

Sector	1950-51	1980-81	1999-2000	2009-2010
Primary (Agriculture)	55.4%	38%	27.50%	14.6%
Secondary (Industry)	15%	24%	24.63%	28.5%
Tertiary (Services)	29.6%	38%	47.87%	56.9%

Following points are made clear from the table:
- The share of agriculture in GDP at the time of independence was more than 55% of Indian population was dependent on agriculture. This dependence on agriculture gradually decreased to 38% in 1980-81, 27.50% in 1999-2000 and to 14.6% in 2009-10. Decreasing contribution of agriculture in GDP is a good indicator.
- Before reforms i.e. 1991 share of industries in GDP was around 25% which increased to 28.5% in 2009-10. Our industrial sector is growing but at slower rate.
- Since independence tertiary sector has shown continuous growth. Its share in GDP increased from 29.6% in 1950-51 to 56.9% in 2009-10.

Conclusion:

From the above discussion we can conclude that in India the contribution of agriculture in GDP had gradually decreased while that of services has increase. This is a good indicator which suggests that Indian economy is growing.

Q-4 Clarify the concept of Gross National Product. State the methods to calculate it.

Ans.

Introduction:

Gross National Product is a concept associated with production of goods and services within and outside of a country produced by citizens of that country.

Definition:

GNP is defined as the aggregate market value of all final goods and services including productive assets in an economy produced by the nationals of a country during a particular year.

Characteristics of GNP

1. **Monetary measure:** we add up the market value of final goods and services because GNP considers a large number of dissimilar goods and services such as mobile phones and cars, entertainment and holiday trips, fruits and computers etc. So in order to combine them all into a single number it is necessary to value every goods and services in money terms.

2. **Final Goods and services:** while compiling GNP figures we take into account only final goods and services. In other words, we exclude intermediate goods and services. Final goods and services are those which are purchased by the ultimate users.

3. **Production during a particular year:** The GNP for a particular year includes only those goods and services that are produced during that year. For ex. If a car is sold in 2015 which is produced in 2012 the sale will not be included in GNP of 2015 because the same must already be counted in GNP of 2012.

4. **Production by nationals:** while calculating GNP production by nationals of a country is counted irrespective of their residence. Hence, we must include the output produced by the Indians working in foreign countries and we must exclude the output produced by the foreigners working in India.

Methods of calculating GNP:

Economic activities in an economy has three dimensions viz. production, income and expenditure. All the three variables will show the same values under ideal conditions. So there are three methods of calculating GNP.

1. **Production Method or Output Method:** The output method or production method considers the value of goods and services produced during a year by nationals or citizens of a country. Following is the formula for calculating GNP through production method:

   GNP = (P – D) – Net indirect taxes + Net exports + Net factor income from abroad.

   Here, P = Production, D = Depreciation, Net indirect taxes = Indirect taxes – subsidy, Net exports = exports – imports and Net factor income from abroad (NFIA) = factor income from abroad – factor income to abroad.

2. **Income method:** The income method considers income earned by the factors of production in the process of producing/ delivering goods and services. It is also called National Income at factor cost. Following is the formula for calculating GNP by income method:

   GNP = (W+I+R+π) + Net exports + Net factor income from abroad.

   Here, W = Wages, I – Interest, R = Rent, π = Profit,

3. **Expenditure method:** Under this method, we estimate the disposal of income on the purchase of final goods and services. It includes (a) Personal consumption expenditure of households. (b) The gross private domestic investment i.e. business spending on capital goods. And (C) government purchases of goods and services. Following is the formula for calculating GNP using expenditure method.

$$\textbf{GNP = (C+I+G) + Net exports + Net Factor Income from Abroad.}$$

Here, C = Final consumption expenditure, I = Investment expenditure by businessmen, G = Government expenditure.

Conclusion:
GNP is the net value of production done by citizens of a country within and outside boundaries of a country. If required data is available then calculation of GNP from any of the three methods will give same result.

Q-5 Explain the concept of Net National Product (NNP)
Introduction:
Domestic product considers goods and services produced during a particular year within boundaries of a nation on the other hand, National product means production done by nationals or citizens of a country. In order to know NNP we should know GDP, GNP and depreciation.

Meaning:
Before explaining NNP we should know what GNP is. GNP is the monetary value of final goods and services produced by nationals or citizens of a country during a year.

NNP means the market value of final product after adjusting the figure for depreciation because during the production process machines undergo wear and tear.

Formulas:
GNP: For calculating GNP we have to deduct factor income to abroad and add factor income to India from foreign country. Thus,

$$\textbf{GNP = GDP + NFIA}$$

(Net Factor Income from abroad = factor income from abroad – factor income to abroad)

NNP at Market Price: Deducting depreciation from GNP we will get the figure of NNP at market price

$$\textbf{NNP}_{MP} \textbf{ = GNP – Depreciation}$$

NNP at Factor Cost or National Income: If we add subsidy to NNP_{MP} and deduct indirect taxes, we will get the figure of national income. It is also called NNP at factor cost as it shows the income earned by different factors of production in the form of rent, interest, wages or profit. So,

$$\textbf{National Income or NNP}_{FC} \textbf{ = NNP}_{MP} \textbf{– Indirect taxes + Subsidies}$$

Conclusion:
NNP shows the amount of production done by nationals of a country during a year where the cost of depreciation is deducted from the production. NNP at factor cost gives an idea about the total factor income accrued to nationals of a country during a year which is also termed as national income.

Q-6 Explain the concepts of Gross Domestic Product (GDP) and Net National Product (NNP) and differentiate between them.   (6 Marks, 2013)
Introduction:
In order to know about the economic progress of any economy various concepts are used. Two of the concepts are GDP and NNP. We will discuss and differentiate bout them in the following paragraphs.

GDP:
Gross Domestic product (GDP) is the monetary value of all the finished goods and services produced within a country's borders in a specific time period.

GDP is a monetary measure where production of goods is converted in terms of money so that it can be added together easily. It only considers final value or value of finished goods which means the value of goods which are used by final consumers and are not to be resold. It is concerned with domestic production that is production done within boundaries of a nation. And generally calculated for a period of one year.
Following is the formula for calculating GDP:

$$GDP = C + I + G + (X – M)$$

Where, C = Consumption expenditure, I = Gross investment done by business, G = Government expenditure and (X – M) = Exports - Imports

NNP:
Before explaining NNP we should know what GNP is. GNP is the monetary value of final goods and services produced by nationals or citizens of a country during a year.

NNP means the market value of final product produced by citizens of a country after adjusting the figure for depreciation because during the production process machines undergo wear and tear.

For calculating NNP we can use the following formula:

$$NNP = GDP – Depreciation + NFIA – NIT$$

Where GDP = Gross Domestic Product, NFIA = Net Factor Income from Abroad (Factor income received from abroad – Factor income paid abroad), and NIT = Net Indirect Taxes (Indirect taxes – subsidies).

Difference between GDP and NNP

Sr.	Point of Difference	GDP	NNP
1	**Meaning**	GDP means market value of finished goods and services produced within boundaries of a nation.	NNP means the market value of final goods and services produced by nationals of a country.
2	**Depreciation**	GDP figure is not adjusted for depreciation	Depreciation is deducted from GNP to find NNP
3	**NFIA**	Factor income earned from abroad is not considered for calculation of GDP.	Factor income earned from abroad is included while factor income paid abroad is deducted from GNP for calculating NNP.
4	**Necessity**	Knowledge of NNP is not required to calculate GDP.	Without knowing GDP NNP cannot be calculated.

Conclusion:
Both GDP and NNP Considers market value of finished or final goods and services but NNP is adjusted for depreciation as well as factor income from abroad.

Q-7 Explain the concept of Per Capita Income or Clarify the concept of Per Capita Income (4 Marks, 2012, 2014)
Introduction:
Figure of national income is not sufficient for knowing the progress made by a country so a better concept was devised. UNO (United Nation's Organisation) also accepted per capita income as a better measurement of a country's progress than GDP.

Per Capita Income:

The term per capita income refers to the income per head of population. It is the average income of the individuals of a country in a particular year. Thus per capita income can be calculated by dividing National Income of a particular year by the actual size of population of that particular year.

$$\textbf{Per Capita Income} = \frac{\textbf{Total National Income of a particular year}}{\textbf{Population of that year}}$$

National income and population keep on changing, but the rate of change in them is not the same.

If the rate of population growth, and the rate of increase in national income are equal, per capita income remain unchanged. If population increases faster than the national income, per capita income would fall. And if national income increases faster than the population, per capita income will rise.

The concept of per capita income is used to assess the changes in the well being of the people over a period of time. It measures changes in the standard of living of the people of an economy.

Per Capita Income is better than GDP in assessing a country's progress but it does not show true picture of well being of its people. If the increased income is distributed in favour of rich people than even with increased per capita income condition of poor will not change.

Conclusion:

Per capita income means per head income of a country during a year. It shows the standard of living of citizens. In 2013 India's per capita income (GDP) was 1498.87 USD (US Dollars).

Q-8 Explain the concept of personal income. Or Differentiate between personal income and disposable income. (4 Marks, 2013, 2015)

Introduction:

The concept of personal income shows the amount of income which is received by people from all the sources, whether earned or not. Disposable income means the portion of personal income which they will be able to spend.

Personal Income:

Personal Income is defined as the total of income received by persons from all sources. Personal Income includes wages and salaries, fees and commissions, bonus, interest, earnings from self-employment and dividends. It also includes transfer income (transfer payments) such as pensions, family allowances, unemployment allowances, sickness allowances, old age benefits etc.

Total personal income is not exactly the same as the national income because personal income is the income received while national income is the income earned.

The difference arises because some income which is earned – social security contributions, corporate income taxes and undistributed corporate profit – is not actually received by households and conversely some income which is received as transfer payments (old age pension, unemployment allowances etc.) is not currently earned.

So in order to arrive at Personal Income from National Income, we must subtract from National Income those three types of income which are earned but not received and add income received but not currently earned. Therefore,

Personal Income = NI – Social security contribution – corporate income tax – undistributed corporate profits + transfer payments.

The concept of personal income is useful to know the amount of purchasing power actually in the hands of people. Therefore, this may be able to help in roughly assessing the consumer's welfare.

Disposable Income

Disposable income is that part of total income which the individuals are free to spend.

A part of personal income actually received is transferred to government by way of direct taxes such as income tax, professional tax etc.

Only that part of money which remains with the income earners after payment of these taxes is the actual amount available for spending. Thus, disposable income is equal to Personal Income *minus* direct taxes.

Disposable Income = Personal Income – Direct Personal Taxes (including taxes, fines and other compulsory payments)

Disposable income can either be consumed or saved. Therefore,
Disposable Income = Consumption + Saving.

Difference between Personal income and Disposable income:

Sr.	Point of Difference	Personal Income	Disposable Income
1	**Meaning**	Personal income means total income received by people from all the sources.	Disposable income means the income which the individuals are free to spend.
2	**Scope**	Personal income is broader concept than disposable income.	Disposable income is a part of personal income.
3	**Direct tax**	Direct tax is included in personal income so its value is more.	In order to obtain disposable income direct income tax is deducted from personal income so its value is less than personal income.

Conclusion:

Personal income is the total income earned by an individual from all the sources. Disposable income is the income after deducting income tax which he is free to spend. The difference between Personal Income and Disposable Income reflects the monetary burden of the government's fiscal policy (taxation) on the people living in the country.

Q-9 Explain the concepts of Real income and Money income. (4 Marks; 2012, 2014)
Introduction:

In order to know actual welfare of people of a country knowledge of two types of income measurements is needed. These measurements are Real income and Money income.

Money income:

Income received by a person in terms of money is known as money income. It is also called nominal income. Examples of money income includes salary that is paid in cash. Real income does not consider increase in prices i.e. inflation.

Real income:

Real Income of an individual consists of the goods and services that he purchases with his money income. It can be understood as the purchasing power of the individual measured in terms of goods and services.

Real Income depends on prices. It varies inversely with the price level. Money income being constant Real income can change according to rises and decline of the prices. For example, if an individual earns Rs.12 a day and he buys 4 pieces (Rs 3/ bread) of bread with the same each day. Now if the price of the bread increases to Rs. 4/ piece, he will be able to buy only 3 pieces of bread. In this way his money income being the same his real income declined from 4 breads a day to 3.Real income changes with the change in the prices of goods and services.

The concept of real income is very useful for calculating long-term welfare of nationals of a country. We can establish the relationship between the real income and money income. For example before 10 years an individual was earning Rs. 50 and he was able to buy 10 kg of wheat from the same. Now if his money income is Rs. 500 and he is able to buy the same quantity of wheat i.e. 10 kg. There is just an increase in his money income. There is no change in his welfare due to the increase in the income i.e. he is earning the same real income after 10 years also.

Difference between Real income and Monetary income:

Sr.	Point of Difference	Money Income	Real Income
1	**Meaning**	Income received in cash is termed as money income.	Income in terms of goods and services is known as real income.
2	**Inflation**	Money income is not adjusted for inflation	Real income is adjusted for inflation.
3	**It shows**	Money income shows value at current prices.	Real income represents value at constant prices.
4	**Example**	If a person's salary is Rs. 10,000 per month, we can say that his money income is Rs. 10,000.	If the same person is able to purchase 200 Kg. of wheat out of his income of Rs. 10,000 then 200 Kg. wheat will be his real income.

Conclusion:
In order to know long-term welfare of people knowledge of people knowledge of money income and real income is necessary. Real income changes inversely with prices. If prices of goods and services increase real income decreases and vice versa.

Q-10 What is national income? Explain production method to measure national income and its limitations. (6 Marks, 2013)

Introduction:
In any economy, its people are engaged in one productive activity or other, whereby they earn income and spend their income on goods and services to satisfy their wants. Evidently, the health and progress of an economy are to be judged from how much they are able to produce and spend, i.e. (that is) country's total output, income and expenditure.

Definition of National Income:
The national income committee appointed in India in 1948 expressed the concept in the simplest possible terms, **"A national Income estimates the volume of commodities & services turned out (produced) during a given period, counted without duplication."**

National Income in the words of Pigou is, **"that part of the objective income of the community, including of course income derived from abroad, which can be measured in money."**

Production Method:
The production method or also called output method considers the value of goods and services produced during a year in a country. The output method consists of following four stages.

1. **Calculating Domestic Output:** This stage takes into consideration the gross value of domestic output in various sectors of production.

2. **Value of Intermediate Goods/Services and Depreciation:** At this stage we have to determine the value of intermediate goods and services rendered to various sectors of production by other sectors of production. Also we have to estimate annual value of the physical depreciation of the plant and machinery used in these sectors.

3. **Calculating Net Domestic Output:** Now we have to deduct the costs of intermediate goods/ services and depreciation from the gross value of production which will give us net value of domestic output.

4. **Adjustment for income from Abroad:** Finally from net value of domestic output we have to make adjustments for net income from abroad, i.e. we have to add the difference between incomes received from abroad and payments made abroad to the value of net domestic output.

The value thus arrived at represents the sum total of the incomes originating in different sectors of the economy like agriculture, manufacturing, industry and services. The figure arrived at is called Net National Product at factor cost or national income.

We can find national income through following equation:

$$Y = (P-D) + (S-T) + (X-M) + (R-P)$$

Where, Y = Total Income, P = Total value of domestic final production, D = Depreciation or consumption of fixed capital, S = Subsidy, T = Indirect Taxes, X = Exports, M = Imports, R = Receipts or factor income from abroad, P = Payments or factor income paid abroad

Following points are to be kept in mind while calculating national income using production method:

1. Only final products are to be added, i.e. the products which are produced for final users.

2. Production for self-consumption is not considered because these goods are not marketed.

3. Figure of national income should be adjusted for inflation.

4. NFIA (Net Factor Income from Abroad) should be added in NDP.

Limitations of Production Method:
Following difficulties are faced while calculating national income using production method:

1. **Double counting:** The problem of double counting arises when the goods are used for further production and not for final use. The commodities are final from the viewpoint of the firms producing them but it may be used as input for further production. For ex. raw cotton is final product for farmer but is an input for a threading mill, thread is final product for threading mill but input for weaving mill, and so on. So the value of garments include value of cloth thread and cotton. On the other hand some of the thread is used for final consumption by tailors and by people in Uttrayan. So it is difficult to know how much of the produced good are final.

2. **Adjustment for net income from abroad:** In order to know national income the output created in a foreign country by the means of production owned by the residents is to be added. And the output produced in home country by the foreign owned resources are deducted from GNP obtained through final product or value added method. It is very difficult to decide the volume of production done by foreigners in India and Indians in other countries.

3. **Depreciation:** We have to adjust production for wear and tear or depreciation but a problem here is that how much depreciation should be deducted? If we assume life span of a machine for 10 years, it may happen that it works for either less or more years. Besides it is assumed that after the life span of the machine, it will cost the same. In reality prices do not remain constant. At the end of lifespan prices may increase or decrease. So it is difficult to know exact value of depreciation.

Conclusion:
Under production method products produced for final consumption are considered and added together. This method is generally followed by underdeveloped countries. India uses this method for calculating value of certain activities like agriculture, mining and manufacturing.

Q-11 Write a note on income method to measure national income.

Introduction:

National income is a coin with three sides namely production, expenditure and income. We can consider any of the three concepts to measure national income. All the three components will be equal in an economy. Here we will examine income method for calculating national income.

Income Method:

The income method considers the income earned by the factors of production in the process of producing/ delivering goods and services. It is also called National Income at factor cost.

Here income earned by all factors of production is summed up. Following are the various incomes to be included while calculating National Income.

         i)   Wages and Salaries.
         ii)   Compensation of employees.
         iii)   Supplement income like employer's contribution to social security.
         iv)   Dividends
         v)   Undistributed corporate profits
         vi)   Earnings of self employed population
         vii)   Interest
         viii)   Rent
         ix)   Surplus of public enterprises
         x)   Net income from abroad.

Thus National Income is equal to the factor incomes excluding transfer payments (pension payments, unemployment allowances etc.). The sum of above stated incomes provides us the measure of gross national income at factor cost. Symbolically,

$$Y = (W+I+R+\pi) + (X-M) + (R-P)$$

Where, Y= Total Income, W = Wages, I = Interest, R = Rent, π = Profits, X = Exports, M = Imports, R = Receipts from abroad, P = Payments made abroad

While estimating National Income under this method the following points should be considered.

i) Transfer payments like pension payments, unemployment allowance, gifts etc. are to be excluded.

ii) Only the services for which payments are made are to be added.

iii) Transfer incomes like direct taxes and government subsidies should not be taken into account.

iv) Net exports should be included.

v) Undistributed profits of companies, income from government property and profit from public enterprises are to be included in the estimation of National Income.

Conclusion:

National income from income method considers income earned by citizens of a country from different sources. It excludes transfer payments as it is income received and not earned.

Q-12 Explain the expenditure method of measuring national income. (4 Marks, March 2015)

Introduction:

Income received by people is spent over goods and services. There are main three spenders in an economy. They are consumers, government and businessmen. Following is the explanation of calculation of national income using expenditure method.

Expenditure method:

Under this method, we estimate the disposal of income on the purchase of final goods and services.

It includes (a) Personal consumption expenditure of households. (b) The gross private domestic investment i.e. business spending on capital goods. (c) The net foreign investment i.e. net spending by

foreign nationals and firms for the country's goods and services. (d) Government purchases of goods and services.

Following is the formula for calculating national income through expenditure method:

$$Y = (C+I+G) + (X-M) + (R-P)$$

Where, Y = Total Income, C = Consumption, I = Investment, G = Government services, X = Exports, M = Imports, R = Receipts from abroad, P = Payments made abroad

Conclusion:

Estimation of National Income by expenditure method gives idea about the consumption of consumers, businessmen and government. The figure needs to be adjusted for net exports and Net Factor Income from Abroad.

Q-12 'National income is a coin with three sides.' Explain. (6 Marks, 2015)

Introduction:

There are three dimensions of economic transactions in an economy i.e. Production, Income and Expenditure. It is assumed that production of a certain amount leads to same amount of income and the same amount of money when chases the production, the same will be the value of expenditure.

Diagram:
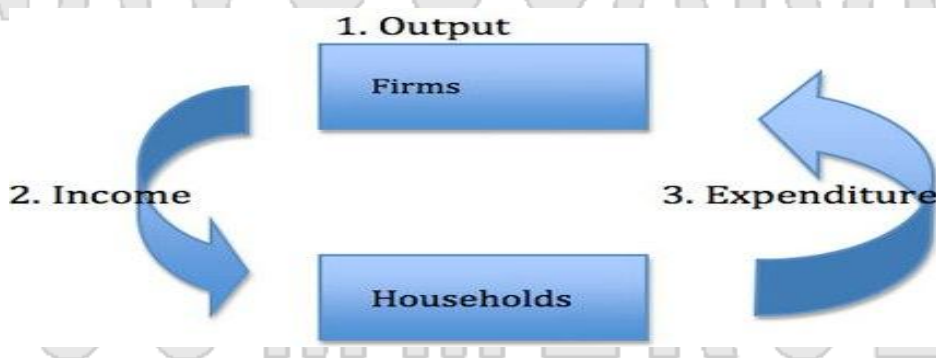
Explanation:

For simplicity we have assumed that there is full employment in an economy and there is no savings. In an economy firms are basic production unit and households are basic consuming units. For production firms require services of factors of production like land, labour, capital and entrepreneur which are supplied by households.

In return of their services, households receive income from firms. This income is in the form of wages for labour, interest for capital, rent for land and profit for entrepreneurs.

Factors of production or households use this income to purchase the goods and services they have produced for firms. In ideal conditions the value of all the three will be same.

Example:

Let's take an example to understand the three sides of national income. Suppose in an economy firms produced goods worth Rs.10,000 using services of households. In return to this services households will get Rs. 10,000 as income. Households spend this income to purchase goods and services produced by firms. Now there is Rs. 10,000 to be spent and the production is also of Rs. 10,000 this means that all the goods produced will be consumed and again firms have Rs. 10,000 as income out of which they will carry out further production. And thus the cycle of production, income and expenditure goes on in an economy.

Conclusion:

As there are mainly three dimensions namely production, income and expenditure in an economy we can say that national income is a coin with three sides. Calculation of national income using any of the three dimension gives us the same result. Thus, we can conclude that national income is a coin with three sides.

Q-13 Describe the difficulties in measuring national income. (4 Marks, 2013, 2015)

Introduction:

National Income means the aggregate monetary value of production of final goods and services during a specific period of time. In under-developed countries like India, we face some special difficulties in estimating national income.

Difficulties in measurement of national income:

Following are some of the difficulties faced in measuring national income:

1. **Non-monetised transactions:** The first difficulty arises because of the prevalence of non-monetised transactions in under-developed countries like India. So quite a large part of agriculture production is consumed by the farmers or being exchanged with other goods in village. It creates a problem for the national income statisticians to find a suitable measure for calculation for this part of output. As a result they have to estimate the value of such production which may lead to overvaluation or under valuation of the national income.

2. **Illiteracy:** A majority of small farmers and manufacturers in underdeveloped countries are illiterate and ignorant of accounting procedures. They do not follow the practice of keeping regular accounts. This makes task of getting reliable information from a large number of petty (small) farmers and producers all the more difficult.

3. **Incomplete occupational specialization:** Because of under-development occupational specialization is still incomplete. Many people undertake more than one economic activity in order to meet their ends. For example, small farmers will be engaged in manual work in industries and public projects in the off-season i.e. except monsoon. Hence it will be difficult to calculate national income of such people for the whole year.

4. **Lack of adequate data:** As mentioned earlier small manufacturers does not keep proper accounts for their income and those who keeps record of the income are not willing to reveal them fully in order to save government taxes. So the data available are not reliable and adequate.

5. **Value of inventories:** It is not easy to calculate value of inventories, i.e. raw materials, semi-finished goods and finished goods in the custody of producers. Obviously (clearly) any miscalculation on this score will give wrong estimate of the output of productive enterprises.

6. **Calculation of depreciation:** The calculation of on capital consumption presents a difficulty because there are no acceptable standard rates of depreciation applicable to various categories of machines. Unless from the gross national income correct deductions are made for depreciation, the estimate of net national income is bound to go wrong.

7. **Problem of double counting:** In order to overcome the problem of double counting final goods are taken into account while computing national income. But it is very difficult to make distinction between intermediate goods and final goods when the goods are used as raw material as well as final consumption. For E.g. car tires are used as a component in car manufacturing as well as tires are also sold directly to customers. Sugarcane is used for direct consumption as well as in the production of sugar.

8. **Illegal activities:** Many people in an underdeveloped country are engaged in illegal activities such as smuggling, piracy and as a part of gray/black market. Though these activities generate income, the same is not included in the estimation of national income which underestimates the final figure of national income.

Conclusion:

In spite of the difficulties involved in calculating the national income, the data is useful to economists, planners and businessmen in estimating future trends and making proper decisions. It also shows state of well being of the people of a country and the data is also useful for various comparisons.

Q-14 Check the trends of GDP and per capita GDP of India since independence. (6 Marks, 2014)

Introduction:

Economic growth of any country can be checked with the help of GDP. Higher rate of increase in GDP indicates economic progress. Since population growth also plays an important role in determining welfare of people, GDP is not sufficient measure of true economic progress. So we have to calculate per capita GDP based of population of a country.

Per Capita GDP:

Per Capita GDP means per head production done during a year by economic agents. In order to know per capita GDP we need to divide total GDP by population. Following is the formula for calculating per capita GDP:

$$\text{Per Capita GDP} = \frac{\text{Total GDP of a particular year}}{\text{Total population of that year}}$$

Trend in India:

Following table shows trend in GDP and Per Capita GDP in India since independence.

Time period	GDP Growth rate	Time period	Per Capita GDP
1950-51 to 1960-61	3.9%	1950-51 to 1979-80	1.4%
1960-61 to 1970-71	3.7%		
1970-71 to 1980-81	3.1%		
1980-81 to 1990-91	5.6%	1980-81 to 1990-91	3.2%
1990-91 to 2000-01	5.6%		
2000-01 to 2004-05	7.3%	1991-92 to 2004-05	4.1%
2004-05 to 2009-10	8.5%		

Explanation:

Following is the brief description of trend in GDP and Per Capita GDP of India.

1. First three decades (1950-51 to 1979-80): Per Capita GDP was 1.4% for the three decades while average GDP growth rate was 3.5%. The reason for Per Capita GDP being low was around 2.1% growth in population.

2. Time period from 1980-81 to 1990-91: The decade before reforms, GDP growth rate was around 5.6% while per capita GDP was 3.2% again because of increasing population, the fruits of development were not reaching all.

3. 15 years after reforms (1991-92 to 2004-05): After the announcement of New Industrial Policy 1991 because of liberalisation, privatisation and globalisation of Indian economy we can see progress in India's GDP as well as Per Capita GDP. For the time period 1990-91 to 2000-01 GDP growth rate was 5.6% and Per Capita GDP was 3.2%. for five years from 200001 to 2004-05 GDP growth rate was 7.3% and Per Capita GDP growth rate was 4.1%.

4. Period during 2004-05 to 2009-10: During these five years India's GDP and Per Capita GDP kept increasing. India's GDP during this period was 8.5% while Per Capita GDP was 4.1%.

Conclusion:

India's GDP and Per Capita GDP kept on increasing continuously after independence and especially after the reforms of 1991. There is difference between the figures of GDP and Per Capita GDP where Per Capita GDP is lower than GDP that is because of continuous increase in India's population.

Q-15 Write a note on GDP Deflator. (4 Marks, 2013)

Introduction:

Nominal value of GDP does not consider increase in price level over the period of time so it is not reliable measure of progress of an economy. In order to know the true picture of progress we have to adjust the figure of GDP with inflation. This can be done with the help of GDP Deflator.

Meaning of GDP Deflator:

The GDP deflator is a tool used to measure the level of price changes over time so that current prices can be accurately compared to historical prices. In other words, it eliminates the effects of price changes over time.

Formula:

GDP deflator can be found by dividing nominal GDP with real GDP and multiplying the answer with 100. Following is the formula for GDP Deflator:

$$\text{GDP Deflator} = \frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$$

The GDP price deflator has two common uses: (1) as an indicator of the price level and economic activity and (2) as a method of deflating nominal economic indicators to real terms. GDP deflator is similar concept to Consumer Price Index. The GDP deflator has an advantage over the Consumer Price Index because it isn't based on a fixed basket of goods and services. Changes in consumption patterns or the introduction of new goods and services are automatically reflected in the deflator.

Conclusion:

In order to see the real picture of increase in economic activities nominal figure of GDP needs to be adjusted for inflation. This adjustment can be done through GDP deflator.

One mark Questions:

1. What is the difference between GDP and NDP?
   A) Foreign Income B) Depreciation C) Subsidies D) Direct taxes
2. In which concept of national income NFIA is not included?
   A) GDP B) GNP C) NNP D) National Income
3. For faster economic development of any economy, share of which sector should decrease?
   A) Primary B) Secondary C) Tertiary D) All
4. In how many sectors economic activities of a nation divided?
   A) Two B) Three C) Four D) Five
5. What is the difference between market price and factor cost?
   A) Depreciation B) NFIA C) Net indirect taxes D) Net direct taxes
6. To obtain personal disposable income what should be deducted from personal income?
   A) Depreciation B) Direct taxes C) Indirect taxes D) NFIA
7. How many dimensions does national income has?
   A) Two B) Three C) Four D) Five
8. Which method of national income is known as consumption-saving method?
   A) output method B) income method C) expenditure method D) production method
9. Which organisation gives data on national income?
   A) Planning commission B) Central Statistical Organisation C) RBI D) SEBI
10. At present which sector of Indian economy contributes the most to the GDP?
    A) Agriculture B) Industry C) Services D) Foreign trade
11. What is the reason for difference between GDP growth rate and per capita GDP growth rate?
    A) Employment B) Population C) Poverty D) Inflation
12. Real GDP is nominal GDP adjusted for _____.

A) Income B) Inflation C) Production D) Depreciation

13. Which of the following is used to convert Nominal GDP into Real GDP?
    A) CPI   B) GDP deflator   C) Depreciation   D) Net indirect taxes

14. Which of the following represents national income?
    A) GDP_{FC} B) NDP_{MP} C) NNP_{MP} D) NNP_{FC}

15. While calculating national income we just consider income earned and ignore income received. (True / False).

16. Which one of the following will not be included while calculating national income?
    A) Transfer payments   B) Profit of a firm   C) Exports D) Agricultural income

17. The value of total annual output of finished goods and services of a country in a year is defined as:
    A) Gross National Income B) Gross Domestic Product C) Net National Output at Factor Cost   D) National Income

18. Real national income / size of population = _____
    A) Personal Income B) Per capita income C) Per capita real income D) None

19. Net National Product = _____
    A) Gross National Product / depreciation   B) Gross National Product x depreciation
    C) Gross National Product – Depreciation D) Gross National Product + depreciation

20. Which of the following is not a transfer payment?
    A) Retirement pension B) Unemployment allowance C) Student grants D) Social Security

Answers:

1. Depreciation 2. GDP 3. Primary 4. Three 5. Net Indirect Taxes 6. Direct taxes (Income tax) 7. Three (Production, income and expenditure) 8. Expenditure method 9. Central Statistical Organisation (CSO) 10. Services 11. Population 12. Inflation 13. GDP deflator 14. NNP_{FC} 15. True 16. Transfer payments 17. Gross Domestic Product 18. Per capita real income 19. Gross National Product – Depreciation 20. Retirement pension

Unit: 2   Money and Credit

Q-1 What is Money? Explain evolution of money in brief. OR Explain types of money in brief. (4 Marks; 2014, 2013)

Introduction:

In order to purchase and enjoy different goods we need to pay its price in monetary terms. So anything which can be used as payment for our purchases can be termed as money.

Definition:

According to Crowther, "Money is anything that is generally acceptable as a means of exchange (i.e., as a means of settling debts), and that at the same time acts as a measure and as a store of value."

Evolution of money:

Some of the major stages through which money has evolved are as follows: (i) Commodity Money or barter system (ii) Metallic Money (iii) Paper Money (iv) Credit Money (v) Plastic Money vi) Digital money.

Money has evolved through different stages according to the time, place and circumstances.

(i) **Commodity Money or barter system:** In the earliest period of human civilization, any commodity that was generally demanded and chosen by common consent was used as money. Goods like furs, skins, salt, rice, wheat, utensils, weapons etc. were commonly used as money. Such exchange of goods for goods was known as 'Barter System'.

Barter system suffered from many disadvantages. There was lack of double coincidence of wants. Also there was lack of common measuring rod of value. There was difficulty in payment of value when thing purchased is of small value and very difficult to store commodities for long period.

(ii) **Metallic Money:** With progress of human civilization, commodity money changed into metallic money. Metals like gold, silver, copper, etc. were used as they could be easily handled and their quantity can be easily ascertained. It was the main form of money throughout the major portion of recorded history.

(iii) **Paper Money:** It was found inconvenient as well as dangerous to carry gold and silver coins from place to place. So, invention of paper money marked a very important stage in the development of money. Paper money is regulated and controlled by Central bank of the country (RBI in India). At present, a very large part of money consists mainly of currency notes or paper money issued by the central bank. It is also known as fiat money as it does not have any intrinsic value.

(iv) **Credit Money:** Emergence of credit money took place almost side by side with that of paper money. People keep a part of their cash as deposits with banks, which they can withdraw at their convenience through cheques. The cheque (known as credit money or bank money), itself, is not money, but it performs the same functions as money.

(v) **Plastic Money:** With advancement in technology debit card and credit cards has emerged as a new type of money. This form of money is more secure and convenient. Credit cards operate on the principle of 'buy now pay later'. Debit cards can be used for purchases as well as withdrawing money. Money can be withdrawn from ATMs any time.

(vi) **Digital Money:** Digital currency or digital money is an Internet-based medium of exchange distinct from physical (such as banknotes and coins) that exhibits properties similar to physical currencies, but allows for instantaneous transactions and borderless transfer-of-ownership.

Conclusion:

Over the period of time money has evolved very much. Its evolution started with barter system which was replaced by metallic money and then paper money, credit money, plastic money and digital money replaced metallic money.

Q-2 What is money? Give an explanation of the functions of money. (4 marks, 2012, 2013; 6 Marks 2015)

Introduction:

To satisfy our needs we need to purchase goods and services. This purchases can be done with the help of money. Money has replaced barter system because of its advantages and functions other than just a medium of exchange.

Definition:

According to Crowther, "Money is anything that is generally acceptable as a means of exchange (i.e., as a means of settling debts), and that at the same time acts as a measure and as a store of value."

Functions of Money:

Following are the functions performed by money:

The various functions of money can be classified under four groups:

1. Main Functions, 2. Secondary Functions, 3. Contingent Functions, and 4. Other Functions.

1. Main Functions

These are also referred to as original functions of money. Following are the two main functions of money:

a. **Money is a medium of exchange:** Money has the quality of general acceptability so all exchanges take place in terms of money. In the modem money-exchange system, the prices of all goods and services are expressed in terms of money. In the modern exchange system; money acts as the intermediary in sales by helping in both purchase and sale. It is on this account that money is referred to as the medium of exchange.

b. **Money is a measure of value:** The second important function of money is that it measures the values of all goods and services. Money is, thus, looked upon as a collective measure of values. Since all values are expressed in terms of money, it is easier to determine the rate of exchange between various types of goods and services. It may, however, be pointed out that money still presents a difficulty in its role as a collective measure of values because its value keeps on fluctuating with occasional changes in the internal price-level.

2. Secondary Functions

Following are the secondary functions of money:

a. **Money is a standard of deferred payments:** Both borrowings as well as lending are done in terms of money. Money, thus, acts as the standard of deferred payments. Money has proved to be a suitable standard of deferred payments for the following three reasons:

i. The value of money is stable compared to the value of other commodities.

ii. Money is more durable compared to the commodities.

iii. Money has the quality of general acceptability.

b. **Money is a store of purchasing power or value:** Savings were discouraged under the barter system because storage can only be done in forms of commodities which were perishable. So, savings done in terms of commodities were not permanent. But, with the invention of money, this difficulty has disappeared. Money can be easily stored without incurring any expenditure. Moreover, if we put the saved money in bank we can earn interest.

c. **Money is a means of transferring purchasing power:** With the development of trade and business it was necessary to transfer purchasing power from one place to another. Money performed this function easily and quickly. Further, on account of the general acceptability of money purchasing power can be transferred from one person to another.

3. Contingent Functions.

These functions have been well described by Prof. Kinley. These are as follows:

a. **Money is the basis of credit:** In recent years, the importance of credit has increased in all the countries of the world. The use of cheques, bills of exchange, etc., has gone up particularly in the developed countries of the west. It should, however, be remembered that money is the basis of credit. Without money, credit instruments cannot circulate. For example, a depositor can make use of the cheques only when there are sufficient funds in this account.

b. **Money facilitates distribution of social income:** Modern production is made possible by the collective co-operation of the various factors of production. The share of each factor out of total production is determined in terms of money in the form of rent, wage, interest, profit etc.

c. **Money helps to consumers and producers in taking decisions:** Money plays an important role in equalizing the marginal utilities of the consumer because the prices of all commodities are expressed in money. Likewise, money also helps the producer in equalizing marginal productivities because ultimately these productivities are measured in terms of money. Money helps both the consumers and the producers to maximize their satisfaction. Since money is the only commodity which can be put to several uses and in varying quantities, it helps consumers and producers alike in allocating their resources so as to achieve maximum satisfaction.

d. **Money increases the productivity of capital:** Money is the most liquid type of capital. It can be put to any use. It is on account of this liquidity of money that capital can be transferred from the less productive to the more productive uses. The mobility of capital has also increased on account of the liquidity of money. So money can be converted into any form of wealth at any time. Thus, it is money which imparts liquidity to all types of wealth. It is this feature of the money which distinguishes it from all other commodities.

4. Other Functions

Money also performs certain other functions, which may be set forth as follows:

a. **Money helps to maintain repayment capacity:** Money possesses the quality of general acceptability. So, to maintain its repayment capacity, every firm has to keep some amount of liquid money in its assets. By so doing, the firm safeguards repayment capacity.

b. **Money represents generalized purchasing power:** Purchasing power stored in terms of money can be put to any use. It is not essential that money should be used for the purpose for which it has been saved. For example, if a person saves now to build a house in future, it is not essential that he should utilize that saving only for building the house. Instead of utilizing that saving for building a house, he may prefer to spend it on the education of his children.

c. **Money gives liquidity to capital:** Money is the most liquid form of capital. It can be put to any use. From this point of view, money is highly important. It is essential to keep capital in a liquid form for a variety of motives, according J. M. Keynes.

Conclusion:

The invention of money system is the greatest of all the inventions of mankind. Money serves as a medium of exchange, a measure of value, a standard of value, it also helps storing and transferring purchasing power, it serves as standard of deferred payments, it is the basis of credit, it also gives liquidity to capital. In all a man who is having enough money always feels a sense of security. In general there are four main functions of money which can be summarized as follows:

> **"Money is a matter of functions four,**
> **A Medium, a Measure, a Standard, a Store"**

Q-3 Critically explain Fisher's equation of exchange. (Quantity Theory of Money) (6 Marks, 2012, 2013 and 2014)

Introduction:

As gold and silver inflows from the Americas into Europe were being minted into coins, there was a resulting rise in inflation. This led economist Henry Thornton in 1802 to assume that **more money equals more inflation and that an increase in money supply does not necessarily mean an increase in economic output**.

Quantity Theory of Money:

The Quantity Theory of Money states that there is a direct relationship between the quantity of money in an economy and the level of prices of goods and services sold. According to QTM, if the amount of money in an economy doubles, price levels also double, causing inflation

Statement of the theory:

The theory asserts that any given percentage increase or decrease in the quantity of money will lead to the same percentage of increase or decrease in the general levels of prices.

Assumptions of the Theory:

Fisher's theory is based on the following assumptions:

1. Price is passive factor so it is affected only by change in supply of money. No other factor can change price level.
2. Money can only be used as medium of exchange and measurement of value.
3. The proportion of M' to M remains constant which means banking habits of people remain unchanged.
4. V (velocity of legal money) and V' (velocity of bank money) are assumed to be constant and are independent of changes in M and M'.
5. T (number of transactions) also remains constant and is independent of other factors such as M, M', V and V'.
6. It is assumed that the demand for money is proportional to the value of transactions.
7. The theory is applicable in the long run.
8. It is based on the assumption of the existence of full employment in the economy.
9. There is absence of foreign trade and barter system in the economy.

Fisher's equation of Exchange:

In its simplest form, the theory is expressed as:

$$MV = PT$$

Each variable denotes the following:

       M = Money Supply, **V** = Velocity of Circulation (the number of times money changes hands)
       P = Average Price Level, **T** = Volume of Transactions of Goods and Services

In the above equation, MV gives total effective **supply** of money during given period while PT is the money value of all the things purchased during a given period. In fact, PT represents **demand** for money. Hence **MV = PT indicates that supply of money is equal to demand for money.**

This equation of exchange included only currency money and left out bank money. The bank money is of great importance in the modern economic organisation. Consequently, the original equation was extended by Fisher to include bank money as follows:

$$MV + M'V' = PT$$

$$OR$$

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

     Where, M = Total quantity of currency money, V = Velocity of circulation of money, M'= Bank money, V' = Velocity of circulation of bank money, P = General Price level, T = Total volume of transactions.

Criticism or limitations of the theory

Following are the main criticisms of the theory:

1. **Unrealistic Assumptions:** It has been argued that the quantity theory of money is based on highly unrealistic assumptions. With the assumption of other things remaining constant the theory has oversimplified the theory.

2. **Interdependent variables:** The theory states that different variables of the equation are independent of each other. But, in fact, this is far from correct. The variables of the equation of exchange are inter-related with each other. For example, according to the theory, changes in the price level (P) are the result of changes in the quantity of money (M). But experience has shown that the price level (P) may rise without any increase in quantity of money (M), but because velocity of circulation (V) may have risen.

3. **Considers money as only a medium of exchange:** Fisher's equation regards money only as a medium of exchange required for transactional purposes. In other words, it is held that the demand for money arises mainly from transactions, that is, for the purchase of goods and services offered for sale. But it should be remembered that money not only acts as a medium of exchange but it also performs an important function as a store of value. This important function of money has been ignored in the theory.

4. **Price level is passive:** According to this theory, price-level is influenced by changes in the quantity of money, that is, the monetary factors affected the general level of prices. But in reality, besides monetary factors, the price level is also affected by certain non-monetary factors also. For example, changes in consumers' tastes, preferences, habits, fashions, the technique of production etc. also affect general price level.

5. **Full employment:** Another important objection that has been raised against the theory is that it is based on the unrealistic assumption of full employment. It is, of course, true that if there is full employment in the economy, an increase in the quantity of money will lead to a proportionate increase in the price level. But there are unemployed resources in all economies so an increase in the quantity of money may not result in an increase in the price level.

6. **Rate of Interest:** The quantity theory of money has been considered inadequate, as it takes no account of the rate of interest. Because an increase in the quantity of money tends to reduce the rate of interest. This would encourage greater investment expenditure along with the consumption expenditure, and this would determine the price level. So the theory ignores the role of interest in deciding price level.

Conclusion: Although the quantity theory is not mathematically true, yet it does lend support to the view that whenever money supply is greatly expanded, prices are bound the rise. This is what has happened in India under the five-year plans. However, in view of the objections mentioned above, some of modern economists do not subscribe to the quantity theory.

Q-4 Explain the cash balance equation of money. Or explain the Cambridge's cash balance equation. (6 Marks; 2015, 2013)

Introduction:

The transaction approach to quantity theory of money, elaborated by Prof. Fisher with the help of his equation of exchange is widely popular in America. This approach is based on the function of money as a medium of exchange. However, in Europe and especially in England, a slightly different approach, known as the cash balance approach, has been more popular. The cash balance approach emphasizes the store of value function of money

Demand for money:

According to the theory money is not demanded for its own sake but is demanded for following three main reasons:

1. People like cash to buy goods and services, that is, to conduct day-to-day transactions. This is known as **transaction motive** for holding cash.

2. People like to keep cash as measure of protection in the event of emergencies. This is known as **precautionary motive** for holding cash.

3. People hold cash for **speculative** purpose, that is, to earn profit as a result of fluctuations in the rate of interest.

Supply of money:

According to Cambridge version, the supply of money is its stock at particular moment rather than its flow during a given period. The supply of money is composed of all the cash and deposits subject to withdrawal by cheques. The concept of velocity of circulation plays no part in the cash balance equation.

Cash Balance / Cambridge Equation

The relationship between price level and supply of money has been expressed by the Cambridge economists in the form of equations known as cash balance equations or Cambridge equations. We discuss below the equation as presented by Pigou:

$$P = \frac{KR}{M}$$

Where, P = The purchasing power of money (i.e. the value of money). It is the inverse of price level.

R = The total real income expressed in terms of any particular commodity – say wheat, produced by the community during a year.

K = Proportion of real income (R) which people desire to hold in cash.

M = Total quantity of money or the total number of units of money.

It is clear from the equation that P, the purchasing power will vary directly with K or R and inversely with M.

Criticism of the cash balance approach:

Although cash balance approach is superior to cash transaction approach, it is not free from shortcomings. Following are some of the limitations of cash balance approach:

1. **Only consumption goods:** In the first place, the cash balance equations given by Pigou and Keynes emphasis the purchasing power of money in terms of consumption goods only. For example, Pigou speaks of real income expressed in terms of wheat (R) and Keynes specifically refers only to consumption goods. But value of money cannot be artificially restricted to include only consumption goods, since money is kept for a vast multiplicity of business and personal purpose.

2. **Incomplete:** The cash balance approach states that changes in demand for money bring about changes in the value of money but it does not state clearly the factors which cause changes in the demand for money. Besides, it does not even analyze all determinants of demand for money. For example, the cash balance equation refers to transactions and precautionary motives to hold money, but does not consider speculative motive determining the demand for money which often causes violent and sudden shifts in the liquidity preference of the people. By ignoring the role of speculative motive as an important

determinant of demand for money, the cash balance approach has failed to explain the forces influencing the demand for money and its value.

3. **Lack of real forces:** The cash balance approach does not explain the real forces which are responsible for changes in the price level. It ignores such important variables as income, savings and investment which affect the price level.

4. The cash balance approach like the cash transaction approach assumes that K (% cash holding) and R (real income) are constant but in real world both are ever changing.

5. Although the cash balance version asserts that changes in the quantity of money in the short period will have an important effect in changing the output and prices, it does not tell us how much shall price and output change as a result of a given change in the money supply.

Conclusion: Notwithstanding the limitations, the cash balance approach of the quantity theory of money is not entirely insignificant. It explains how changes in the people's desire to hold a part of their real income in cash balance (K) affect the price level. From this standpoint, the cash balance approach is superior to cash transaction approach.

Q-5 Compare and contrast between Quantity Theory of money and Cash balance approach.
Introduction:
Both the quantity theory of money and cash balance approach focuses on suggesting how the value of money is decided. Both the theories are used in economics but they offer certain similarities and dissimilarities.
Similarities:
Following are the similarities between the two approaches:
   1. **Same Conclusion:** The Fisherian and Cambridge versions lead to the same conclusion that there is a direct and proportional relationship between the quantity of money and the price level and an inverse proportionate relationship between the quantity of money and the value of money.
   2. **Similar Equations:** The two approaches use almost similar equations. Fisher's equation $P = MV/T$ is similar to Robertson's equation $P = M/kT$ However, the only difference is between the two symbols V and k which are reciprocal to each other. Whereas $V = (1/k)$ $k = (1/V)$ Here V refers to the rate of spending and k the amount of money which people wish to hold in the form of cash balances of do not want to spend. As these two symbols are reciprocal to each other, the differences in the two equations can be reconciled by substituting 1/V for k in Robertson's equation and 1/k for V in Fisher's equation.
   3. **Money as the Same Phenomenon:** The different symbols given to the total quantity of money in the two approaches refer to the same phenomenon. As such MV+M'V of Fisher's equation, M of the equations of Pigou and Robertson, and n of Keynes' equation refer to the total quantity of money.

Dissimilarities:
Despite these similarities the two approaches have many dissimilarities:
   1. **Functions of Money:** The two versions emphasize on different functions of money. The Fisherian approach lays emphasis on the medium of exchange function while the Cambridge approach emphasises the store of value of function of money.
   2. **Flow and Stock:** In Fisher's approach money is a flow concept while in the Cambridge approach it is a stock concept. The former relates to a period of time and the latter to a point of time.
   3. **Nature of Price Level:** In Fisher's equation, P refers to the average price level of all goods and services. But in the Cambridge equation P refers to the prices of final or consumer goods.

4. **V and k Different:** The meaning given to the two symbols V and k in the two versions is different. In Fisher's equation V refers to the rate of spending and in Robertson's equation k refers to the cash balances which people wish to hold. The former emphasises the transactions velocity of circulation and the latter the income velocity.

5. **Nature of T:** In Fisher's version, T refers to the total amount of goods and services exchanged for money, whereas in the Cambridge version, it refers to the final or consumer goods exchanged for money.

6. **Emphasis on Supply and Demand for Money:** Fisher's approach emphasises the supply of money, whereas the Cambridge approach emphasises both the demand for money and the supply of money.

7. **Different in Nature:** The two approaches are different in nature. The Fisherian version is mechanistic because it does not explain how changes in V bring about changes in P. On the other hand, the Cambridge version is realistic because it studies the psychological factors which influence k.

Conclusion:

Both the equations have some similarities but both are very much different in their approach to determine value of money. It is on account of these differences that Hansen wrote: "It is not true as is often alleged that the cash balance equation is merely the quantity theory in new algebraic dress."

Q-6 Discuss components of money supply. (6 Marks; 2012, 2014)

Introduction:

The central bank of a country plays the biggest role in controlling the supply of money in the economy. India is no exception to it. In India, the Reserve Bank of India is the sole authority to decide the quantity and quality of money supply in the country.

Components of money supply:

In India following are the main components of money supply:

1. **Currency with public (C):** (Coins and currency notes of different denominations). The first component of money supply in India is the currency with public. By law currency in India is created both by the Government of India and by the RBI. The government of India creates coins of all denominations and prints the one-rupee note; and then hands them over to the RBI. All currency notes with denominations exceeding one rupee are printed by the RBI. Then, both the government's currency and the RBI's currency are clubbed together and the total currency is issued by the RBI itself.

2. **Other deposits with RBI (OD):** (provisions of money by central and state governments with RBI). The RBI being the central bank of country does not undertake banking business except the provision of banking services to the Government of India and the state governments. However, in the course of its various activities, certain deposits are created with it which, in its judgment, can be encashed by the depositors at their discretion. So, the RBI includes them in its measures of money supply with the public. However, it is notable that the amount of OD is always a very small part as compared to other components of money supply in our country.

3. **Demand deposits (DD):** (generally current accounts opened by businessmen. Highly liquid bank money). Deposits made by the general public in the different banks are a major component of money supply in India. Such deposits are called demand deposits as they can be withdrawn on demand by the deposit holder. Therefore, they are termed as highly liquid bank money.

4. **Time deposits: (fixed deposits).** Like demand deposits, time deposit with the banks is another component of money supply. Such deposits are kept by the public for a fixed period of time.

5. **Deposits with post office savings bank organization:** In India deposits are also allowed in the post office to encourage rural and small savings.

Since April 1977, RBI has been publishing four alternative measures of money supply as follows

M_1 = C + DD + OD
M_2 = M_1 + Post office savings bank deposits
M_3 = M_1 + Time deposits with bands (it excludes the post office savings bank deposits)
M_4 = M_3 + Total post office deposits

Conclusion:
Currency, demand deposits, time deposits, post office savings bank organisation and other RBI deposits constitutes currency supply. M_1, M_2, M_3 and M_4 are the different measures of money supply. Out of these M_3 is the most widely used measure of money supply in India and is also termed as the 'money stock' by the RBI. Unless the context is specified, the reference with regard to money supply is always to this measure.

Q-7 Discuss the factors affecting money supply. (4 Marks; 2013, 2015)
Introduction:
The supply of money at any moment is the total amount of money in the economy. There are two theories of the determination of the money supply. According to the first theory, money supply is determined exogenously by the Central Bank. The second states that the money supply is determined endogenously by changes in the economic activity which affects people's desire to hold liquidity as well as the rate of interest.

Determinants / factors affecting money supply:
Following are the main factors affecting money supply:

1. **Cash Reserve Ratio (CRR):** Every commercial bank by law is required to maintain a minimum percentage of their deposits with central bank. An increase in required reserve ratio reduces the supply of money with commercial bank and thus decreases supply of credit and money in the economy.

2. **Statutory Liquidity Ratio (SLR):** In addition to CRR banks are required to keep a certain percentage of their deposits in form of cash with them. An increase in SLR leads to reduced supply of money with bank for creating credit. So there is an inverse relationship between SLR and supply of money.

3. **Open Market Operations:** Open market operations refer to purchase and sale of government securities and other types of assets like bills, bonds and securities etc. When the Central bank buys or sells securities in the open market, the level of bank reserves expand or contract. Purchase of securities by the government releases money into the market leading to increase in supply of money on the other hand selling of securities leads to decrease in supply of money.

4. **Public's Desire to Hold Currency and Deposits:** People's desire to hold currency (or cash) relative to deposits in commercial banks also determines the money supply. If people are in the habit of keeping less in cash and more in deposits with the commercial banks, the money supply will be large. This is because banks can create more money with larger deposits. On the contrary, if people do not have banking habits and prefers to keep their money holdings in cash, credit creation by banks will be less and the money supply will be at a low level.

5. **High powered money:** It is the sum of commercial bank reserves and currency (currency notes and coins) held by the public. High powered money is the base of creation of credit in

an economy. The supply of money (bank credit) varies directly with the changes in the monetary base and inversely with reserve ratios.

6. **Business Cycle:** Business cycle means the alternating phases of prosperity and depression in an economy. In case of boom economy grows which leads to increased income which leads to increased money supply. On the contrary during the periods of depression employment and income decreases which reduces money supply.

7. **Fiscal policy:** Fiscal policy is the policy of government related to taxes. When government increases taxes, people pay more money as tax and are left with less money to spend which decreases money supply while in case when government announces tax cut money supply with people increases.

Conclusion:
Supply of money in market decides the level of prices in an economy. Increased supply of currency as well as bank credit leads to increase in prices and vice versa. CRR, SLR, Open market operations, people's attitude towards savings, high powered money etc are some of the factors affecting money supply.

Q-8 Explain alternative measures of money supply as proposed by the Reserve Bank of India.
(4 Marks, 2013)
Introduction:
There are four measures of money supply in India which are denoted by M1, M2, M3 and M4. This classification was introduced by the Reserve Bank of India (RBI) in April 1977.
Measures of Money Supply:
Following are the different measures of money supply:

1. **M_1:**
    The first measure of money supply, M_1 consists of:
    (i) Currency with the public which includes notes and coins of all denominations in circulation excluding cash on hand with banks:
    (ii) Demand deposits with commercial and cooperative banks, excluding inter-bank deposits;
    (iii) 'Other deposits' with RBI which include current deposits of foreign central banks, financial institutions and quasi-financial institutions such as IDBI, IFCI, etc., other than of banks, IMF, IBRD, etc. The RBI characterizes it as narrow money.
    $$So, M_1 = C + DD + OD$$
    Where, C = Currency (notes and coins), DD = Demand Deposits, OD = Other deposits with RBI

2. **M_2:**
    The second measure of money supply is M_2 which consists of M_1 plus post office savings bank deposits. The majority of people in rural and urban India have preference for post office deposits from the safety viewpoint than bank deposits.
    $$So, M_2 = M_1 + Savings \; deposits \; with \; Post \; Office \; Savings \; Banks$$

3. **M_3:**
    The third measure of money supply in India is M_3, which consists of M_1, plus time deposits with commercial and cooperative banks, excluding interbank time deposits. The RBI calls M_3 as broad money.
    $$So, M_3 = M_1 + Net \; time \; deposits \; of \; banks$$

4. **M_4:**
    The fourth measure of money supply is M_4 which consists of M_3 plus total post office deposits comprising time deposits and demand deposits as well. This is the broadest measure of money supply.
    $$So, M_4 = M_3 + Total \; deposits \; with \; Post \; Office \; Savings \; Organisation \; (excluding \; NSC)$$

Conclusion:

Of the four inter-related measures of money supply for which the RBI publishes data, it is M_3 which is of special significance. It is M_3 which is taken into account in formulating macroeconomic objectives of the economy every year. It is on the estimates of increase in M_3 that the effects of money supply on prices and growth of national income are estimated. Out of these measures M_1 is the most liquid measure while M_4 is the least liquid.

Q-9 Explain the concept of High Powered Money. (4 Marks; 2012, 2014)

Introduction:

In the context of supply of money, the concept of high powered money is more prevalent in modern time. In the context of purchasing power of money, there are two types of money. (1) High Powered Money (2) Low Powered Money.

**Definition of High Powered Money:**

High Powered Money is defined as the portion of the commercial banks' reserves that are maintained in accounts with central bank plus the total currency circulating in the public.

The total liability of RBI is called high powered money or reserve money or monetary base. It includes deposits with commercial banks and deposits held by RBI. These items are claims which general public, government and banks have on RBI and hence are considered to be the liability on RBI.

High powered money is basic money; real money supply is much more because deposits with commercial banks have a multiplying effect as an outcome of credit creation process.

High powered money v/s. Total money supply:

Following diagram shows the difference between high powered money and total money supply:
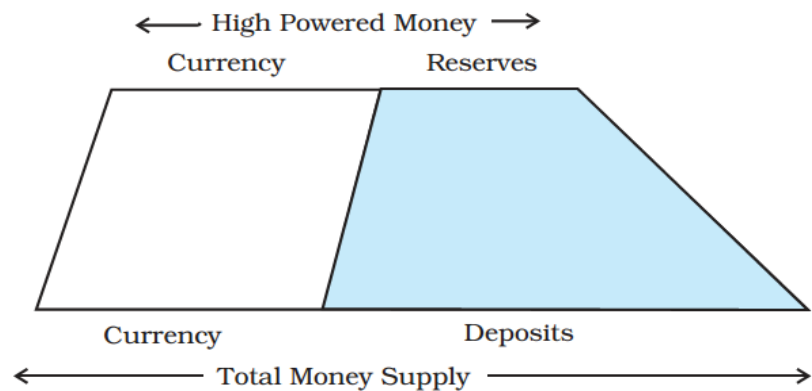
High Powered Money in Relation to Total Money Supply

The figure shows that high powered money forms base for total money supply. The reason total money supply is greater than high powered money is because of multiplier effect and credit creation power of commercial banks.

The total purchasing power of people depends on the growth rate and quantity of total supply of money. From this point of view, money multiplier is considered in addition to quantity of currency and bank money. During the given time, the transaction made with the units of money are taken into account **e.g.** The R.B.I has issued Rs. 10 crore currency but if this currency is used as medium of exchange four times it indicates $10*4 = 40$ corers wroth purchasing power. This is called money multiplier. Money multiplier is an important factor determining the supply of money.

If people borrow loans from P.F. or if banks provide loans against appropriate mortgages or pledges the supply of money increases.

In short, the increase in volume of money creates purchasing power in more or less degree. The increase in supply of money that generates more purchasing power is called high powered money.

Conclusion:
The concept of high powered money is not new. Dennis Robertson had called it money riding on wings. It is the base money which decides the total money supply and purchasing power in an economy.

Q-10 Give the meaning of credit and explain its importance. (4 Marks, 2015)
Introduction:
The word credit originated from the Latin word 'Credo' which means 'I believe'. Credit is a matter of faith in the person and no less than in the security offered.

Definition:
According to Cole, "Credit is purchasing power not derived from income but created by the financial institutions either as an offset to idle incomes held by depositors in the banks, or as a net addition to the total amount of purchasing power."
According to Newlyn, "Credit creation refers to the power of commercial banks to expand secondary deposits either through the process of making loans or through investment in securities.

Importance of Credit:
Following are the points which shows importance of credit in an economy:
1. **Economic growth:** Supply of money for investment and spending is very much important for development of any economy. Money printed by central bank of any country is not sufficient for these purpose. It is the credit offered by banks in terms of loans which enables businessmen invest money in to business which brings about employment and income.
2. **Supports purchase:** Credit helps people in purchasing products without paying full amount for the same. This is the reason people can afford to live in own house, can purchase car, TV, washing machine etc. on credit. They can enjoy different products because of the support of credit.
3. **Helps businessmen in investment:** No businessmen can carry out big investment without help of credit from public or banks. In order to build big factories, carry out production on large scale, employ a lot of people, purchasing raw material etc. huge investments are required which depends on availability of credit.
4. **Helps in expanding business:** Purchase and sale on credit helps businessmen increase the sales. Suppliers supply products to their creditworthy customers on credit which helps the supplier increase sales while it helps customer as he requires less amount of money as working capital and thus he can save on interest.

Conclusion:
The term credit can be used in two ways. One of them is that credit is loan, a current advance against future payment. Credit is also used to mean the credit standing of the borrower. The essence of credit is confidence. Credit is the basis of purchase ,sales, expansion of business as well as growth of an economy.

Q-11 Explain types of credit. (4 Marks; 2013,2014)
Introduction:
The word credit originated from the Latin word 'Credo' which means 'I believe'. Credit is a matter of faith in the person and no less than in the security offered. The essence of credit is confidence.

Types of Credit:
Credit is a powerful tool that comes in several forms. It allows you to buy now with the promise of paying later. Following are the different types of credit:
1. **On the basis of form:** finance can be classified into two types on the basis of form: Direct finance and indirect finance.

a) **Direct credit:** Huge investment has to be made to establish business and factory. So for starting a business and expansion, diversification of business this kind of finance is used. Direct finance includes obtaining credit from banks or financial institutions in the form of loan, cash credit or overdraft.

b) **Indirect credit:** When banks or financial institutions buy the shares, debentures, public debt or bonds and thus provide finance to the unit, it is indirect finance. Hire purchase and lease are also forms of indirect credit.

2. **On the basis of time period:** Finance given to an industrial unit can be divided into three types based on time period:

   a. **Short term credit:** Generally, credit obtained by an industrial unit for a period of up to one year is called short term credit. Generally it is used to purchase raw-materials, payment of wages etc. In short, this type of financed is used as working capital. This type of finance is obtained from banks, financial institutions, trade credit etc.

   b. **Medium term credit:** Generally, finance obtained by an industrial unit for more than one year but less than five years is termed as medium term credit. Such credit can be obtained from banks or financial institutions for modernization, expansion and diversification of an industrial unit. Other sources of such credit includes commercial bills, overdraft, commercial papers, public deposits, hire purchase, leasing etc.

   c. **Long term credit:** Generally, finance obtained by an industrial unit for a period of more than five years is called long term credit. This type of finance is used for the purpose of establishment, expansion or modernization of the business unit. Industrial units obtain such finance for technology transfer to survive in competition or for implementing programmes for growth to conduct research. Long term credit can be obtained from banks, special financial institutions, commercial institutions or from international money markets.

3. **On the basis of purpose:** Credit obtained by an industrial unit can be divided into the following types based on purpose:

   a. **Finance for establishment:** This is the preliminary finance required while setting up the business. This finance is for medium or long term. It is obtained in the form of loan from banks and financial institutions. Big industrial houses can obtain this finance by issuing shares and debentures.

   b. **Venture capital:** In the current competitive age, constant changes are necessary. Such new projects carry high risk. Hence, investors and lending institutions do not readily give finance. In such a situation, finance can be obtained in the form of venture capital fund. The venture capitalists provide finance directly or through partnerships or by buying guarantees. The interest rate is high here as the risk is also high.

   c. **Finance for working capital:** Short term finance is obtained by an industrial unit for purchasing raw materials, fuel, paying wages, transportation cost and of other variable expenses. Generally, this finance is obtained from banks in the form of overdraft, cash credit and bill discounting. Trade credit also is helpful for working capital.

   d. **Growth-oriented finance:** An existing industrial unit requires finance for expansion, modernization or for technology transfer. Such finance is obtained from banks or special financial institutions.

   e. **Finance for turn-around:** Sometimes, even established units come to the verge of closure due to recession, or change in technology. Sometimes, this happens due to inefficient management. Such units require funds for turn-around. It is provided as a special package by the government or financial institutions established by the government.

   f. **Bridge finance:** Sometimes, there is a possibility of obtaining finance only when the project is in implementation stage but currently funds are required and the procedure for obtaining regular finance may take some time. In such a situation, banks and financial institutions provide finance for this period which is called bridge finance.

4. **Classification on the basis of source:** This kind of finance can be divided into two types:
    a. **Institutional credit:** Institutional finance is the finance provided by banks, special lending institutions, non-banking financial institutions and special institutions established to provide credit to specific industrial areas. Generally, industrial units obtain finance from the banking sector in the form of cash credit, overdraft, bill discounting or loan.
    b. **Non-institutional credit:** This type of credit includes finance obtained from the capital market. An industrial unit can obtain this finance by issuing shares, debentures or public deposits. This type of finance in the form of foreign currency can also be secured from the international capital market.

5. **Credit with or without security:**
    a. **Credit with security:** This is a source of finance obtained against the security of land, building, machinery, raw material etc. Banks provide finance even against shares, debentures or government securities. The interest rate is lower here as this credit is more secure.
    b. **Credit without security:** When a bank grants credit only after fulfilling documentary procedure without any security, it is called finance without security. Such credit is risky and so the interest rates are high. Such credit is given on the basis of the goodwill of the customer or industrial unit. For example, finance granted by banks in the form of cash credit or overdraft.

Conclusion:
Based on form, time period, purpose, source and security there are different types of credit available in an economy by banks, financial institutions and other sources.

Q-12 Write a detailed note on Credit Control.   OR   Elucidate the quantitative instruments of credit control. (4 Marks; 2015)
Introduction:
By credit control we mean control over the quantity and value of credit in the country. Control of credit is essential for stability and growth of an economy. The authority for controlling credit in any economy lies with central bank of that country. In India the authority is given to Reserve Bank of India.

Objectives of Credit control:
Following are the objectives of credit control.
-   To maintain stability of internal prices
-   To achieve stability of foreign exchange rate
-   To eliminate fluctuations in production and employment
-   To assist in economic growth

Methods or weapons of credit control:
There are two types of methods of credit control:
-   General or Quantitative methods of credit control
-   Selective or Qualitative methods of credit control

⇒ **Quantitative Methods of Credit Control**: These methods are directed towards influencing the total volume/ supply of credit in the banking system. Following are the components of quantitative methods of credit control.

a) **Bank Rate or Discount Rate:** The bank rate may be defined as the minimum official rate at which central bank is willing to discounting first class bills of exchange or advance loans against approved securities. In some countries it is also known as the discount rate. Bank rate

and the general interest rate move in the same direction. An increase in bank rate will lead to increase in interest rate by commercial banks and vice versa, thereby making credit either dearer or cheaper. In times of inflation if the central bank wants to control the credit, it will raise the bank rate. As a result commercial banks will have to pay a higher interest rate to borrow from the central bank and therefore they will also increase the interest rate. This will raise cost of borrowing and the demand for loans will be reduced from the side of industry and trade. On the other hand at times of deflation/ depression central bank reduces bank rate to stimulate investment, production and employment. Lowering bank rate enables commercial banks to borrow at cheaper rate from central bank and to lend to customers at reduced rates. This will encourage business people to invest money by taking loans or lead to expansion of credit. The problem associated with this method is that if the commercial banks are possessing excess reserves they may not increase the rate of interest. In underdeveloped countries like India the lack of well organized money market, lack of bill market and lack of banking habits etc make the bank rate policy ineffective.
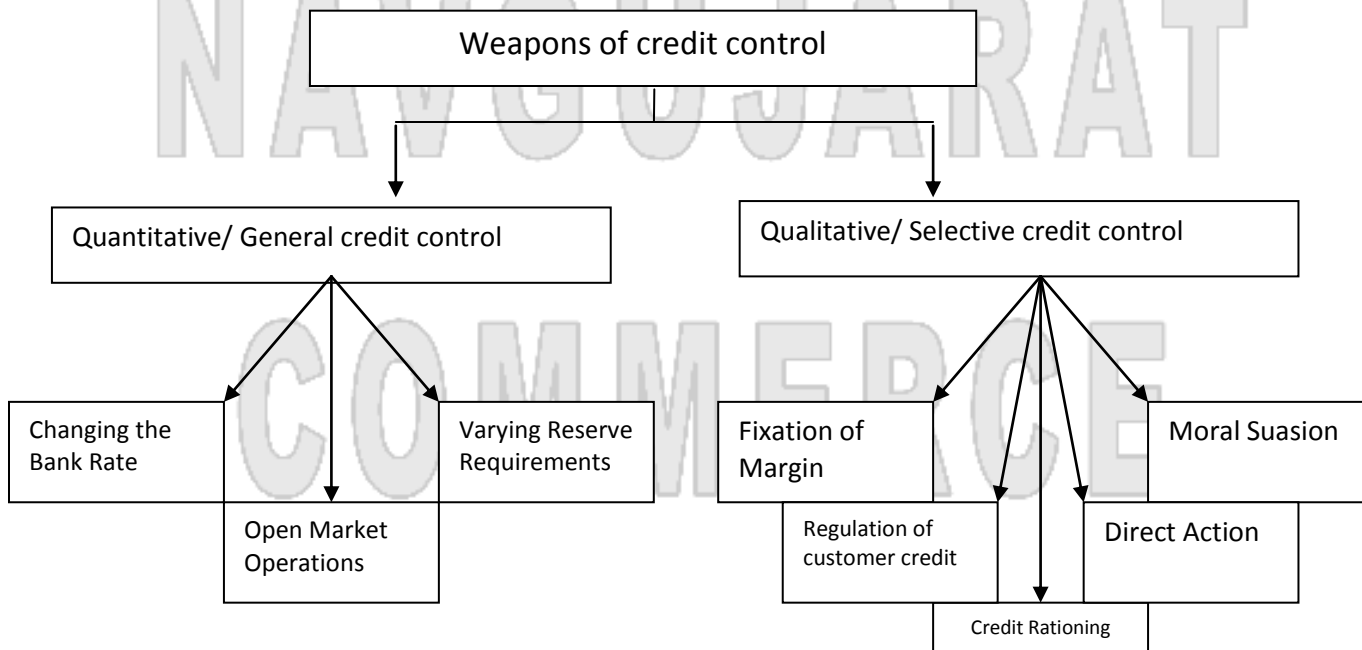
b) **Open Market Operation:** The term 'open market operation' in narrow sense means purchase and sell of government securities by the central bank. While in the broad sense it means purchase or sell by a central bank of any kind of paper in which it deals like government securities, trade bills, securities of well reputed private concern etc. Selling of securities in open market leads to contraction of credit and purchase of the same leads to expansion of credit. When central bank sells securities in the open market, it receives payments against the securities which leads to increase of money with the central bank and reduce cash with commercial banks. With reduction in its cash, the commercial banks has to reduce its lending. Thus credit contracts. On the other hand when central bank purchases securities, it pays through cheques drawn on itself. This increases cash balance in the commercial bank and enables them to expand credit.

c) **Variations in the Reserve Ratios:** The commercial banks are requested to keep a certain portion of their demand and time liabilities as cash reserves with the central bank which is called Cash Reserve Ratio (CRR). Central bank is empowered to make changes in this ratio in the context of the needs of the situation. Reserve bank has the power to vary CRR from 3% up to 15% of the aggregate liability. Variations of reserve requirements is affect the liquidity position of the banks and hence their ability to lend. The raising of reserve requirements is an

anti-inflationary measure as it reduces excess reserves of the commercial banks. Lowering the reserve ratio enables the banks to expand credit in the economy.

⇒ **Qualitative/ Selective Methods of Credit Control:** The qualitative instruments of credit control do not affect the total quantity of money in circulation, but it regulates and controls the amount of money that is put to use in a particular sector of an economy. The main purpose of using qualitative instruments of credit control is to channelise bank credit from undesirable to desirable and economically useful sectors. Following are the instruments for selective credit control:

a) **Fixation of Margin Requirement:** The margin is the difference between the 'loan value' and the 'market value' of the securities offered by borrowers against secured loans. In order to curtail bank advances the central bank may issue directions that a higher margin to be kept. The raising of margin requirement is designed to check speculation in the stock market. The higher the margin required. The less credit one would obtain for the purchase of stocks and shares.

b) **Regulation of Customer Credit:** Apart from credit for trade and industry, a great deal of credit, may be for durable consumer goods like houses, motor cars, refrigerators, T.V. etc. when they are sold on hire-purchase or installments system. Central bank seek to control such credit in various ways e.g. i) by regulating the minimum down payments on specific goods ii) by fixing coverage of selective consumer durable goods and iii) by regulating the maximum payment period on all installment credits.

c) **Credit Rationing:** When banks create more credit, the Central Bank has to resort to this means. For this, the related bank can (1) stop the facility of rediscounting completely or reduce it. (2) Banks can decide upon the quota of credit. (3) They can fix limits for different industries or trades.

d) **Direct Action:** Direct action implies coercive measures like refusal on the part of the central bank to rediscount for banks whose credit policy is not in accordance with the wishes of the central bank. Central bank can also cancel the banking license of the bank not following the banking rules in extreme cases.

e) **Moral Suasion:** This method involves advice, request and persuasion with the commercial banks to co-operate with the central bank in implementing its monetary and credit policies. Moral suasion is a sort of advice. There is no element of compulsion in it. The central bank focuses on the dangerous consequences of the credit expansion and seeks their cooperation.

f) **Publicity:** Publicity means to force commercial banks to follow only that credit policy which is in the interest of the economy. The publicity generally takes form of periodicals and journals.

Conclusion: From the above discussion we can say that the use of quantitative methods of credit control affects the total supply of credit and also the cost of credit in general and the use of quantitative instruments of credit control affects quantum of credit used for selective purposes only.

Q-13 Explain the meaning of Bank Rate. (4 Marks; 2012)
Introduction:
Bank rate is one of the quantitative instruments used by RBI to control inflation in an economy. Change in bank rate affects credit creation power of commercial banks.

Meaning:
Bank rate can be defined as the rate charged by the central bank for lending funds to commercial banks.
Bank rates influence lending rates of commercial banks. Higher bank rate will translate to higher lending rates by the banks. In order to curb liquidity, the central bank can resort to raising the bank rate and vice versa.
Effects of changes in Bank Rate:

Change in bank rate brings about stability in an economy due to the following effects:

1. **The effect of interest rate:** At the time of inflation central bank of a country increases bank rate which in turn makes borrowings costly for commercial banks. In order to maintain current level of profitability, commercial banks have to increase interest rates which decreases demand for loans and installment purchases. On the other hand in order to prevent recession RBI goes for decreasing bank rate which decreases interest rates and makes borrowings cheap which in turn increases effective demand.

2. **Effect on internal price level:** If bank rate decreases, credit extends. Traders and industrial activities are encouraged. Speculative activities go up. As a result, internal price level goes up. On the other hand, if bank rate increases credit contracts, trade and industrial activities are discouraged. The internal price level declines.

3. **Effect on capital flow:** As the bank rate increases, with the increase in interest rate of market advances, the interest rate on deposits also rises. Therefore, even the foreign investors come to the country to take advantage of higher rates of interest. On the other hand, if bank rate goes down, the rates of interest on bank deposits also goes down and the capital of the country goes to other countries and the supply of capital decreases.

4. **Effect on exchange rate:** As the bank rate is increased, other rates of interest also increases. As a result, foreign capital comes to the country. The balance of trade becomes favorable and exchange rate also becomes favorable and vice versa.

5. **Cash induced effect:** Generally, there is inverse relationship between the rate of interest and the cost of securities. If bank rate increases, the rates of interest go up and the cost of securities decreases. Therefore, the capacity of the banks for credit creation decreases. As a result, prices go down. Therefore, during inflation bank rate is increased and during recession, it is decreased.

6. **Psychological effect:** People receive signals regarding market through changes in bank rate. Private sector comes to know what measures the Government wishes to take.

Conclusion:
Changes in bank rate are reflected in the prime lending rates offered by commercial banks (to their best customers), which in turn affect investments such as bank deposits, bond issues, mortgages.

Q-14 Clarify the concept of Repo Rate. (4 Marks, 2012) OR   Explain meaning of Repo Rate and Reverse Repo Rate.   (4 Marks; 2014)
Introduction:
Repo Rate and Reverse Repo Rate are important instruments of central bank's credit policy. To control the situation of inflation or deflation, Central Bank uses these instruments. Generally, changes in Repo Rate and Reverse Repo Rate affects interest rates. (Repo means Repurchase Agreement)

Repo Rate:
Repo rate is the rate at which the central bank of a country (Reserve Bank of India in case of India) lends money to commercial banks in the event of any shortfall of funds. Repo rate is used by monetary authorities to control inflation.

The discount rate at which a central bank repurchases government securities from the commercial banks, depending on the level of money supply it decides to maintain in the country's monetary system. To temporarily expand the money supply, the central bank decreases repo rate. To contract the money supply it increases the repo rates.

When the repo rate is decreased vice a versa will happen like recently governor has decrease the repo rate it affects on the economy are:

1. Infrastructure investment to get a push.

2. Home loans and corporate loans to be cheaper.
3. Housing sector will get a boost.

When the repo rate is increased it means bank has to pay more money to the central bank i.e. RBI. It means that it has to increase the rate of interest charged on the loan, further the industries will not take the loan from the banks and this will draw the excess liquidity from the market. This situation arises when there is inflation in the market/economy. It leads to increased loan EMIs and increase in the Fixed Deposit interest rates.

Reverse Repo Rate:
Reverse repo rate is the rate at which the central bank of a country (Reserve Bank of India in case of India) borrows money from commercial banks within the country. It is a monetary policy instrument which can be used to control the money supply in the country.

Reverse repo rate is exactly the opposite of repo rate. There are times when even the apex (ટોચનું) bank (RBI) falls short of money and this is when it asks commercial banks to grant loan to it at reverse repo rates. Reverse repo rate is always higher than repo rate, which is very attractive scenario for commercial banks as their money is at no risk when they advance it to reserve bank than when they extend money as loans to common consumers. However, even this measure means banks lend most of their excess money to the reserve bank and have very little left for common man. This measure helps check the amount of money in the economy. So excess money supply moves out of the economy and thus inflation is controlled.

Conclusion:
At times RBI uses both Repo Rate and Reverse Repo Rate according to the requirements of the economy. Both of these are the Liquidity Adjustment Facility (LAF) measures which are taken by RBI in order to control the inflation.

Q-15 Explain the concepts of CRR and SLR.
Introduction:
In order to ensure faith of people in banking system, Central Bank of any country demands that every commercial bank must maintain minimum of Legal Reserve Ratio. This Legal Reserve includes two ratios – CRR (Cash Reserve Ratio) and SLR (Statutory Liquidity Ratio).

Cash Reserve Ratio:
The commercial banks are requested to keep a certain portion of their demand and time liabilities as cash reserves with the central bank which is called Cash Reserve Ratio (CRR). Central bank is empowered to make changes in this ratio in the context of the needs of the situation. Reserve bank has the power to vary CRR from 3% up to 15% of the aggregate liability.

Statutory Liquidity Ratio:
SLR or statutory liquidity ratio is the minimum percentage of deposits that a bank has to maintain in form of gold, cash or other approved securities. It is the ratio of liquid assets (cash and approved securities) to the demand and term liabilities / deposits.

RBI is empowered to increase this ratio up to 40%. An increase in SLR restricts the bank's leverage position to pump more money into the economy, thereby regulating credit growth.

Conclusion:
CRR and SLR are used by RBI to control the money supply and credit in the economy. Currently in India CRR is 4.00% while SLR is 21.50%.

One mark questions:

1. By which method Central Bank issued the legal money in India?
   A) 100% reserve method   B) Fixed ratio method   C) Minimum reserve method   D) Equal reserve method

2. From the following which bank perform the function of credit control in India?
   A) SBI   B) NABARD   C) IDBI   D) RBI

3. Which money is known as reserve money?
   A) High powered B) Narrow C) Broad D) Bank

4. Who has given the concept of liquidity approach of supply of money?
   A) Shaw and Gurale B) Redcliffe Committee C) Milton Friedman   D) Fisher

5. Which money is known as narrow money in India?
   A) M_1 B) M_2 C) M_3 D) M_4

6. Which money is known as broad money in India?
   A) M_1 B) M_2 C) M_3 D) M_4

7. How much value of gold must be kept as reserve by RBI in India?
   A) Rs. 100 Cr.   B) Rs. 115 Cr.   C) Rs. 200 Cr. D) Rs. 2000 Cr.

8. Whose sign is there on the currency note of Rs. 2 or more in India?
   A) Prime minister   B) Finance Secretary C) RBI Governor D) Home minister

9. Whose sign is there on the currency note of Rs. 1 in India?
   A) Prime minister   B) Finance Secretary C) RBI Governor D) Home minister

10. Which economist has given more importance to speculative motive of demand of money from the following?
    A) Fisher   B) Keynes   C) Friedman D) Baumol and Tobin

11. According to Keynes, for which purpose demand for money is more affected by rate of interest?
    A) Transaction B) Security C) Speculative   D) All of them

12. Which economist has developed a new concept of demand of money for transaction motive instead of demand of money for speculative motive?
    A) Fisher   B) Keynes C) Tobin   D) Baumol

13. According to Friedman, which income is connected with demand of money?
    A) Monetary B) Real C) Permanent Real D) Permanent monetary

14. According to quantity theory of money, if the quantity of money is doubled then what is the value of money?
    A) Double   B) Three times   C) One and half time D) Half

15. According to which economist, individual liquidity preference is based on individual wealth?
    A) Prof. Pigou B) Prof. Marshall   C) Prof. Keynes D) Prof. Milton Friedman

16. Which of the following is an essential characteristic of barter economy?
    A) Goods exchanged against goods B) Simple and smooth system C) Lack of civilization D) Inconvenience.

17. Barter exchange is not possible when:
    A) A standard commodity is used in intermediation   B) Two persons have no mutual agreement on their wants C) There is no money D) There is no common measure of value

18. The metallic money contains:
    A) token coins only B) all money C) standard coins plus token coins D) gold and silver only

19. Token coin means:
    A) coin having face value more than its intrinsic value B) coin having face value same as the intrinsic value C) coin given as bank's token against cheque D) none of the above

20. In the equation: $P = MV/T$ when M increases, V and T being constant. What happens to P?
    A) P decreases B) P increases C) P varies inversely D) Nothing happens to P

21. Which of the following is a correct Cambridge equation?
    A) $P = M/kR$ B) $P = kT/M$ C) $P = k/n+rk$ D) $P = kR/M$

22. The Chicago version of QTM is propounded by:

A) Milton Friedman B) Tobin C) Samuelson D) Frazer

23. Reserve Bank of India measures money stock:

A) in a descending order of liquidity B) as monetary aggregates C) as money supply D) none of the above

24. Money supply is determined by:

A) monetary base B) community's choice C) cash reserve ratio D) all of the above

25. Which of the following equations explain "Demand of money = Supply of money?

A) Cambridge equation   B) Equation of exchange C) Keynes equation D) Milton Friedman equation.

Ans: 1 Minimum reserve method 2. RBI 3. High Powered (also known as base money, money base, outside money, central bank money or, in the UK, narrow money) 4. Redcliffe Committee 5. M_1 6. M_3 7. Rs. 115 Cr. 8. RBI Governor 9. Finance Secretary 10. Keynes 11. Speculative 12. Baumol 13. Permanent Real 14. Half 15. Prof. Marshall 16. Goods exchanged against goods 17. Two persons have no mutual agreement on their wants 18. Token coins only 19. Coin having face value more than its intrinsic value 20. P increases   21. P = kR/M 22. Milton Friedman 23. As money supply 24. Cash reserve ratio 25. Equation of exchange

Unit – 3 Keynesian Economic Theory

Q-1 Explain J. B. Say's law of market with its limitations provided by Keynes. (6 Marks, 2012, 2013, 2014) OR "Supply creates its own demand." Explain this statement. (4 Marks, 2015)

Introduction:

According to classical view, if market forces are allowed to operate in the economic system, they will eliminate over production and make the economy produce output at the level of full employment. J. B. Say (1776 - 1832) was one of the classical economist he was also an industrialist. He was influenced by the writings of Adam Smith and David Ricardo.

Say's Law of Market:

According to J. B. Say: "When goods are produced by firms in the economy, they pay reward to the factors of production. The households after receiving rewards of the factors of production spend the amount on the purchase of goods and services. From this it follows that each product produced in the economy creates demand equal to its value in the market". This conclusion came to be known as Say's Law of Market.

Assumptions of the Say's Law of Market:

The classical model is based mainly on the following four assumptions:

(i) **Pure competition exists:** No single buyer or seller of commodity or an input affect its price.

(ii) **Wages and prices are flexible:** The wages and prices of goods are free to move to whatever level the supply and demand direct it.

(iii) **Self interest:** People are motivated by self interest. The businessmen want to maximize their profits and the households want to maximize their economic well being.

(iv) **No government interference:** There is no necessity on the part of the government to intervene in the business matters.

Explanation:

Say's Law of market states that supply creates its own demand. The income a person receives from production is spent to purchase goods and services by others. For the economy as a whole, therefore, total production equals total income.

From this it implies that when the production of goods generate income sufficient to purchase goods, then there will be no deficiency of demand for goods, there will be no over production of goods and so no lay off or general unemployment for the workers. The essence of Say's law is that whatever the economy generates is automatically spent on the purchase of goods and services. The economy is, therefore, self correcting. Because of this self-adjustment, the economy operates automatically to full employment level as if guided by Adam Smith's "Invisible hand".
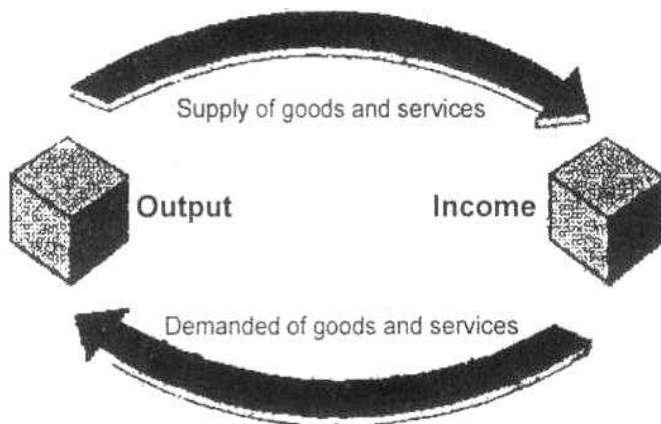
Say's Law is explained with the help of simplified circular flow in adjoining figure. Say's Law means that supply creates its own demand for goods and services. The income persons receive from output is spent to purchase goods and services produced by others. The very act of supplying certain level of goods and services necessarily equals the level of goods and services demanded. For the economy as a whole, total production therefore equals total income.

It may here be noted that if a part of the economy's income is saved, the Say's Law of Market would still hold good. It is because of the reason that whatever amount is saved is invested by businessmen on capital goods. Saving is equal to investment. Aggregate spending thus will be equal to aggregate income and the economy operates at the level of a full employment.

Keynes' Criticism on Say's Law:
The law of J.B. Say was finally falsified and laid to rest with the writings of Lord J.M. Keynes. He in his book, 'General Theory', has severally criticized the Say's Law on the following grounds:

(i) **Possibility of deficiency of effective demand**. According to Keynes, the classical theory based on Say's Law is unreal. In a competitive market, he says, it is not necessary that all income earned is automatically spent on consumption and investment. A part of income may be saved and may go to increase individual holdings. There may, thus, appear a deficiency in aggregate demand causing overproduction and unemployment in the country.

(ii) **Not a general theory**. The Say's Law assumes that micro economic analysis can profitably be applied to the economy as a whole. Keynes rejects this view and says that for the explanation of the general theory of income and employment, the macro economic analysis is required.

(iii) **Saving investment equality**. Keynes was never convinced of the classical version that interest elasticity can equate savings and investment. According to him, it is the income and not the rate of interest which is the equilibrium force between saving and investment.

(iv) **Full employment**: J. B. Say has assumed full employment in the market which is unrealistic. Full employment is not a permanent phenomenon. Most economies face problem of unemployment

(v) **Monopoly element**. Say's Law assumes perfect competition in the economy. Keynes says it is the imperfect competition which in practice prevails in the product and factor markets. The Say's Law is therefore, not operative.

(vi) **Short run economics.** Keynes rejects Says Law that aggregate demand will always be sufficient to buy what is supplied in the long run. Keynes remarks that "In the long run we are all dead". The length of long run is not clear in Say's Law.

Conclusion:
J. B. Say was of the opinion that there is full employment in an economy and at that level in the long run supply creates demand equal to itself. But Keynes criticized the theory and says that full employment is a myth and there is nothing called long run. In spite of criticisms Say's law of market is helpful in explaining simple flow of money and income in an economy.

Q-2 What is effective demand? Give an explanation of its constituents. OR Write factors affecting effective demand. (4 Marks, 2012, 2014, 2015) OR Explain Keynes' under employment equilibrium theory on the basis of aggregate demand price and aggregate supply price. (6 Marks, 2013) OR Give the Keynesian theory of employment. (4 Marks, 2014)

Introduction:
In 1936, economist John Maynard Keynes published a book titled The General Theory of Employment, Interest, and Money, which attempted to explain short-run under employment equilibrium based on effective demand.

Conceptual Framework of Effective Demand:
Keynes's theory of income and employment is based on the Principle of Effective Demand. However, in order to be able to understand this principle, it is necessary to know components of effective demand.

Components of effective demand are Aggregate Supply (price) and Aggregate Demand (price).

Aggregate Supply:

In an economy, all entrepreneurs, taken together, employ a certain total number of labor, who in turn produce a certain quantity of output. The total cost of producing the output by that number of men is called the **'aggregate supply price'.**

"At any given level of employment of labor, aggregate supply price is the total amount of money which all the entrepreneurs in the economy, taken together, must expect to receive from the sale of the output produced by that given number of men, if it is to be just worth employing them."

In this way, corresponding to each possible level of employment in the economy, there will be a different aggregate supply price. We can thus draw an aggregate supply price curve as shown below.
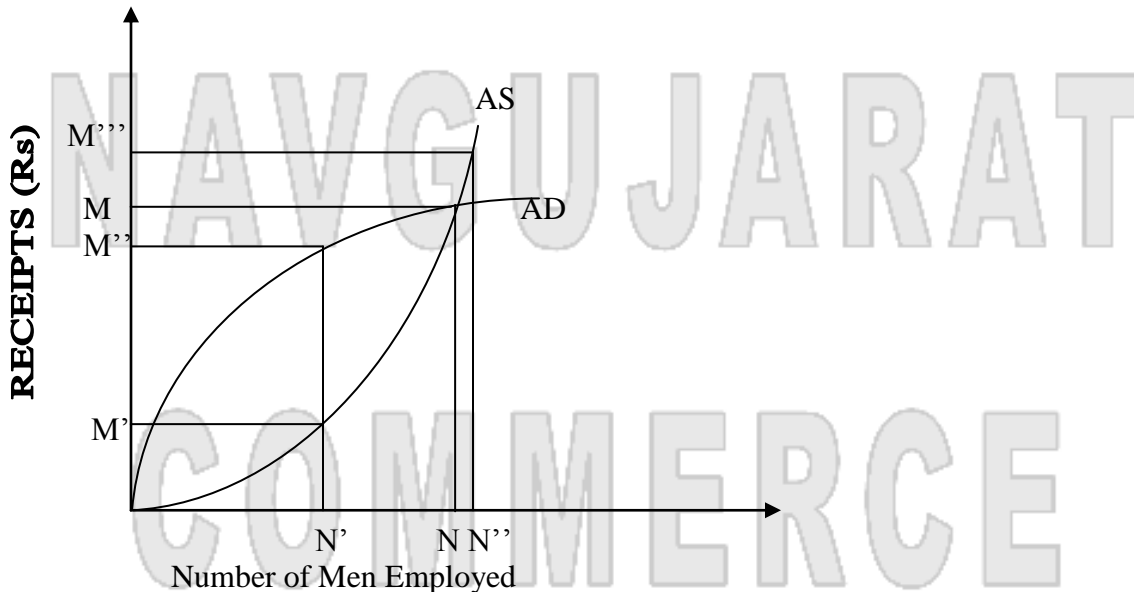
Aggregate Demand:

The expected receipts of entrepreneurs by the sale of total output when a given volume of employment is offered to workers is called the aggregate Demand Price.

In other words, **"Aggregate demand price at any level of employment is the amount of money which all the entrepreneurs in the economy taken together really do expect that they will receive if they sell the output produced by this given number of labor."**

In this way, corresponding to each possible level of employment in the economy, there will be a different aggregate demand price. We can thus draw an aggregate demand price curve as shown above.

Determination of Equilibrium Level of Employment:

In the above figure Aggregate Demand Curve (AD) and Aggregate Supply curve (AS) have been drawn. Along the X-axis are measured the number of men employed and along the Y-axis are shown the various amounts of receipts received by all entrepreneurs in the economy, taken together, from the sale of output. To put it alternatively, these receipts of the entrepreneurs are the different levels of expenditure incurred by the community on purchasing the entrepreneurs' output.

Let us take the AS curve first. It shows, for each possible volume of receipts by entrepreneurs from the sale of output, how many men it would be just worth employing.

Now look at AD curve. This shows how much money the community would actually spend on the outputs produced by the different volumes of employment,

It is noteworthy about the AS curve that it rises slowly. It implies that as the number of men employed increases, cost of output does not rise rapidly. If the amounts received by entrepreneurs continued to rise, employment would rise progressively less sharply until all those who wanted jobs are employed. In the above figure there are ON" men wanting jobs, and if entrepreneurs' receipts had risen to Rs. OM''', it would be worth employing all of them. But even if the receipts of entrepreneurs (expenditure of the community) were to rise above Rs. OM''', employment would not increase any further, because all persons seeking employment have secured employment. At this point (i.e., point on AS curve corresponding ON"), the elasticity of supply of labor falls to zero and now AS curve rises vertically.

Now observe the shape of the AD curve. It rises quite steeply as employment first rises, but the rapidity of this rise tends to slacken when employment reaches high levels. Why this is so should be very easy to understand. At low levels of employment, people's income is low and they would consume most of it and save very little; but as employment reaches high levels, the people's income rises and they now save much more, and thus their expenditure on goods and services does not increase proportionately.

Effective Demand:
The concept of effective demand was developed by J.M.Keynes. The concept is different from aggregate demand. We have seen that the aggregate demand of an economy is different at different levels of employment. But at which aggregate demand will the economy be in equilibrium?

The economy is in equilibrium at that level of employment at which the aggregate demand curve intersects the aggregate supply curve.

Thus, **"Effective Demand is that aggregate demand price which becomes effective, because it is equal to aggregate supply price and thus represents a position of 'short-run' equilibrium."** It represents an equilibrium position which actually is realized, while at all the other points aggregate demand is either greater or less than aggregate supply.

Equilibrium at less than Full Employment:
A very important point about 'effective demand' is that owing to certain causes, it may be deficient so that the economy can be in short-run equilibrium and yet there may be considerable unemployment. In the above figure, while full employment level is ON'', effective demand or equilibrium level of employment is at ON, when NN'' number of men are still unemployed. Keynes greatly emphasized this point and, in this way, was able to satisfactorily explain the existence of prolonged unemployment.

Conclusion:
The above analysis has a great practical importance. It suggests the right method of removing unemployment, viz., government taking suitable steps to raise effective demand to the level of aggregate supply which corresponds to full employment.

Q-3 Explain the various concepts of consumption function. (6 Marks, 2015) OR Explain the concepts of average propensity to consume and marginal propensity to consume with the help of an example. (4 Marks, 2013)
Introduction:
In order to know the functional relationship between consumption and income consumption function is useful. In order to have greater analysis of income, consumption and savings concepts of APC, APS, MPC and MPS are used. The concepts are discussed below:

Average Propensity to Consume (APC):
The consumption function may again be technically broken into two parts, namely Average Propensity to Consume (APC) and Marginal Propensity to Consume (MPC). APC may be defined as

the ration between consumption and income. If C stands for consumption and Y for given level of income, APC can be symbolically stated as follows:

$$APC = \frac{C}{Y}$$

Suppose, income is equal to Rs. 300 crores and consumption expenditure is equal to Rs. 200 crores, then

$$APC = \frac{200}{300} \qquad\qquad \text{i.e.} \quad \frac{2}{3}$$

If at a given level of income, say Rs. 100 crores, consumption is equal to Rs. 100 crores. APC = 1. Thus APC tells us the amount that is diverted to consumption out of particular level of income.

Marginal Propensity to Consume (MPC):
Marginal Propensity to Consume (MPC) may be defined as the ratio of increase in consumption expenditure to increase in income. If ΔC stands for increase in consumption and ΔY for increase in income, MPC can be symbolically stated as:

$$MPC = \frac{\Delta C}{\Delta Y}$$

If income increases by Rs. 50 crores and consumption expenditure moves up by Rs. 40 crores then

$$MPC = \frac{40}{50} \qquad\qquad \text{i.e.} \quad \frac{4}{5}$$

If in yet another round, income goes up by Rs. 50 crores and consumption expenditure out of it increases by Rs. 30 crores, the MPC = 30 / 50 i.e. 3/5. The MPC measures the rate of change in aggregate consumption spending relative to the rate of change in aggregate income. Since economic analysis is marginal analysis, the concept of marginal propensity to consume naturally is of great importance.

We can have following three values of MPC. They are as follows:

1. **MPC > 1:** When additional consumption expenditure is greater than additional income we have a case of MPC exceeding unity or 1. Suppose additional income (ΔY) is Rs. 50 crores and additional consumption expenditure (ΔC) is Rs. 75 crores then MPC = 75 / 50, i.e. 3/2. When MPC is greater than unity, people draw upon past savings or indulge in debt. It, therefore, leads to dis-savings. Though normally MPC is not likely to be more than one, in certain conditions MPC may be greater than one. When income is very low consumption may be more than income in order to meet even primary necessities of life. In this situation incremental consumption is more than incremental income.

2. **MPC = 1:** When additional consumption expenditure is exactly equal to additional income, MPC = 1 or unity. If, for example, additional income is equal to say Rs. 50 crores and additional consumption expenditure is also equal to Rs. 50 crores then MPC = 50/50 = 1. However, this is hardly the case. MPC may be equal to one, due to pure accident than a deliberate design. When MPC = 1, savings are zero and the whole extra income is spent on consumption.

3. **MPC < 1:** MPC is less than one when the additional consumption expenditure falls short of additional income. If additional income = Rs. 50 crores and additional consumption expenditure = Rs. 30 crores, then MPC = 30/50 i.e. 3/5 or < 1. According to Keynes, MPC tends to be less than unity because as income increases, consumption also increases but less than proportionately. When MPC < 1, some part of the additional income is saved. In other words, as income expands, the gap between income and consumption (i.e. savings) become wider. Thus MPC of rich people is less than that of poor people.

Average Propensity to Save (APS):

The counterpart of Propensity to Consume is Propensity to Save. It is divided into two parts, namely Average Propensity to Save (APS) and Marginal Propensity to Save (MPS). APS may be defined as the ration between saving and income. If S stands for saving and Y for given level of income, APS can be symbolically stated as follows:

$$APS = \frac{S}{Y}$$

Suppose, income is equal to Rs. 300 crores and Saving is equal to Rs. 100 crores, then

$$APS = \frac{100}{300} \qquad\qquad \text{i.e.} \quad \frac{1}{3}$$

If at a given level of income, say Rs. 100 crores, consumption is equal to Rs. 100 crores. APS = 0. Thus APS tells us the amount that is saved out of particular level of income.

Marginal Propensity to Save (MPS):

Marginal Propensity to Save (MPS) may be defined as the ratio of increase in saving to increase in income. If ΔS stands for increase in saving and ΔY for increase in income, MPS can be symbolically stated as:

$$MPS = \frac{\Delta S}{\Delta Y}$$

If income increases by Rs. 50 crores and saving moves up by Rs. 10 crores then

$$MPS = \frac{10}{50} \qquad\qquad \text{i.e.} \quad \frac{1}{5}$$

If in yet another round, income goes up by Rs. 50 crores and saving out of it increases by Rs. 20 crores, the MPS = 20 / 50 i.e. 2/5.

Any additional income that arises will either be consumed or saved. In this context we can say that:

$$MPC + MPS = 1$$

Conclusion:

The concepts of APC, MPC, APS and MPS helps us understand the behavior of a customer towards his income. We would be in a position to know how much he will be saving and how much will be spent by him.

Q-4 Write consumption function of Keynes and determinants of consumption function. (6 Marks, 2012, 2014) OR What is consumption function? Explain in short the factors affecting consumption function. (4 Marks, 2012, 2013)

Introduction:

Consumption function refers to the whole schedule of consumption expenditure out of various income levels. Consumption function is a functional relationship between consumption expenditure and real income.

What is Consumption Function?

The whole schedule relating to consumption at various levels of income is what Keynes calls the propensity to consume or simply the consumption function.

Consumption schedule and diagram:

The consumption function enables us to know the changes in consumption that are likely to take place due to given changes in income. Hence it is a strategic macro-relationship. As savings present

income not consumed, saving function is a complement of the consumption function. The functional relationship between income and consumption can be shown in the form of a schedule as also in the form of a diagram. Consider the following table:

Consumption Schedule (in crore rupees)	
Real Income (Y)	Consumption (C)
0	30
50	60
100	100
150	140
200	170
250	190
300	200

The above consumption schedule shows consumption (C) as an increasing function of income (Y) as income and consumption move in the same direction. We can represent the above schedule diagrammatically as follows:
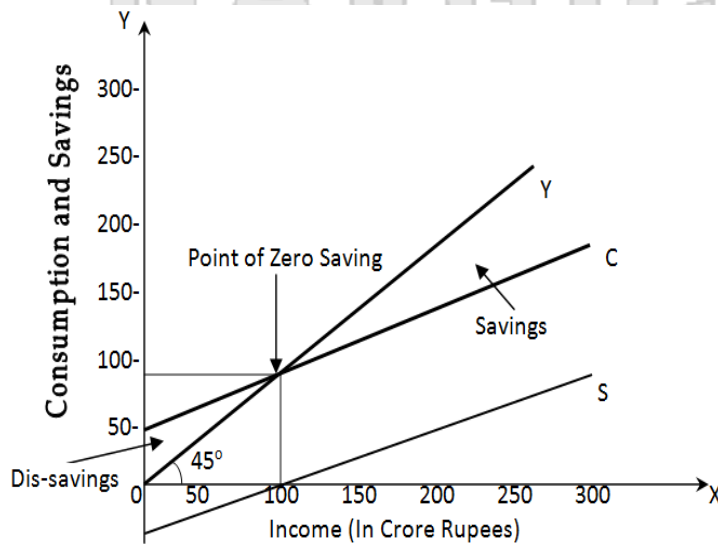
In the diagram income is shown on X axis and consumption as well as savings are shown on Y-axis. The 45° income line shows zero savings because if we move on that line, the entire income is spent on consumption and nothing is saved. The C curve and S curve show consumption and saving respectively at different income levels. The point of intersection between 45° Y (income) curve and C curve is the point of zero saving or break-even point. This point is reached when both income and consumption are equal (Rs. 100 crore). Before the income of Rs. 100 crores is reached, consumption exceeds income (C > Y) and dissavings are created and as income expands beyond Rs. 100 crores, consumption is less than income (C < Y) and positive savings are created. The S curve measures different levels of savings corresponding to different levels of income. The vertical distance between X axis and the S curve is the same as between the 45° income curve and C curve.

Determinants / Factors affecting consumption function:

Although income is the main determinant of consumption function, there are another determinants also which influence consumption function. These other determinants can be put under two heads as follows:

(a) Subjective determinantsand,

(b) Objective determinants.

(a) **Subjective Determinants:** Subjective determinants of consumption function are purely personal reactions to consumption. The subjective factors are also known as internal factors. According to Keynes, the subjective factors are the main determinants of the shape and position of the C curve.

The subjective factors determining consumption function refer to the psychological motives and attitudes of people as also of institutions. They prevent people and organisations from consuming their income wholly. Keynes lists following eight such motives:

1. Building of reserves for unforeseen contingencies or we can say for some sudden event.

2. Provision for anticipated future needs such as purchasing a new house or car.

3. The desire to enjoy enlarged future income by investing funds out of current income in assets like house, fixed deposit, stocks and shares.

4. The enjoyment of a sense of independence.

5. The power to do things

6. To carry out speculation or business projects

7. Bequeathing (leave as will for relatives) a fortune

8. The satisfaction of pure miserliness (greediness).

The subjective determinants of consumption function are not likely to change substantially at least during short run. except for revolutionary or abnormal periods, they remain nearly stable as the established behavior patterns of persons as also of organisations do not materially change in the short period of time. Though these factors determine the position and shape of C curve, they exercise a great stabilizing influence on consumption function as they themselves are fairly stable.

(b) Objective determinants: Objective determinants of consumption function are exogenous or external factors. Unlike subjective determinants, objective factors influencing consumption expenditure are liable to change rapidly even in the short period. They are, therefore, the major factors causing shift in the short period. They are, therefore, the major factors causing shift in consumption function during the short run. The important objective determinants of consumption function are as follows:

i) **Change in Fiscal Policy:** Fiscal policy relates to government taxing and spending policy. Progressive taxation adopted by modern economies to reduce inequality of income tends to shift consumption upwards by transferring purchasing power from the rich to poor. Progressive public expenditure financed by taxes on rich as also loans subscribed by the rich tend to stimulate consumption. Controls, rationing and such other restrictions on spending imposed during wartime or during the period of planned development depress overall consumption in the economy.

ii) **Windfall gains or losses:** Windfall gains consequent upon stock market fluctuations or any other factor will stimulate consumption. The opposite effect will follow in case of windfall losses. Unexpected increase in incomes shifts consumption upward while unexpected cut in incomes shifts it downwards.

iii) **Changes in expectation:** Changes in the economic outlook of persons also shift consumption upwards or downwards. If people expect prices to rise in future, there will be a heavy rush for buying in the present, shifting consumption upwards. Expectation of decline in prices in future will depress consumption. Similarly, when people expect income to increase, they may save less and consume more out of current income. Thus, expectations about future income also affect their consumption.

iv) **Changes in the rate of interest:** Changes in the rate of interest influence consumption through their effects on the market values of securities. A fall in the rate of interest, by raising the market prices of securities is likely to increase consumption. A rise in the rate of interest may shift consumption downwards by reducing the market prices of securities. However, substantial changes in the rate of interest are not likely to occur in the short period. Therefore, this objective factor may be regarded as only of secondary importance in the short run.

v) **Changes in wage level:** If wage rate is increased, there will be an increase in consumption expenditure, because workers have a high propensity to consume. In other words, when wage rate is increased consumption curve shifts up. But if the rise in wage rate is followed

by a more than proportionate increase in prices, the real wage rate will fall and consumption curve will shift in the downward direction.

vi) **Financial policy of the corporations:** If the joint stock companies retain a larger amount of profits for business expansion, dividend income of the shareholders will be low and consumption will shift down. Conversely, if the joint stock companies retain a smaller of profits, consumption will shift up.

vii) **Pattern of income distribution:** Marginal propensity to consume is different for different groups of people in the society. Generally the poor have a higher marginal propensity to consume than the rich. Hence, if income is transferred from the rich to the poor, total consumption in the economy will increase and consumption curve will shift up. Conversely, if income is transferred from the poor to the rich, consumption curve will shift down.

viii) **Amount of wealth:** People with larger amount of wealth in the form of land and buildings etc. are less worried about future uncertainties of life. Hence they save less and consume more out of current income. Conversely, people who possess no wealth save more and consume less out of current income.

Conclusion:

Consumption function shows the relationship between income and consumption. As income of a person increases, his consumption also increases but less than the increase in income. Many subjective and objective factors affect consumption of an individual.

Q-5 Write a note on savings function.

Introduction:

Saving is that part of income which is not spent from the income. The relationship between saving and income is called saving function.

Saving Function:

The tendency of a person to save from different levels of income. It is also known as propensity to save. Saving is directly related to income. As income increases, savings also increases. Two noteworthy features of saving are: (i) Savings can be negative or zero at low levels of income and (ii) As income increases savings increases but more than the increase in income.

Symbolically, $S = f(Y)$ Where, S = Saving, f = function and Y = Income.

Thus the level of saving depends on the level of income. This is illustrated in Table 1.

Table 1: Relation Between Income and Saving

Income (Y)	Consumption (C)	Saving (S)	APS (S/Y)	MPS $\Delta S/\Delta Y$
(1)	(2)	(3)	3/1 = (4)	(5)
0	20	−20	—	—
60	70	−10	—	—
120	120	0	0	—
180	170	10	0.6	0.17
240	220	20	0.8	0.17

Column (3) of the Table shows that when income is zero or very low, people dissave (minus Rs 20 crores or Rs 10 crores). They have to consume even if they are not earning or their consumption expenditure (Rs 70 crores) is more than their income (Rs 60 crores).

When income (Rs 20 crores) equals consumption expenditure (Rs 120 crores), savings are zero. As income increases further by Rs 60 crores, their savings increase by Rs 10 crores. It shows that as income increases savings also increase but by less than proportionately.
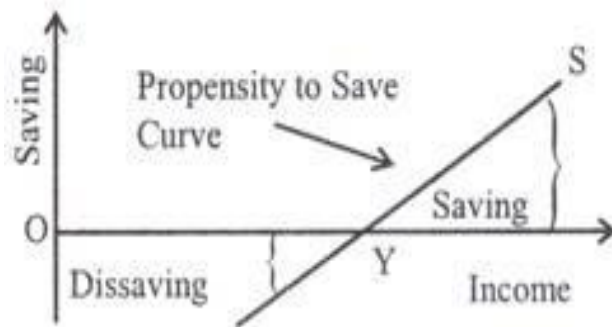

Fig. 1

This relation between saving and income is called the propensity to save or the saving function. It is represented as S = f (Y). Thus the saving function indicates a functional relationship between S and Y, where S is the dependent and Y is the independent variable, that is, S is determined by Y.

This relationship is based on the assumption "other things being equal" which means that all influences on savings are held constant and that income and saving increase by a constant amount, that is, income increases by Rs 60 crores and saving by Rs 10 crores, as shown in Table 1.

The propensity to save curve is shown in Fig. 1 where income is taken on the horizontal axis and saving on the vertical axis. The entire S curve with a definite position and slope is the propensity to save curve. The figure shows that below point Y, savings are negative because people disserve. At Y, savings are zero. Above Y, savings increase with the rise in income. The S curve is linear (straight line) because the rise in income and savings is at constant rates (Rs 60 crores and Rs 10 crores respectively).

The propensity to save is of two types: The average propensity to save and the marginal propensity to save. Average propensity to save can be calculated by dividing total savings by total income so APS = S / Y, where S = Savings and Y = income.

Marginal Propensity to save is the additional savings from additional income which is calculated by dividing change in saving by change in income. So MPC = $\Delta S / \Delta Y$. where ΔS = change in savings and ΔY = change in income.

Conclusion:
Saving functions show the relationship between income and savings. It shows that there is direct relationship between the two. As income increases savings also increases at greater rate than increase in income.

Q-6 Describe leakages in investment multiplier. (4 Marks, 2012) OR Describe the equation of investment multiplier and discuss in short the leakages of multiplier. (4 Marks, 2013, 2014) OR Evaluate the concept of investment multiplier. (6 Marks, 2015)
Introduction:
The concept of multiplier was developed by Keynes as early as 1929. R. F. Kahn further developed it in 1931 although Kahn's multiplier was, strictly speaking, an employment multiplier rather than an investment multiplier. Today, the multiplier has become a part and parcel of the Keynesian Theory of Employment.

Investment Multiplier:

The multiplier expresses the relationship between an initial increment in investment and the final increment in aggregate income. **The multiplier is the ratio of the change in income to the change**

in investment. It shows by how many times the effect of an initial change in investment is multiplied by causing changes in consumption and finally in the aggregate income.

Whenever an investment is made in the economy, the effect is to increase aggregate income not only by the amount of the original investment, but also by something much more than it. Why is it so? The reason is that the original investment increases income not only in the industry where the investment is made but also in certain other industries whose products are demanded by men employed in investment industries. **The size of the multiplier depends upon the size of the marginal propensity to consume.** Higher the marginal propensity to consume, higher shall be the size of the multiplier and vice versa.

Keynes expresses the multiplier in symbolic terms as K. If K stands for the multiplier then it can be found out by the following formula:

$$K = \frac{\Delta Y}{\Delta I}$$

Here ΔI represents the quantum of autonomous investment expenditure, K represents the power of investment multiplier and ΔY represents additional income that is generated in the economy as a result of ΔI. Briefly, a certain change in net investment results in a multiple change in the equilibrium level of income.

Example: ΔI = Rs. 100 crores
              ΔY = Rs. 500 crores   Therefore K = 5

Thus if the initial investment is Rs. 100 crores and if the power of the multiplier is 5, the final change in the equilibrium income will be Rs. 500 crores. This means that if the initial investment remains the same, an increase in the power of the multiplier will increase the final income and a decrease in the power of the multiplier will decrease the final income.

According to Keynes, the value or power of the multiplier is determined by the MPC. The higher the MPC, the higher will be the power of multiplier and vice a versa. The multiplier can also be derived from MPS as MPS is the complement of MPC:

$$K = \frac{1}{1 - \dfrac{\Delta C}{\Delta Y}} \quad OR \quad K = \frac{1}{1 - MPC} \quad OR \quad K = \frac{1}{MPS}$$

Assumptions on which the theory of Multiplier is based:

1. The change in investment is autonomous, meaning thereby that it is income inelastic and is influenced by exogenous factors like innovations, changes in the size of population, changes in the size of the labor force, changes in weather conditions, research, war, political upheaval etc. thus it is independent of the level of income.

2. Induced investment is absent – investment which is income or profit oriented.

3. MPC remains constant

4. Consumption is carried out from current income

5. There is no time lag in the process of the multiplier. In other words, a change in investment instantaneously results into a multiple change in income.

6. The new level of investment is maintained steadily for the multiplier process to be completed.

7. There is a net increase in investment which implies that an increase in investment in one sector is not off-set by an equivalent decrease in investment in another sector.

8. Surplus capacity to produce consumer goods and sufficient Consumption goods are available to back up the effective demand generated by an increase in income.

9. The economy is working at a level that is less than full employment.

10. Prices are constant.

11. The economy is closed one that is foreign trade is non existence.

Value of multiplier (K):

Based on formula of multiplier we can deduce (assume, conclude) the following:

1. The size of the K varies directly with the size of MPC

2. The size of K varies inversely with MPS.

3. Since MPC is greater than zero and less than 1 (0<MPC<1) the multiplier is always between 1 and infinity (1<K<∞)

4. If the multiplier is one, then, $\Delta Y = \Delta S$, therefore MPC = zero, But if K = ∞, MPC = 1, MPS = zero ($\Delta Y = \Delta C$). This will lead to full employment.

Diagrammatic presentation of Multiplier:

In the following diagram, we measure aggregate income on the horizontal axis OX and aggregate consumption, saving and investment on the vertical axis OY. The slope of the consumption curve
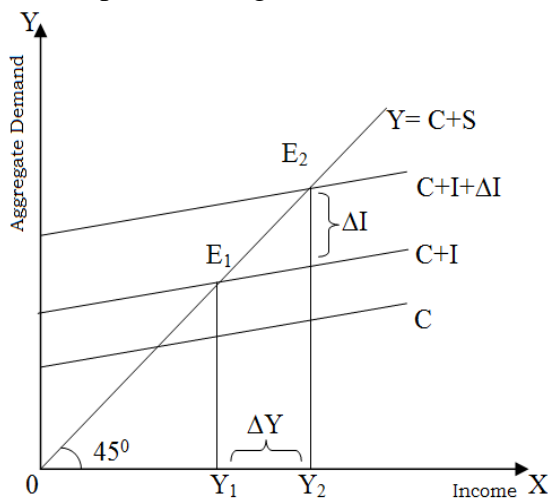
CC represents MPC which we have assumed to be ½ or 0.5. The aggregate demand curve C+I intersects the 45° angle line at E1 which represents the initial level of the equilibrium income OY_1. Thereafter additional net investment expenditure takes place in the economy with the result that the original aggregate demand curve C+I shifts upwards to C+I+ΔI. The vertical distance between C+I and C+I+ΔI indicates the additional investment marked as ΔI. The new aggregate demand curve C+I+ΔI intersects the 45°-angle line at E_2 so that the new equilibrium income now is OY_2. As the increase in income is double that of the additional net investment (ΔI), the value of the multiplier obviously is 2.

Leakages in the Multiplier

Following are the main leakages of multiplier:

i. **Saving**: It constitutes an important leakage in the process of income propagation. If the M.P.C. were equal to 1, i.e., if the entire increment in income were to be spent by people on buying consumer goods, then even a single increase in investment would go on creating additional increment in income till the stage of full employment is reached in the economy. But the M.P.C. is seldom equal to 1. In actual practice, the people do not spend the entire increment in income on consumer goods. On the contrary, they save a part of it. The saved portion of the increased income thus peters out of the income-stream, limiting the value of the multiplier. Thus, the higher the propensity to save of the people, the lower shall be the value of the multiplier.

ii. **Debt Cancellation:** A part of the new increment of income may be used by income recipients to payoff old debts. Additional income, if used to pay off old debts, will dry up the income stream to that extent. But in many cases the debt cancellation does not have much effect on consumption.

   iii. **Accumulation of the Idle Cash Deposits:** A part of the increased income may be saved in the form of idle bank deposits, which cannot affect the consumption function in the upward direction.

   iv. **Purchase of Old Stocks and Securities:** A part of the new income may be used in buying old stocks and securities from others who fail to spend the proceeds on consumption. The amount spent on the purchase of securities from others who in turn do not spend, will result into a leakage.

   v. **Imports:** Money spent on the purchase of imported goods does not add to domestic income and employment. Such an expenditure does not have any effect on consumption of domestic goods and may be considered to be an important leakage from the domestic income-stream.

   vi. **Price Inflation:** As a result of price inflation, a good part of increased incomes may be dissipated on higher prices instead of promoting consumption, income and employment.

   vii. **Taxes and Corporation Savings:** Since both of these affect the marginal propensity to consume of the people, they have inevitable repercussions on the value of the multiplier. An increase in taxation reduces the purchasing power of the people and thus constitutes a leakage from the income stream. Likewise, undistributed profits of business corporations also represent a leakage because they are not available to the shareholders for being spent on consumer goods.

Conclusion:

The concept of multiplier is of importance for government. Based on the multiplier effect government decides about the investments to be done in an economy. The leakages in multiplier hampers the process of income generation but theoretically the concept presents good explanation of how income multiples in an economy.

Q-7 Explain with the help of formula Marginal Efficiency of Capital. (4 Marks, 2012, 2014) OR What is marginal efficiency of capital? Explain supply price of capital asset and present value of the annual expected returns of capital assets. (4 Marks, 2013) OR State the factors affecting marginal efficiency of capital. (4 Marks, 2015)

Introduction:

The most important inducement to invest is the consideration of the profit. The profitability of investment depends mainly on two factors 1. Marginal Efficiency of capital (MEC) and 2. Interest Rate (IR). It relates to the cost-benefit analysis. The businessman while investing capital has to calculate the cost of borrowing and the expected rate of profits from it.

Marginal Efficiency of Capital (MEC)

MEC refers to productivity of capital. It may be **defined as** the highest rate of return over cost accruing from an additional unit of capital asset. Also it refers to the yield expected from a new unit of capital.

The MEC depends on two important factors.

     1. Prospective yield from the capital asset (present value of annual expected returns) and

     2. The supply price of the capital asset.

The MEC is the ratio of these two factors. **The prospective yield of a capital asset means the total net returns expected from the asset over its lifetime.** After deducting the variable costs like cost of raw materials, wages, etc from the marginal revenue productivity of capital, an investor can estimate the prospective income (expected annual returns and not the actual returns) from the capital asset.

Along with it a businessman has to consider the supply price or replacement cost of the capital asset. **Supply price of a capital asset is the cost of producing a brand new asset of that kind, not the**

supply price of an existing asset. It is the actual amount of money spent by an investor while purchasing new machinery or erecting a new factory.

The MEC of a particular type of asset means what an investor expects to earn from an additional unit of it compared with what it costs him. To be more specific, MEC is the rate of discount, which will make the present value of the capital assets equal to their future value (prospective yield) in their lifetime. Supply price = discounted prospective yield.

The MEC can be calculated with the help of the following formula.

$$Cr = \frac{Q1}{(1+r)^1} + \frac{Q2}{(1+r)^2} + \frac{Q3}{(1+r)^3} + \frac{Qn}{(1+r)n}$$

In the above formula Cr represents Supply price or replacement cost of the new capital asset. Q1, Q2, Q3 indicate the prospective yields in the various years 1 2 3 … and n. represents the rate of discount which will make the present value of the series of the annual returns just equal to the supply price of capital asset. Thus, r denotes the rate of discount or MEC.

We can illustrate the meaning of MEC as a rate of discount by means of a simple arithmetical example. Suppose, the supply price of a capital asset is Rs.3000/and the asset will become useless after two years. Further suppose that capital asset is expected to yield Rs.1100/at the end of one year and Rs.2420/at the end of 2 years. Now, it is obvious that the rate of discount of 10% will equate the future yields of the asset with its current supply price. At 10% discount rate the present value of Rs1100/discounted for one year plus Rs.2420/discounted for 2 years amounts to an aggregate sum of Rs.3000/which is as pointed out above the supply price of the capital asset. The abovementioned formula can be used to explain the same point.

$$Cr = \frac{Q1}{(1+r)^1} + \frac{Q2}{(1+r)^2} \qquad 3000 = \frac{1100}{(1+0.1)} + \frac{2420}{(1+0.1)^2}$$

$$3000 = \frac{Rs.1100}{[1.10]} + \frac{Rs.2420}{[1.10]2} = \frac{1100}{1.1} + \frac{2420}{1.21}$$

$$3000 = Rs.1000 + Rs.2000$$

In this case, the discounted prospective yield is equal to the current supply price of the capital asset. If the expected rate of yield is greater than the supply price, then only it becomes profitable to invest and otherwise not. The volume of induced investment depends on MEC and IR. It is necessary to note that:

When **MEC > IR,** the effect on investment is favorable.

When **MEC < IR,** the effect on investment is adverse.

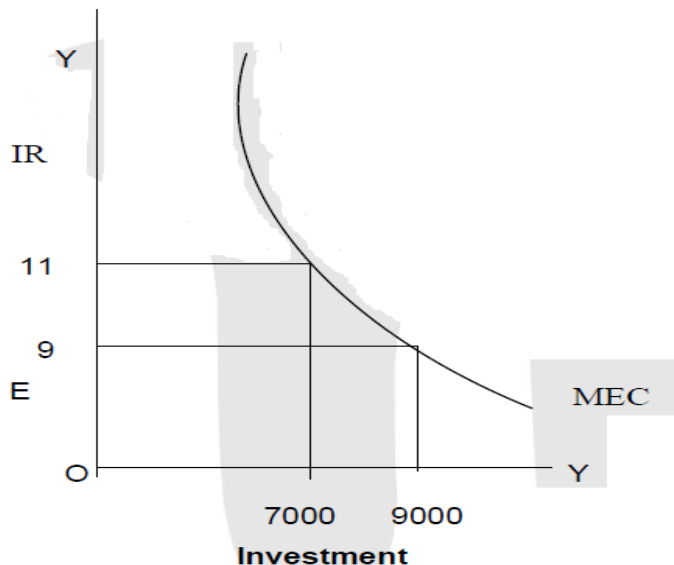When **MEC = IR,** the effect on investment is neutral.

Generally speaking, the MEC of a capital falls as investment increase because costs go up and earnings fall. The fall in MEC will be different at different levels of investment. The MEC curve slope downwards from left to right.

This tendency can be explained with the help of the following example.

The IR in % p.a	Volume of investment in Crores	MEC of capital in % p.a
13%	5000	13%
11%	7000	11%
9%	9000	9%

7%	11000	7%
5%	13000	5%
3%	15000	3%

On the OX axis, we represent different amounts of investment and on OY axis, we represent MEC and IR. The ME curve indicates the MEC. It can be seen that as investment increases, the ME curve slope downward. It is clear that if the current IR 9 %, then the entrepreneurs will invest Rs 9000/because at this point the MEC is also 9%. MEC = IR. If the IR falls to 7%, then the entrepreneurs will invest Rs 11000/. This is because the MEC is also 7% at this point.

MEC represents an investor's return and the IR is his cost. Obviously, the return on capital must be equal to its cost. Thus, the MEC and IR are closely related to each other and they move together. We can conclude that given a MEC curve, the investment will depend on the existing IR in the market.

Determinants factors affecting MEC
Following are the factors affecting Marginal Efficiency of Capital:
1. **Demand of goods :-** If the demand is greater than the marginal efficiency of capital will also be greater. On the other hand if the demand of goods is smaller then the marginal efficiency of capital will also be smaller.
2. **Price of commodities :-** With the increase in the prices of goods, marginal efficiency of capital increases and with the fall in price the marginal efficiency of capital also falls.
3. **Cost of production :-** With the fall in the cost of production marginal efficiency of capital increases and with the rise in the cost, marginal efficiency of capital falls.
4. **Psychological factor :-** If the businessman are optimistic, efficiency of capital will be higher and if they are pessimistic about future then marginal efficiency of capital will be low.
5. **Foreign trade :-** If the export demand increases, then producer will increase the investment because marginal efficiency of capital increases.
6. **The quantity of capital goods :-** If the capital goods are already in the large quantity to meet the demand of the market, then it will not be beneficial for the investors to invest the money in the project and the marginal efficiency of capital will fall.
7. **Rate of population growth :-** If the rate of population growth is high then the demand of various goods will increase . So it will increase the marginal efficiency of capital. It falls with the slow birth rate.
8. **Technological advancement:-** Inventions and technological improvement encourages investment in various projects. So marginal efficiency of capital increases.
9. **Rate of taxes :-** If government imposes the taxes on various goods, it will increase the cost of production and will reduce the profit . So with the fall in profit the rate of investment and marginal efficiency of capital both falls.
10. **Labour efficiency :-** Efficiency of labour increases the marginal efficiency of capital lowers.
11. **Government interference :-** If the government interferes in the private business and imposes some restrictions then people will hesitate to invest and marginal efficiency of

capital falls. On the other hand if it encourages the private business then marginal efficiency of capital will increase.

Conclusion:

Before carrying out investment businessmen consider Marginal Efficiency of Capital. The higher the efficiency of capital, the greater will be the investment done by the businessman.

One Mark Questions:

1. Who has presented the law that supply creates its own demand?
   A) Pigou   B) J. B. Say   C) Keynes   D) Friedman
2. Which economist proved that equilibrium at underemployment is a general phenomena?
   A) Pigou   B) Fisher   C) Keynes   D) Hicks
3. According to Keynes, income, employment is based on which thing?
   A) Supply   B) Trade   C) Production   D) Effective demand
4. According to Keynes what is the shape of ASPC (Aggregate Supply Price Curve)?
   A) Negative   B) Positive   C) 45 Degree   D) Vertical
5. Which function shows the relationship between total national income and total consumption expenditure?
   A) Consumption function   B) Demand function   C) Saving function   D) Investment function
6. If the general price level increases then propensity to consume is …………
   A) Increase   B) Decrease   C) Fixed   D) None
7. Who has given the concept of employment multiplier?
   A) R. F. Kahn   B) Keynes   C) Pigou   D) Hicks
8. If the value of marginal propensity to consume is 1 then what will be the value of multiplier?
   A) 1   B) More than 1   C) Less than 1   D) Infinite
9. What will be the relation between investment and MEC (Marginal Efficiency of Capital)?
   A) Straight   B) Inverse   C) Variable   D) None
10. In context of investment, what is the shape of MEC curve?
    A) Positive   B) Negative   C) Horizontal   D) Vertical
11. Formula for investment multiplier
    A) K = ($\Delta Y/\Delta I$) *100   B) K = ($\Delta Y/\Delta I$) + 100   C) K = $\Delta Y \times \Delta I$ D) K = $\Delta Y/ \Delta I$
12. Marginal propensity to Save is 0.25, then Marginal Propensity to Consume is
    A) 0.55   B) 0.45   C) 0.75   D) 0.50
13. Marginal Propensity to Save (MPS) + Marginal Propensity to Consume (MPC) =
    A) Zero   B) -1   C) 100   D) 1
14. Marginal Efficiency of Capital means …………..
    A) Expected rate of profit   B) Expected rate of interest   C) Expected rate of interest   D) Investment multiplier.

Ans: 1. J. B. Say 2. Keynes 3. Effective demand   4. 45 degree   5. Consumption function   6. Decrease 7. R. F. Kahn 8. Infinite 9. Inverse 10. Negative 11. K = $\Delta Y / \Delta I$ 12. 0.75 13. 1 14. Expected rate of profit.

Unit 4 Business Cycle and Inflation

Q-1 Give definition of Business Cycle and explain four phases of business cycle (6 Marks; 2012, 2013: 4 Marks, 2014). Give the meaning of trade cycle and explain its characteristics (4 Marks; 2012, 2015)

Introduction:

The economic activities in any country seldom runs smooth. The economic activities of most countries of the world are marked by increase or decrease in the volume of economic activities over the period of time. Economic activities over the period of time shows wavelike fluctuations of good times and bad times called expansion and contraction respectively. This fluctuations shows increase or decrease in production, income, employment and prices. The study of these fluctuations is called business cycle also known as Trade Cycle.

Definition:

A Trade Cycle or Business Cycle may be defined as wave-like fluctuations of expansion and contraction of major components of the national economy, such as output, employment, price level etc, chasing each other.

According to J. M. Keynes, "A trade cycle is composed of periods of good trade characterised by rising prices and low unemployment percentages alternating with periods of bad trade characterised by falling prices and high unemployment percentages."

Characteristics/ Features of Business Cycle

Following are the main characteristics of a typical business cycle.

1) **Expansion and Contraction:** Cyclical fluctuations or trade cycles are marked by tides and ebbs of economic activity rather than movement in one direction. They are wave like changes of expansion and contraction following each other. Expansion occurs when there is increase in economic activities of a nation including income, employment, production and prices, while the decrease of the same is called contraction.

2) **Regular cyclical sequence:** Trade cycles have a regular cyclical sequence. Different phases of a business cycle flow in regular cyclical sequence e.g. expansion ultimately clears the track of recession, recession merges in to contraction, contraction leads to revival and revival yields ground back to expansion. The movement is clockwise. Time period for different phases of business cycle may be different but the sequence of it remains the same.

3) **Upper and lower turning points:** As we have seen that expansion and contraction chases each other there is a point from which expansion ends and contraction starts. In the same way while all economic activities are going downwards there will be a lowest point from where again the economy starts reviving. Both the upper and lower points from where the grounds for recession and expansion ends are called turning points. The upper turning point is called peak while the lower turning point is called trough.

4) **Cycles are Universal:** Cyclical fluctuations are universal in the sense that they have tendency to appear in all the important spheres of business activity. Expansion and contraction are not only limited for certain sectors of the economy but affects all economic activities like production, consumption, employment, income, imports, exports, wages, interest rates, profits and many more.

5) **Crosses boundaries of a Nation:** As the invention of technology and well spread transport has made world a global village. The cyclical fluctuations of a particular nation does not only affects the nation but it has a more or less effect on the other countries also. The great depression of 1930 is a perfect example of the case in point.

6) **Phase to phase movement:** As climbing a hill the upward movement of the economic activities takes long time. The process of expansion is gradual and slow while the movement

from expansion to recession is abrupt and fast. So once the pessimism starts in any economy it will spread very fast.

7) **Cycles are unique:** Although cycles have similar pattern and shape, no two cycles are exactly alike. Different phases of different cycles have different times as well as their upper and lower turning points are achieved at different levels. Pigou has rightly remarked that 'cycles may not be twins but they are all members of the same family.'

8) **Most appearance in capitalist economies:** cyclical fluctuations are most marked in free capitalist countries. They also have tendency to visit periodically industrial countries rather than agriculture countries or centrally planned economies. Cyclical fluctuations have a closer association with countries built on industry and business.

Conclusion: Business cycles also called Trade cycles are wavelike fluctuations of expansion and contraction in business activities. Any business cycle consists of four phases of expansion, recession, contraction and revival occurring in sequence one after another. Although business cycles share same phases no two business cycles are same.

Four phases of business cycle with diagram
Every business cycle is unique in its own but the phases of the business cycle are the same all over. We can explain typical business cycle with the help of following diagram.
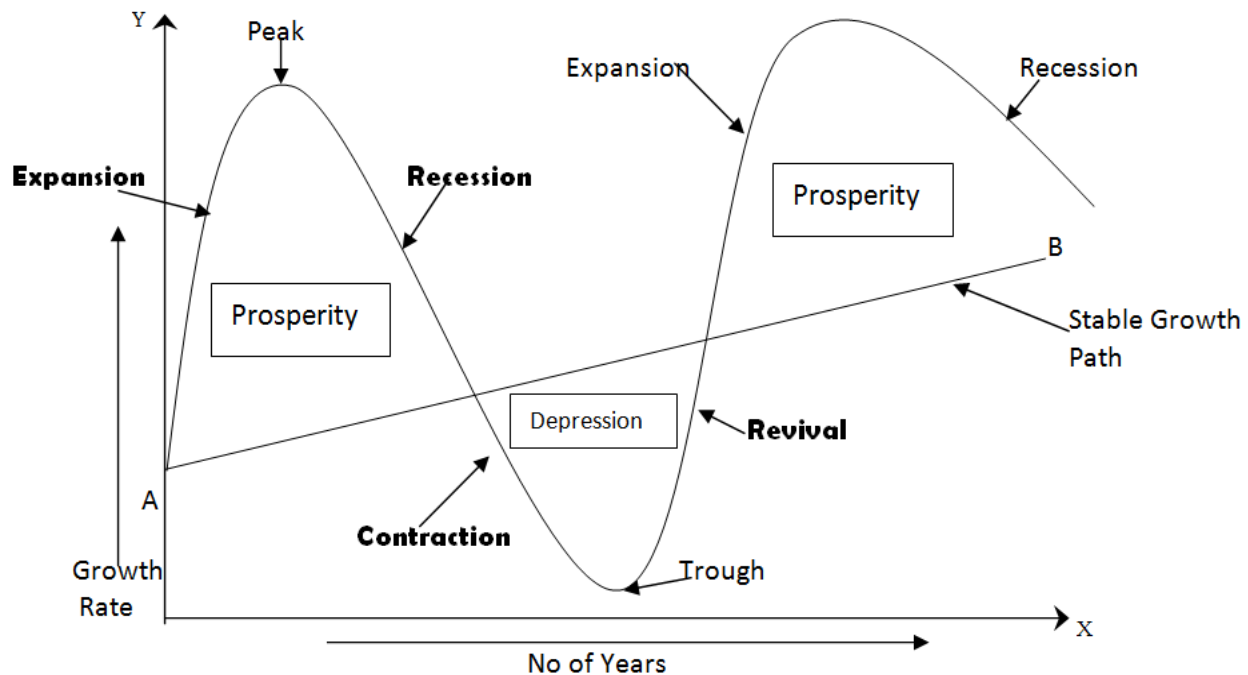
A typical business cycle has four phases viz. i) Expansion ii) Recession iii) Contraction iv) Revival. We will discuss each of the stage in detail but before moving to explanation of the stages we need to assume that the economy is in equilibrium and is constantly attacked by environmental factors which stimulates fluctuations in the economic activity.

1. **Expansion :** Expansion stage starts when there is **rise in demand** of products due to certain external factors like war, new technological inventions, earthquakes etc. In order to meet the increased demand there will be need to **increase output** which will lead to increase in employment but as the economy approaches full employment level, output cannot be increased anymore. Hence the **prices start rising**. Price rise is also stimulated by increased expenditure in the part of factors of production which receive more and more incomes as expansion progresses. Businessmen earn more and more incomes as prices rise faster than the costs like wages, interest, taxes, rents etc.

Rising profits and expectation of further rise in profit generates boom condition in the stock exchange. The mood of optimism and confidence created by expanding profit reinforces expansion. Merchants and manufacturers start holding the stocks. Banks encourage further addition to fixed capital by liberal lending policies. This adds further fuel to fire and prices soar high.

Gradually economic activities will achieve a peak level which is also called the **upper turning point** from which the decline in economic activities starts. After this point the recession phase starts.

2. **Recession:** During the phase of expansion certain factors within the economy will emerge which will weaken the phase of expansion and leads to decline of business activities or growth and marks start of recession phase. The factors behind hampering expansion are rising costs and inability of the forms to increase prices.

Costs starts rising as wages, interests, rents etc. starts rising faster than prices due to their scarcity. This leads to decrease in profits and weakens further investments less attractive. On the other hand after certain period of time firms are not able to raise prices as consumption increases but less than proportionately. Also demand for durables is less likely to increase. Also the projects started in the beginning increases supply of finished goods. This leads to piling of stocks which creates sales pressure and ultimately the pressure depress the price level and start of recession.

The phase of recession is marked by economic stagnation or contraction. The decrease in profits decreases the market value of stocks of companies. Companies do not go for new issues and cut orders with the manufacturers of machinery and other capital goods. Dealers in commodities clear off their stock in the anxiety to get out of the market. Commercial banks not only refuse new loans but also not ready to maintain their existing loans. Thus sales pressure in stock exchange, commodity and money market soon brings about a fall in prices and profits. With this, the phase of recession merges into contraction.

3. **Contraction:** During depression, there is an **overall reduction in economic activity** with production, income, employment and prices falling in a cumulative manner. The fall in the price level in the beginning is caused by accumulated stocks. Falling prices are supported by reduction in money supply. The cut in money supply creates a further downward pressure on prices. Due to wages and other costs of production fall more slowly than prices. Such unequal reduction in costs and prices generate business losses.

Banks not only stops giving loans but ask for repayment of their existing loans. A wave of pessimism and nervousness spreads across the economy. Business activities will be at its lowest possible level. This level is called **Trough or lowest turning point** which is marked by the lowest levels of production, income and employment. From here the economy takes a turn and revival phase starts.

4. **Revival:** Before the economy collapses during depression certain forces within the economy will emerge which will weaken the phase of contraction and creates an opportunity for growth. As propensity to consume can cot be zero in depression also the accumulated stocks of goods exhausted over the period of time and as production is at its lower levels it will not be enough to cater to the demand. So the rising demand along with low production weakens depression.

On the other hand due to the pressure of unemployment during depression factors of production are ready to work at lower wages. Besides, with the removal of inefficient factors during depression, efficiency is also high. Thus rising demand and reduced costs once again improve price cost relationship. They remove losses and generate profits. With profits appearing, depression ends and yields ground for revival.

As profits are earned security prices will also rise. Companies approach the market with new issues and new investment projects. Which will expand economic activities. This expansion will increase output, income and employment. Expenditure by factors of production getting more incomes now gives added force to revival, which merges into the phase of expansion. At this point the trade cycle completes its first round and is ready for the second.

Conclusion:

A business cycle is divided in to two situations viz. prosperity and depression. When economic activities are above normal level the situation is called prosperity. This includes the phase of expansion and recession. When business activities are below normal level the situation is called depression, which is made up of contraction and revival phases. All the four phases chases each other in the specified sequence. All the four phases have different level of income, employment, prices, profits and production.

Q-2 Explain the liquidity preference theory of Keynes (6 Marks, 2013, 2014; 4 Marks, 2012)

Introduction:

The liquidity preference theory was propounded by the Late Lord Keynes. According to this theory, the rate of interest is the payment for parting with liquidity. Liquidity refers to the convenience of holding cash. The demand and supply of money, between themselves, determine the rate of interest.

Motives for liquidity: (Demand for money)

Money may be demanded to satisfy a number of motives. These are:

i)   **Transaction motive:** We get income only periodically. We must keep some money with us till we receive income next, otherwise how can we carry on transactions?

Transactions motive also includes business motive. It takes some time before the businessman can sell his product in the market. But he must pay wages to the workers, cost of raw material etc., now. He must keep some cash for the purpose.

ii) **Precautionary motive:** Everyone makes arrangements to keep some money to meet unforeseen situations and emergencies. So for the reason of ensuring availability of money in times of need people have demand for liquid cash.

iii) **Speculative Motive:** Future is uncertain. Rate of interest in the market continues changing. No one can guess what turn the change will take. But everybody hopes, and with confidence, that his guess is likely to be correct. It may or may not be so. Some money, therefore, is kept to speculate on these probable changes to earn profit.

Supply of Money:

Supply of money consisting of coins plus bank notes plus demand deposits with banks.

Interest rate determination:

According to Keynes, the demand for money, i.e. the liquidity preference, and supply of money determine the rate of interest. It is in fact the liquidity preference for speculative motive which along with the quantity of money determines the rate of interest.

How the rate of interest is determined by the equilibrium between the liquidity preference for speculative motive and the supply of money is shown in the following diagram:

In part (a) of the diagram, LPS is the curve of liquidity preference for speculative motive. In other words, LPS curve shows the demand for money for speculative motive. To begin with, OM_2 is the quantity of money available for satisfying liquidity preference for speculative motive. Rate of interest will be determined where the speculative demand for money is in balance with, or equal to, the (fixed) supply of money OM_2. It is clear from the diagram that speculative demand for money is equal to OM_2 quantity of money at **Or** rate of interest. Hence **Or** is the equilibrium rate of interest.

(a)
Liquidity Preference Curve

(b)
Interest-Rate Determination
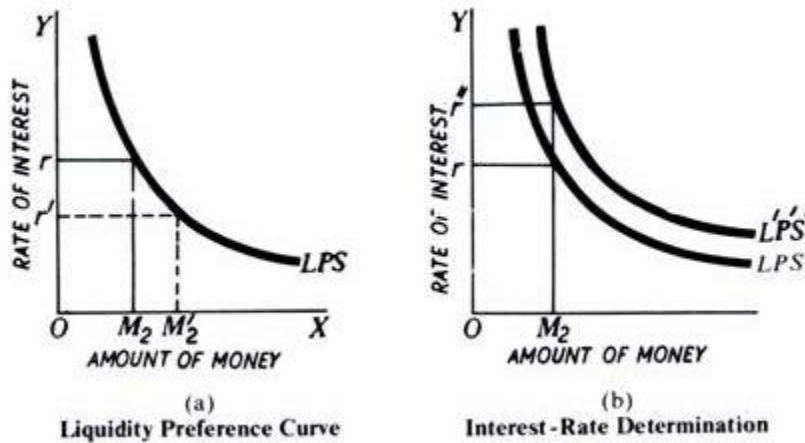
Assuming change in expectations, an increase in the quantity of money for the speculative motive will lower the rate of interest. In part (a) of the diagram, when the quantity of money increases from OM_2 to OM'_2, the rate of interest falls from Or to Or', because the new quantity of money OM'_2 is in balance with the speculative demand for money at Or' rate of interest. In this case, we move down the LPS curve.

In part (b) of the diagram, assuming that the quantity of money remains unchanged at OM_2, with the rise of the liquidity preference curve from LPS to LPS', the rate of interest rises from Or to Or'', because at Or'', the new speculative demand for money is in equilibrium with the supply of money OM_2. It is worth noting that when the liquidity preference for speculative motive rises from LPS to LPS', the amount of money hoarded does not rise; it remains as OM_2 as before. Only the rate of interest rises from Or to Or'' to equilibrate the new liquidity preference for speculative motive with the available quantity of money OM_2.

Criticism:
Following are the main criticisms of the Keynes's theory of interest.

1) **Monetary phenomena:** It has been pointed out that the rate of interest is a purely monetary phenomenon. But real forces like productivity of capital and thriftiness (careful spending) also play an important role in determination of the rate of interest.

2) **Rate of interest independent of investment fund:** Keynes makes the rate of interest independent of the demand for investment funds. In fact, it is not so independent. The cash-balances of the businessmen are largely influenced by their demand for savings for capital investment. The demand for capital investment depends upon the marginal revenue productivity of capital. Therefore, the rate of interest is not determined independently of the marginal productivity of capital.

3) **Factors influencing the rate of interest:** Liquidity preference is not the only factor governing the rate of interest. There are several other factors which influence the rate of interest by affecting the demand for and supply of investible funds.

4) This theory does not explain the existence of different rate of interest prevailing in the market at the same time.

5) Keynes ignores saving or waiting as a source or means of investible funds. To part with liquidity without there being any saving is meaningless.

6) The Keynesian theory explains interest in the short run only. It gives no clue to the rates of interest in the long run.

7) **Indeterminate:** Finally, exactly the same criticism applies to Keynesian theory itself on the basis of which Keynes rejected the classical and loanable funds theories. Keynes' theory of interest, like the classical and the loanable funds theories, is indeterminate. According to Keynes, the rate of interest is determined by the speculative demand for money and the supply of money available for satisfying speculative demand. Given the total money supply, we cannot know how much money will be available to satisfy the speculative demand for money unless we know how much the transactions demand for money is; and we cannot know the transactions demand for money unless we first know the income level. Thus, the Keynesian theory, like the classical theory, is indeterminate.

Conclusion: According to the liquidity preference theory, the demand for money means demand to hold money, i.e. the amount of money which the public and the businessmen want to keep in the form of ready cash with them. The supply of money means the money in existence at any particular time. Keynes has done good effort to explain how the interest rate is determined in the market but his theory too was not free from flaws.

Q-3 Explain loanable funds theory of interest (4 Marks, 2014)
Introduction:

The loanable funds theory of interest is also known as the neo-classical theory of interest. According to the theory the rate of interest is determined by the demand for and supply of loanable funds. 'The sums of money supplied and demanded in the credit market may be called loanable funds.'

Following are the factors affecting the demand for and the supply of the loanable funds.

I) **Demand for loanable funds:** According to the classical theory, the demand for loanable funds consists only of demand for investment purposes, whereas according to the loanable funds theory, the demand for loans, besides investment purposes also consists of demand for consumption and hoarding. In other words the demand for loanable funds consist of a) Investment demand b) Consumption demand c) Demand for Hoarding and d) Demand from government.

 a) **Investment demand:-** Investment demand by far constitutes the most important demand for loanable funds. In modern times, bulk of loanable fund is borrowed for investment purposes by the producers and the entrepreneurs. The rate of interest which they will be willing to pay for the loanable funds will depend upon the expected rate of return or what is known as the marginal productivity of capital.

 b) **Consumption demand:** Another important demand for loanable funds comes from the individuals who borrow for consumption purposes. Such loans are demand by the people when they wish to make purchases in excess of their current incomes and cash resources. Generally, the loans for consumption purposes are demand for buying durable consumer goods like cars, refrigerator, TV etc. it is but natural that at lower rates of interest the consumption demand for loanable funds will be more than at higher rates of interest.

 c) **Demand for hoarding:** The demand for loanable funds also arises because of the people's desire to hoard money and this depends on their liquidity preference. Hoarded money represents 'idle cash balances'. People save money when they do not spend all their income on consumption. The amount of money which they save can be utilized in two ways- either they can lend their savings to others and earn interest thereon or they may hoard their savings. An important reason for the demand for hoarding money is that people like to take advantage of the future changes in the rate of interest or in the prices of securities.

 d) **Government:** The government is perhaps the biggest borrower, especially in developing countries. In planned development, government undertakes big industrial projects like steel plants, transport undertakings like shipping yards, huge multipurpose projects like the hydro-electric projects. The government also borrows for social welfare activities and so on.

Since the demand for loanable funds for all these purposes is inversely related to the rate of interest, the aggregate demand curve is therefore a downward sloping curve.

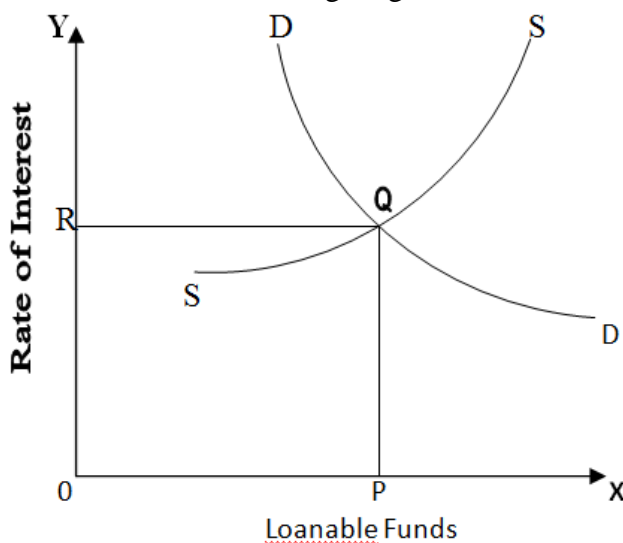II) **Supply of loanable funds:** The supply of loanable funds is derived from the following sources:

 a) **Savings:** The most important source of loanable funds is the saving by individuals and households. Although such savings primarily depend on the size of their income yet given the level of income the amount of savings will vary with the rate of interest. If the rate of

interest is high, more savings will be forthcoming and vice versa. Apart from the savings of the individuals and householders, there are also savings of the business corporations.

b) **Dishoarding:** Dishoarding of the past savings constitutes another source of the supply of loanable funds. When people dishoard, the idle cash balances become active cash balances and thus add to the supply of loanable funds. If the market rate of interest rises people would take advantage of it and dishoard their money. This could cause an increase in the supply of loanable funds. In other words, at higher rate of interest, people will be induced to dishoard more money and at lower rate of interest there will be a greater tendency to hold on money.

c) **Bank Credit:** Bank money or bank credit is the third source of the supply of loanable funds. The commercial banks by creating credit money advance loans for investment or consumption purpose and thus add to the supply of loanable fund. It can be said that other things being equal at higher rates of interest banks will lend more money and at lower rate they will lend less money.

d) **Disinvestment:** Disinvestment means separating of the present fixed and working capital from the business. When there is a declining tendency in certain industries due to some structural changes in the economy, the entrepreneurs may not like to remain in those industries and allow the existing stock of machinery and other fixed capital equipment to wear out, they would not like to replace such equipment. Consequently, the amount kept as reserve for depreciation becomes available in the market as loanable funds. Similarly, as working capital also is gradually withdrawn from such industries, this amount too becomes available as loanable funds. At higher rates of interest there will be increasing tendency for greater amount of disinvestments and vice versa.

Equilibrium between demand for and supply of loanable funds:
In the market the rate of interest will be determined at that level where the demand for loanable funds equals supply of loanable funds. The market rate of interest is determined by the intersection of the demand for loanable funds curve and the supply of loanable funds curve. This is the equilibrium rate of interest where the demand for and the supply of loanable funds are equal. This situation is illustrated in the following diagram:

In this diagram DD curve represents the demand for loanable funds and SS curve represents the supply of loanable funds. Q is the point of interest at which the demand and supply of loanable funds are equal. The rate of interest is therefore OR or PQ.

Criticism:
The loanable funds theory of interest is a definite improvement over the classical theory in two aspects:

a) On the demand side, the loanable funds theory takes into consideration not only investment demand for funds but also consumption demand and demand for hoarding.

b) On the supply side, the loanable funds takes into account the role of bank credit, dishoarding and disinvestments in the supply of loanable funds which was ignored by the classical theory.

In spite of this improvement the loanable funds theory of interest is not free from certain shortcomings. The main limitations of the theory are as follows:

1. **Fixed income:** the theory has been criticized by Lord Keynes on the ground that it assumes the income of the community as fixed and constant and that the volume of investment has no effect on it. But actually this is not so. Thus, for example, when there is a rise in the rate of interest, the volume of investment and consequently production will fall, this in turn will lead to fall in the level of income and therefore the supply of loanable funds will now come from this reduced level of income, i.e. the supply of loanable funds too will diminish. The assumption that the level of income remains constant therefore, cannot be accepted.

2. **The theory is indeterminate:** According to Prof. Hansen, the loanable funds theory is indeterminate and does not clearly tell us how the rate of interest is determined. According to the theory, the rate of interest is determined by loanable funds. But the loanable funds themselves depend upon disposable income and disposable income ultimately depends on the level of investment. The level of investment, as we know, depends on the rate of interest. This is arguing in a circle. The theory therefore, does not provide a determinate solution of the interest rate determination.

3. **Hoarding concept is vague:** it has been said that the concept of hoarding as used in the loanable funds theory is quite vague and dubious. This is so because hoarding by itself cannot increase or decrease the supply of loanable funds as long as the total quantity of money remains the same. Money in circulation in an economy has to be in somebody's cash balance at any time. If one person hoards more money, it will affect the hoarding capacity of another person, in other words, the greater hoarding of money by one person will be offset by the dishoarding of money by another person and therefore there may be change in the total volume of hoarding and consequent supply of loanable funds. As long as there is no change in total quantity of money the supply of loanable funds will not be affected by hoarding.

4. **Changes in income level ignored:** The theory gives an explanation of the equilibrium rate of interest at a particular rate of income. But it does not explain the effects of changes in the level of income on the demand for and supply of loanable funds and consequently on the rate of interest.

Conclusion: According to the loanable funds theory, demand for and supply of loanable funds. In this sense, supply of loanable funds includes not only savings out of current income but also bank credit, dishoarding and disinvestment and demand for loanable funds includes not only the demand for investment but also for hoarding and dis-saving. Though the theory included many aspects still the same is criticized on the basis that it is not considering income factor and as classical theory it is indeterminate.

Q-4 Explain the factors affecting interest rate. (4 Marks, 2015)
Introduction:
In the ordinary language, the term interest refers to the payment made by the borrower to the lender of the capital for its use. Interest can also be defined as the 'price' for the productivity or services of capital paid to its owner for his 'waiting' or 'abstinence' which he has undergone in order to save it. According to Prof. Seligman, "Interest is the return from the fund of capital.

Factors affecting Interest rate:
The rate of interest is based on the following factors:

1. **Nature of the security offered against loan:** one of the important reasons for the differences in the rates of interest is that all borrowers cannot offer equal securities. Those borrowers who can offer good securities like stock, shares, movable and immovable property etc. will be able to get loans at comparatively lower rates of interest than those who cannot offer such securities.

2. **Character of Borrower:** where the lender is sure of the honesty, integrity, social prestige and credit-worthiness of the borrower and knows that there will be no default, he will be

willing to lend at comparatively low rates of interest. But in case if he has doubt about the honesty or credit-worthiness of the borrower he will charge a higher rate of interest.

3. **Period of loans:** Other things being equal, long-term loans will carry higher rates of interest than short term loans because in case of long term loans the lender looses command over the money for a long period of time and there is possibility of fall in the value of securities or a rise in price level.

4. **Amount of loan:** It is generally seen that the rate of interest also differs with the amount of loan. Interest rate decreases as the amount of loan increases and vice-versa.

5. **Degree of Competition in the capital market:** Different interest rates prevail because of market imperfections. People prefer different sources of loan and accordingly the rates will differ. If loan is taken from unorganized moneylender the rate of interest will be more than the organized banks. This is because of the reason that the unorganized market is faced with less of the competition than the organized market.

6. **Monetary policy of central bank:** In India RBI controls interest rates through its monetary policy. In case RBI goes for cheap money policy, the rates of interest will decrease. On the other hand when RBI undertakes dear money policy, interest rates tend to increase, making credit costly.

7. **Productive of capital:** Differences in rate of interest also exist because of differences in the productivity of capital. In those countries or in those regions where capital is more productive (where it can earn a greater reward for producer) the rate of interest will be higher than if the capital is less productive.

Conclusion:

Whether the interest rate in the market will be high or low depends on many factors like character of borrower, period of loan, amount of loan, risk associated, competition, productivity of capital etc.

Q-5 Briefly name the types of inflation. (4 Marks, 2014).
Introduction:

The word inflation literally means increase in volume or quantity of money. In its most popular sense inflation refers to a rise in the price level of money, unaccompanied by a corresponding increase in demand for it. In words of Culborn, "Inflation is too much money chasing too few goods."

Types of Inflation:

Following is the discussion regarding different types of inflation.

1. Types of Inflation on Coverage

Types of inflation on the basis of coverage and scope point of view:-

1. **Comprehensive Inflation**: When the prices of all commodities rise throughout the economy it is known as Comprehensive Inflation. Another name for comprehensive inflation is **Economy Wide** Inflation.

2. **Sporadic Inflation**: When prices of only few commodities in few regions (areas) rise, it is known as Sporadic Inflation. It is sectional in nature. For example, rise in food prices due to bad monsoon (winds bringing seasonal rains in India).

2. Types of Inflation on Time of Occurrence

Types of inflation on the basis of time (period) of occurrence:-

1. **War-Time Inflation**: Inflation that takes place during the period of a war-like situation is known as War-Time inflation. During a war, scare productive resources are all diverted and prioritized to produce military goods and equipments. This overall result in very limited supply or extreme shortage (low availability) of resources (raw materials) to produce essential commodities. Production and supply of basic goods slow down and can no longer meet the soaring demand from people. Consequently, prices of essential goods keep on rising in the market resulting in War-Time Inflation.

2. **Post-War Inflation**: Inflation that takes place soon after a war is known as Post-War Inflation. After the war, government controls are relaxed, resulting in a faster hike in prices than what experienced during the war.
3. **Peace-Time Inflation**: When prices rise during a normal period of peace, it is known as Peace-Time Inflation. It is due to huge government expenditure or spending on capital projects of a long gestation (development) period.
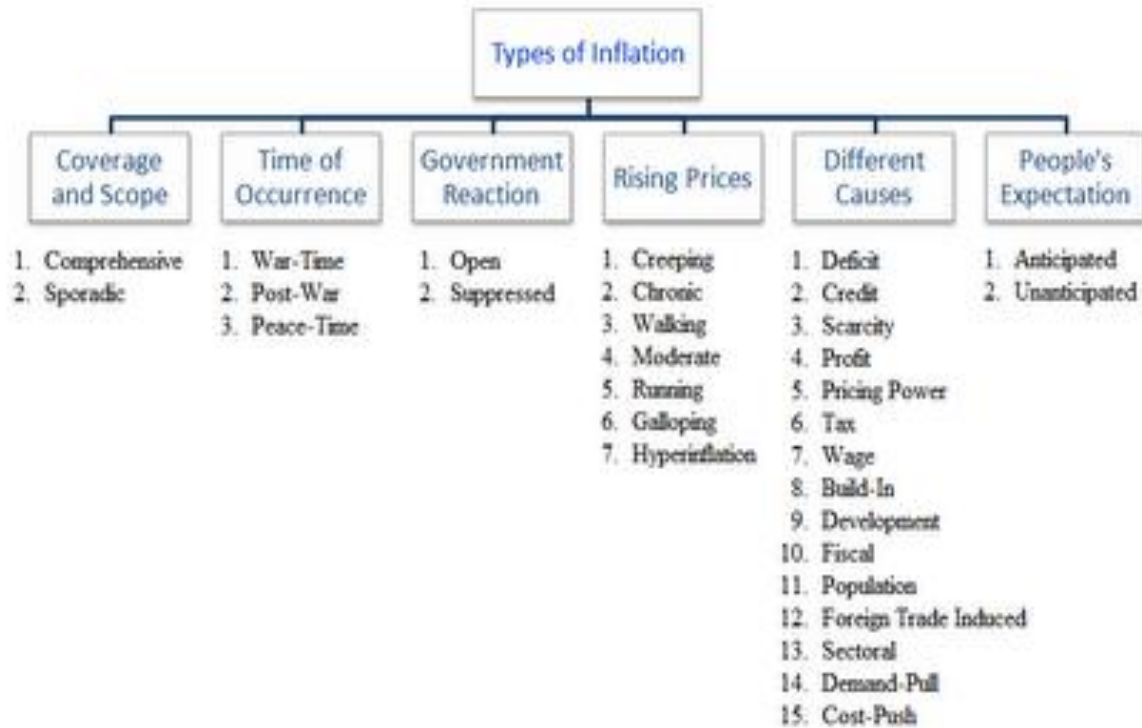
3. Types of Inflation on Government Reaction
Types of inflation on basis of Government's reaction or its degree of control:-
1. **Open Inflation**: When government does not attempt to restrict inflation, it is known as Open Inflation. In a free market economy, where prices are allowed to take its own course, open inflation occurs.
2. **Suppressed Inflation**: When government prevents price rise through price controls, rationing, etc., it is known as Suppressed Inflation. It is also referred as **Repressed** Inflation. However, when government controls are removed, Suppressed inflation becomes Open Inflation. Suppressed Inflation leads to corruption, black marketing, artificial scarcity, etc.

4. Types of Inflation on Rising Prices
Types of inflation on the basis of rising prices or rate of inflation:-
1. **Creeping Inflation**: When prices are gently rising, it is referred as Creeping Inflation. It is the mildest form of inflation and also known as a **Mild** Inflation or **Low** Inflation. According to **R.P. Kent**, when prices rise by not more than (upto) 3% per annum (year), it is called Creeping Inflation.
2. **Chronic Inflation**: If creeping inflation persist (continues to increase) for a longer period of time then it is often called as Chronic or **Secular** Inflation. Chronic Creeping Inflation can be either Continuous (which remains consistent without any downward movement) or Intermittent (which occurs at regular intervals). It is called chronic because if an inflation rate continues to grow for a longer period without any downturn, then it possibly leads to Hyperinflation.

3. **Walking Inflation**: When the rate of rising prices is more than the Creeping Inflation, it is known as Walking Inflation. When prices rise by more than 3% but less than 10% per annum (i.e between 3% and 10% per annum), it is called as Walking Inflation. According to some economists, walking inflation must be taken seriously as it gives a cautionary signal for the occurrence of Running inflation. Furthermore, if walking inflation is not checked in due time it can eventually result in Galloping inflation.

4. **Moderate Inflation**: Prof. Samuelson clubbed together concept of Crepping and Walking inflation into Moderate Inflation. When prices rise by less than 10% per annum (single digit inflation rate), it is known as Moderate Inflation. According to Prof. **Samuelson**, it is a stable inflation and not a serious economic problem.

5. **Running Inflation**: A rapid acceleration in the rate of rising prices is referred as Running Inflation. When prices rise by more than 10% per annum, running inflation occurs. Though economists have not suggested a fixed range for measuring running inflation, we may consider price rise between 10% to 20% per annum (double digit inflation rate) as a running inflation.

6. **Galloping Inflation**: According to Prof. Samuelson, if prices rise by double or triple digit inflation rates like 30% or 400% or 999% per annum, then the situation can be termed as Galloping Inflation. When prices rise by more than 20% but less than 1000% per annum (i.e. between 20% to 1000% per annum), galloping inflation occurs. It is also referred as **Jumping** inflation. India has been witnessing galloping inflation since the second five year plan period.

7. **Hyperinflation**: Hyperinflation refers to a situation where the prices rise at an alarming high rate. The prices rise so fast that it becomes very difficult to measure its magnitude. However, in quantitative terms, when prices rise above 1000% per annum (quadruple or four digit inflation rate), it is termed as Hyperinflation. During a worst case scenario of hyperinflation, value of national currency (money) of an affected country reduces almost to zero. Paper money becomes worthless and people start trading either in gold and silver or sometimes even use the old barter system of commerce. Two worst examples of hyperinflation recorded in world history are of those experienced by **Hungary** in year 1946 and **Zimbabwe** during 2004-2009 under **Robert Mugabe**'s regime.

5. Types of Inflation on Causes
Types of inflation on the basis of different causes:-

1. **Deficit Inflation**: Deficit inflation takes place due to deficit financing.
2. **Credit Inflation**: Credit inflation takes place due to excessive bank credit or money supply in the economy.
3. **Scarcity Inflation**: Scarcity inflation occurs due to hoarding. Hoarding is an excess accumulation of basic commodities by unscrupulous traders and black marketers. It is practiced to create an artificial shortage of essential goods like food grains, kerosene, etc. with an intension to sell them only at higher prices to make huge profits during scarcity inflation. Though hoarding is an unfair trade practice and a punishable criminal offence still some crooked merchants often get themselves engaged in it.
4. **Profit Inflation**: When entrepreneurs are interested in boosting their profit margins, prices rise.
5. **Pricing Power Inflation**: It is often referred as **Administered Price** inflation. It occurs when industries and business houses increase the price of their goods and services with an objective to boost their profit margins. It does not occur during a financial crisis and economic depression, and is not seen when there is a downturn in the economy. As Oligopolies have the ability to set prices of their goods and services it is also called as **Oligopolistic** Inflation.
6. **Tax Inflation**: Due to rise in indirect taxes, sellers charge high price to the consumers.
7. **Wage Inflation**: If the rise in wages in not accompanied by a rise in output, prices rise.

8. **Build-In Inflation**: Vicious cycle of Build-in inflation is induced by adaptive expectations of workers or employees who try to keep their wages or salaries high in anticipation of inflation. Employers and Organisations raise the prices of their respective goods and services in anticipation of the workers or employees' demands. This overall builds a vicious cycle of rising wages followed by an increase in general prices of commodities. This cycle, if continues, keeps on accumulating inflation at each round turn and thereby results into what is called as Build-in inflation.

9. **Development Inflation**: During the process of development of economy, incomes increases, causing an increase in demand and rise in prices.

10. **Fiscal Inflation**: It occurs due to excess government expenditure or spending when there is a budget deficit.

11. **Population Inflation**: Prices rise due to a rapid increase in population.

12. **Foreign Trade Induced Inflation**: It is divided into two categories, viz., (a) Export-Boom Inflation, and (b) Import Price-Hike Inflation.

   1. **Export-Boom Inflation**: Considerable increase in exports may cause a shortage at home (within exporting country) and results in price rise (within exporting country). This is known as Export-Boom Inflation.

   2. **Import Price-Hike Inflation**: If a country imports goods from a foreign country, and the prices of imported goods increases due to inflation abroad, then the prices of domestic products using imported goods also rises. This is known as Import Price-Hike Inflation. For e.g. India imports oil from Iran at $100 per barrel. Oil prices in the international market suddenly increases to $150 per barrel. Now India to continue its oil imports from Iran has to pay $50 more per barrel to get the same amount of crude oil. When the imported expensive oil reaches India, the indian consumers also have to pay more and bear the economic burden. Manufacturing and transportation costs also increase due to hike in oil prices. This, consequently, results in a rise in the prices of domestic goods being manufactured and transported. It is the end-consumer in India, who finally pays and experiences the ultimate pinch of Import Price-Hike Inflation. If the oil prices in the international market fall down then the import price-hike inflation also slows down, and vice-versa.

13. **Sectoral Inflation**: It occurs when there is a rise in the prices of goods and services produced by certain sector of the industries. For instance, if prices of crude oil increases then it will also affect all other sectors (like aviation, road transportation, etc.) which are directly related to the oil industry. For e.g. If oil prices are hiked, air ticket fares and road transportation cost will increase.

14. **Demand-Pull Inflation**: Inflation which arises due to various factors like rising income, exploding population, etc., leads to aggregate demand and exceeds aggregate supply, and tends to raise prices of goods and services. This is known as Demand-Pull or **Excess Demand** Inflation.

15. **Cost-Push Inflation**: When prices rise due to growing cost of production of goods and services, it is known as Cost-Push (Supply-side) Inflation. For e.g. If wages of workers are raised then the unit cost of production also increases. As a result, the prices of end-products or end-services being produced and supplied are consequently hiked.

6. Types of Inflation on Expectation
Types of inflation on the basis of expectation or predictability:-

1. **Anticipated Inflation**: If the rate of inflation corresponds to what the majority of people are expecting or predicting, then is called Anticipated Inflation. It is also referred as **Expected** Inflation.

2. **Unanticipated Inflation**: If the rate of inflation corresponds to what the majority of people are not expecting or predicting, then is called Unanticipated Inflation. It is also referred as **Unexpected** Inflation.

Conclusion:
Based on coverage, time, government reaction, prices, causes and expectations inflation can be classified into various categories. Some inflation for any economy is good but when it gets out of control, it can cause problems for the economy.

Q-6 Explain the factors responsible for inflation. (6 Marks, 2015) OR explain different causes of inflation.

Introduction:
The word inflation literally means increase in volume or quantity of money. In its most popular sense inflation refers to a rise in the price level of money, unaccompanied by a corresponding increase in demand for it. In words of Culborn, "Inflation is too much money chasing too few goods."

Causes of Inflation:
Inflation can be caused either because of upward shift in demand of goods or downward shift in the supply of the goods. Following are the causes of increase in the demand and decrease in the supply which leads to inflation.
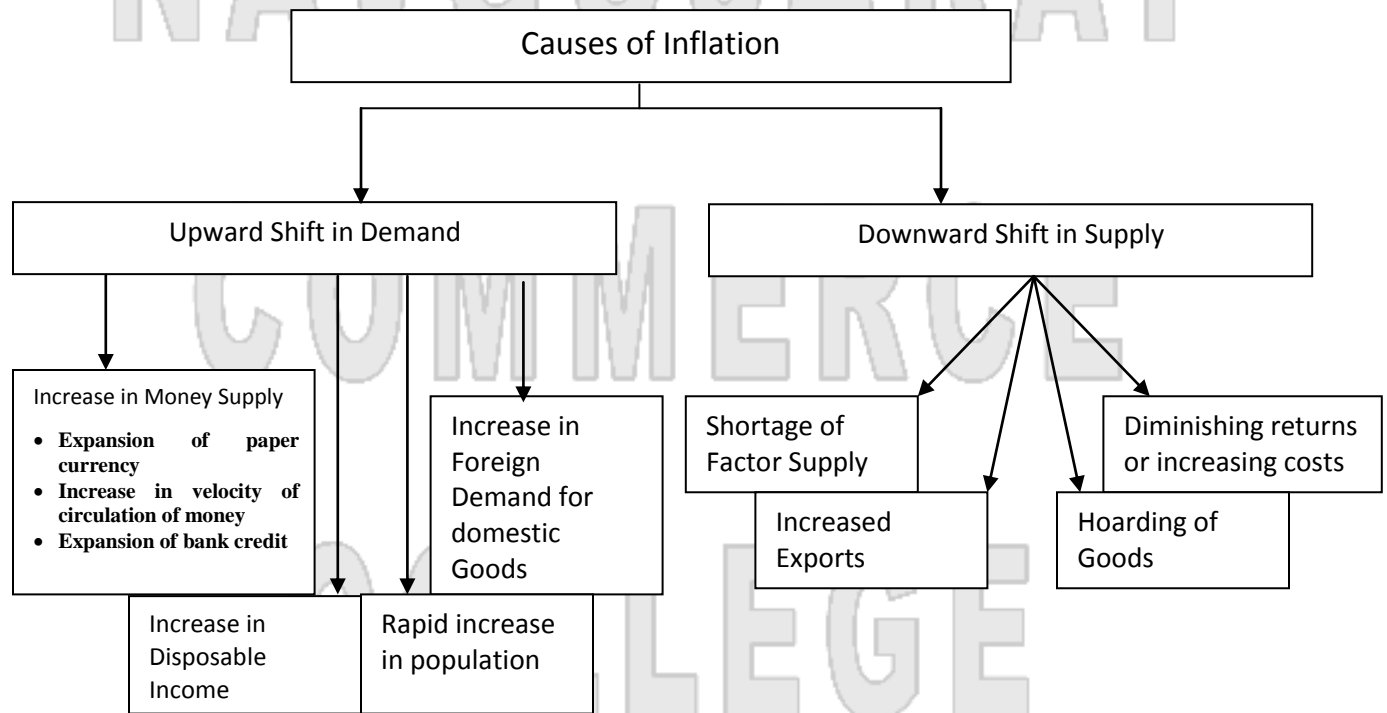
⇒ **Upward Shift in Demand:** Inflation arises when the total effective demand in the economy increases without a corresponding increase in the supply of goods and services. In other words, inflation is the result of excess demand or upward shift in demand. The upward shift in demand may be caused by the following factors.

1) **Increase in Money Supply:** Increase in money supply leads to increase in money income of the community. The increased income is spent on goods and services and the demand for those goods and services increases which leads to inflation. Increase in money supply may be caused due to:

   i) **Expansion of Paper Currency by the Government:** This is done in order to meet budgetary deficit arising out of expenditure over normal sources of revenues, in order to finance war operations or schemes of economic development.

ii) **Increase in Velocity of Circulation of Money:** As demand for goods increases their movement in the market will be fast which will lead to faster circulation of money. As we know that money has earning capacity so faster the money moves in the market, faster it will grow and ultimately it will lead to increased money supply in the market.

iii) **Expansion of Bank Credit:** Banks do not create physical currency but as the instruments of bank like cheque, demand drafts, debit cards etc. are readily accepted as currency banks creates money against the its deposits, keeping a certain amount of money as reserve. If banks are expanding their credits rapidly, it will increase the purchasing power in the market.

2) **Increase in Disposable Income:** If government wants to decrease taxation on personal income, it will lead to increased purchasing power in the hands of people and will lead to increase in demand. On the other hand when prices are raising value of money starts declining so people are less willing to save money, they will spend more of their income on purchase of goods. this will also increase demand.

3) **Increase in foreign demand for domestic goods and services:** When the demand for domestic goods increases in the foreign market and when exports boosts up, it brings pressure on domestic demand for such goods. also the income from exports increases the quantity of money in the market. Consequently there is an upward shift in the demand and prices rise.

4) **Rapid Increase in Population:** A rapid growth in population also brings about an upward shift in demand leading to rise in general price level. If population increases rapidly while the aggregates of money remains stable, the consequent rise in the velocity of circulation of money. Also the production might not increase proportionately to the increase in the population which will lead to increase in demand and price.

⇒ **Downward Shift in Supply:** The second important cause of inflation is a downward shift in supply, because if supply of goods in the economy increases in the same proportions as the increase in the demand. Inflation pressure in the economy perhaps would not arise. But what happens during a period of inflation is that the production and supply of the goods and commodities does not increase corresponding to the increase in demand and hence the prices rise. The main factors responsible for such situation are:

1) **Shortage of Factor Supply:** The scarcity of certain important factors of production like technical and skilled labour capital equipments, raw materials etc. proves to be an obstacle in the way of increasing production.

2) **Increased Exports:** Increase in exports will create a pressure on existing supply of goods as it will lead to decrease in goods available for consumption in the domestic market.

3) **Diminishing Returns and Increasing Costs:** As prices of goods are rising and there is shortage of laborers. They will demand more and more wages and salaries which will lead to increased costs of labour as well as shortage of raw materials makes further expansion of production facilities less attractive.

4) **Hoarding of goods:** Hoarding of goods by producers and traders in anticipation of a further rise in prices reduces the available supply in the market and creates artificial shortage of supply of goods leading to rise in prices.

Conclusion:
Inflation can be caused by either increase in demand of product or decrease in supply of goods in the market. Increase in income, increase in velocity of circulation of money, increased in population etc. lead to increased demand while shortage in factor supply, increased export, hoarding of goods etc. leads to decrease in supply.

Q-7 Elucidate effects of inflation. (4 Marks, 2015). Discuss the effects of inflation on various classes of society. (4 Marks, 2013). Discuss the effects of inflation on the economy as a whole. (4 Marks, 2013). Explain effects of inflation on income and wealth distribution. (4 Marks, 2012)

Introduction:

The word inflation literally means increase in volume or quantity of money. In its most popular sense inflation refers to a rise in the price level of money, unaccompanied by a corresponding increase in demand for it.

Effects of inflation:

We will discuss effects of inflation in two parts: i) Effects on different class of people and ii) Effects on economy as a whole.
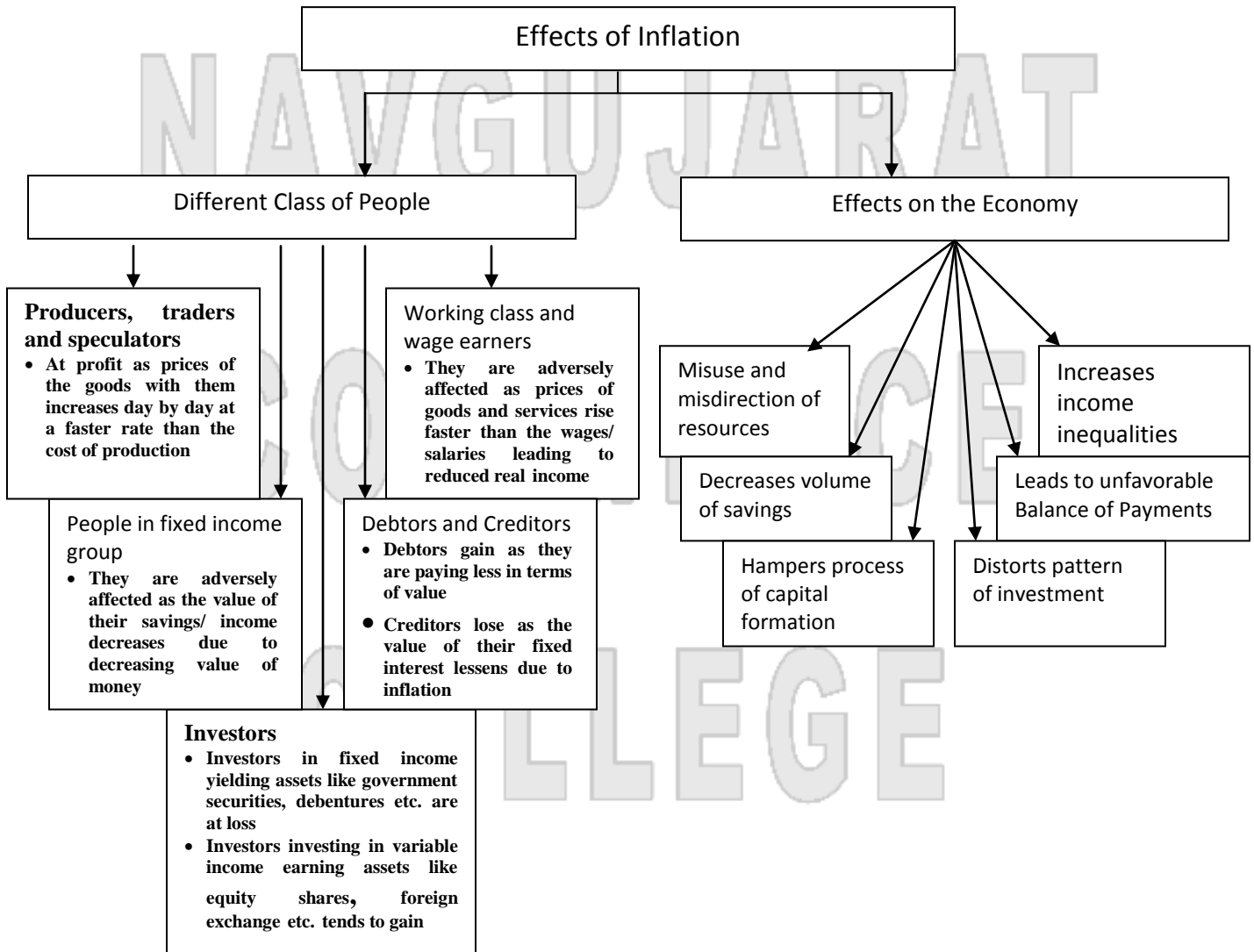
Effects of inflation on different class of people: Inflation affects different classes of the society in different ways. Some groups gain and earn windfall profits, while others are suffered adversely.

1) **Producers, traders and speculators:** All producers, traders and speculators gain during inflation because of the emergence of windfall profits. This is due to the fact that, in the first place, the prices of goods and services rise at a much faster rate than the cost of production. Also the time lag between price rise and cost rise acts in favor of the producers. Besides the money value of the stock and inventories kept by the producers and traders increases as the general price level rises. Thus producers, traders and speculators as a class gain during the phase of inflation.

2) **People in fixed income group:** Inflation hits hard on persons who live on past savings, fixed interest, rents and pension. Similarly persons with fixed salaries are also adversely affected in times of inflation because while their money incomes are fixed, their purchasing power reduces due to rising prices.

3) **Working class and wage earners:** Inflation adversely affects the working class and the wage earners, because in the first place, there is a time lag between the rise in prices and the rise in wages and secondly, the rise in wages in not in proportion to the rise in the price level of those goods and commodities which the workers buy. Organized workers may be able to get increased wages according to the increase in price levels but the unorganized labors like farm labors unskilled and daily wageworkers etc. suffers a lot during this period.

4) **Debtors and Creditors:** During inflation, debtors generally gain and creditors lose. Debtors gain because although they repay the same amount of money together with the interest there on, yet in terms of purchasing power they pay less as the money is able to purchase smaller amount of goods because of rise in prices and fall in value of money. Creditors on the other hand are losers in inflation because they receive less in terms of goods and services than they would have received in times of less prices.

5) **Investors:** Investors in debentures and fixed interest yielding securities lose during period of inflation. Similarly, the small middle class investors who generally invest most of their savings in fixed interest securities, insurance and savings accounts also lose during this period. On the other hand those who have invested in equity shares, foreign exchange etc. tends to benefit as they are having benefit of the increasing price level.

Thus, inflation redistributes income and wealth in favor of producers, traders, debtors and investors in the assets whose prices are determined by market conditions. While it adversely affects the consumers, creditors, small investors, middle class and fixed income groups.

Effects of inflation on Economy: Inflation has its effects on the working of the entire economic system in the following way.

1) **Misuse and misdirection of resources:** At the times of inflation economic resources are diverted from the production of essential goods to the production of luxury and semi-luxury goods because the rich class whose income increases more rapidly during the inflation makes demand for such goods.

2) **Decreased volume of savings:** During periods of inflation, people find that the value of their past savings has been greatly eroded due to rising prices and consequently there is no incentive to save. Inflation not only diminishes the capacity to save but also destroys the atmosphere of confidence which is an essential condition of willingness to save. During inflation, people do not like to keep their savings in the form of money for the simple reason that the value of money rapidly diminishes.

3) **Hampers process of capital formation:** As value of money decreases day by day people are not willing to save in terms of money. So there will be a less inflow of cash in the banks, as banks are not getting money they can not accumulate sufficient money in order to give loans for capital investments, thus the reducing capacity and willingness to save causes serious handicap to the process of capital formation.

4) **Distorts pattern of investment:** It encourages investments in those sectors of economy which are likely to give quicker profits rather in essential and productive sectors. Inflation thus gives incentive to speculative investments. During this period there is phenomenal increase in investment in such fields as land, urban property, gold and foreign currency. Inflation thus affects

not only the volume of saving but also but also changes its pattern of investment. It brings about the allocation of resources which is far from optimum.

5) **Leads to unfavorable Balance of Payment:** Inflation tends to increase imports and decrease exports which means that the economy has to pay foreign exchange for importing goods while the same is not earning foreign currency as exports will decrease. This will lead to a disequilibrium in country's Balance of Payments.

6) **Increases income inequalities:** Inflation increases income inequalities in the society, by widening the gap between the higher and lower income groups. Inflation brings about a redistribution of income in favor of the rich. Thus making richer more rich and poor people more poor. Thus an inflationary situation if allowed to persist for a long period of time, creates widespread feelings of injustice and discontent and ultimately may give way to radical groups such as racists, or communists.

Conclusion:

Inflation is economically unsound, politically dangerous and morally indefensible. As Robertson put it, 'Money which is a source of so many blessings to mankind becomes also, unless we can control it, a source of peril and confusion.'

Q-8 Critically discuss anti-inflationary policies. (6 Marks, 2012, 2014) Discuss the quantitative measures of monetary policy to curb inflation. (4 Marks, 2013)

Introduction:

Inflation is a great economic and social evil and, therefore it should be controlled in the beginning stage itself or else it is likely to degenerate into hyper-inflation with all its disastrous economic, social and political consequences. An inflationary price rise is due to an excess of aggregate demand over a given supply of goods and services, that is, during periods of inflation, aggregate expenditure in the economy runs ahead of total volume of goods and services.

Control of Inflation (Anti-inflationary policies):

In order to control inflation, therefore, two sets of measures are suggested: 1) Measures to control aggregate expenditure or aggregate demand. 2) Measures to increase the production and supply of goods and services. Let us discuss the measures in detail

1. **Measures to control Aggregate Expenditure or Aggregate Demand:**

   Measures to control aggregate expenditure or aggregate demand in the economy occupy a very important place in any scheme designed to control inflation. These measures are of four types:

   a) **Monetary policy:** Monetary policy is the policy of the central bank of the country pertaining to currency and credit and involves the regulation and control of the volume of currency and credit to suit the requirements of the economy. Monetary policy to control inflation is based on the assumption that an inflationary price rise is due to excess of monetary demand for goods and services expressed by the increased total expenditure which is made possible by the expansion of bank credit. Consequently in order to control inflation the central bank adopts a 'tight money policy' or 'dear money policy' which aims at the contraction of bank credit. Under the dear money policy, following measures are adopted.

      1. The central bank increases the bank rate with a view to making credit costly and thereby prevents speculative and non-essential investments.
      2. The central bank sells securities in the open market and thereby brings about a reduction in the cash reserves of the commercial banks.
      3. The central bank directs the commercial banks to increase the cash reserve ratio which they have to keep with it.
      4. The central bank imposes stringent selective credit control measures like credit rationing, increase in the margin requirements, regulation of consumers' credit etc.

b) **Fiscal Policy:** Fiscal policy refers to the policy of government with regard to taxation, public expenditure and public borrowing. It is said that fiscal policy as a measure to control inflation can prove to be more effective than monetary policy. Fiscal measures to combat inflation involve increase in taxation, reduction in public expenditure and increase in public borrowing. All the three are discussed below:

1. **Increase in Taxes:** A cut in public expenditure alone is not sufficient; government must also simultaneously increase taxes to effect a cut in private expenditure in order to control inflation. Taxes determine the size of the volume of disposable income in the hands of the people. The tax policy to combat inflation should be directed towards restricting demand without restricting production. This would, of course, mean the raising of the rates of existing taxes as also the imposition of new taxes. Thus, by reducing the purchasing power and thereby reducing the demand through taxes, it is possible to keep inflationary pressure under check.

2. **Reduction in public expenditure:** During inflation the government must try, as much as possible, to reduce its expenditure. Utmost economy in public expenditure should be observed and all avoidable expenditure should be cut. By reducing spending, the government partly offset the inflationary pressure arising from unregulated private spending.

3. **Public borrowing:** A policy of public borrowing can also help in controlling inflation. For example, the raising of market loans (particularly from non-bank lenders) and other borrowing programme of the government is likely to have disinflationary effect. Further public debt may be managed in such a way that the supply of money in the economy may be controlled. Similarly, various incentive schemes may also be introduced to encourage savings, like the gift coupons, prize lots etc.

c) **Price control and rationing:** Price control and rationing also occupy an important place as anti-inflationary measures. Price control implies the fixation of a legal ceiling beyond which the prices of particular goods are not allowed to rise. Under price control measures, the government fixes the statutory maximum prices of certain goods and commodities and the producers and the traders are prohibited from charging more than the maximum prices.

Along with price control measures, rationing of certain essential goods which are scarce is also introduced. The main purpose of rationing is to ensure a fair and equitable distribution of goods in short supply to all the sections of the society irrespective of their wealth or social status. In fact, price control and rationing generally go together.

d) **Wage Freeze Policy:** It is also suggested that in order to combat inflation, wages, salaries and profits should be controlled and fixed through a system of 'income-freeze'. This will keep down the disposable income and therefore the total effective demand for goods and services. However, the limitation of this policy is that the trade union will not agree to a policy of wage freeze unless there is freezing of prices also.

2. **Increasing domestic supply of goods:**
   a) **Increased Imports and Reduced Exports:** In the context of a serious inflationary situation in the economy, it may well become necessary to increase the supplies of essential articles, particularly of wage goods, through increased imports. Similarly, reduction in exports also may increase the domestic supplies and help to contain inflationary pressures under check. The feasibility of these measures, however, will depend upon the balance of payments situation of the country.
   b) **Increased Production:** Inflation is due to an excess of demand over a given supply of goods and services; it represents disequilibrium between aggregate demand and aggregate supply, aggregate demand running ahead of aggregate supply. Measures to control inflation,

therefore, while laying stress on keeping down the aggregate demand, should also aim at increasing the aggregate supplies of goods and services. Efforts should be made to raise the output in the agricultural and industrial sectors of the economy.

Conclusion:
In order to control inflation, increase in prices needs to be controlled. Prices rise either because of increased demand or decreased supply. If measures are taken to increase supply or decrease demand, than inflation can be controlled. Central bank of a country plays vital role in controlling inflation.

Q-9 Explain demand pull inflation with the help of diagram. (4 Marks, 2012, 2013)
Introduction:
Demand-pull inflation is a term used in Keynesian economics to describe the scenario that occurs when price levels rise because of an imbalance in the aggregate supply and demand.
Demand Pull Inflation:
Demand pull inflation takes place when too much money chases too few goods. In other words, when supply of money exceeds the supply of goods and services, effective demand increases and prices go up. If the supply of money grows continuously, demand can go up continuously. Due to this demand, prices go up. It is called demand pull inflation. Following are the main reasons for demand pull inflation.

1. **Cost of war:** In the times of war, there is a large scale rise in the expenses of the government. To meet these expenses, the government issues a large supply of money. As the income of the people increase, demand of the commodities goes up. But as the means of production are used for the purpose of war, production does not increase therefore inflation is created.

2. **Development cost:** In the initial phase of economic development, long term investment become necessary in basic industries and services for preparation of infrastructure. For this very often it becomes necessary to get money through deficit budgeting also. In this period, production of commodities does not decrease and as supply of money increases, inflation induced by demand is born.
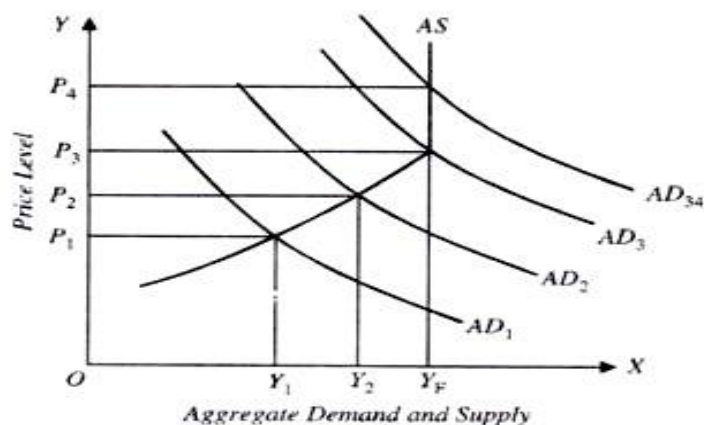

Fig. 23.1. *Demand-Pull Inflation*

The diagram shows the gradual increase in demand from AD1 to AD2 …. and so on. Because of continuous increase in demand, prices are also increased as demand exceeds supply. After some period of time, economy reaches the level of full employment from which further production is not possible. Under this situation if demand increases, there is steep rise in prices because increase in supply is not possible.

Conclusion:
At the time of war and when government prepares deficit budget, demand increases but supply does not match up with the increased demand which leads to increase in prices. This increase in prices is because of increase in demand thus, it is called demand pull inflation.

Q-10 Write a note on cost push inflation. (4 Marks, 2014)
Introduction:
Cost push inflation occurs when we experience rising prices due to higher costs of production and higher costs of raw materials. Cost push inflation is determined by supply side factors

Cost Push Inflation:

Cost-push inflation can lead to lower economic growth and often causes a fall in living standards, though it often proves to be temporary.

Diagram Showing Cost Push Inflation

www.economicshelp.org
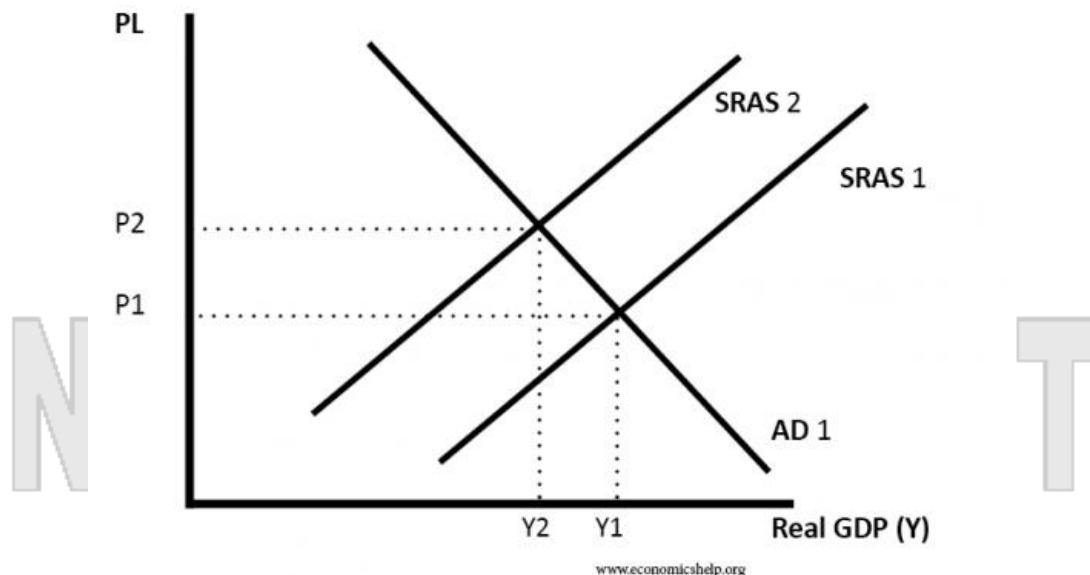
Short run aggregate supply curve shifts to the left, causing higher price level and lower real GDP.

Causes of Cost Push Inflation

1. **Higher Price of Commodities:** A rise in the price of oil would lead to higher petrol prices and higher transport costs. Also rise in the costs of raw material leads to increase in costs. Because of increased cost of production sellers are forced to increase prices of commodities which pushes prices upwards and leads to inflation.
2. **Imported Inflation:** A devaluation will increase the domestic price of imports. Therefore, after a devaluation we often get an increase in inflation due to rising cost of imports.
3. **Higher Wages:** Wages are one of the main costs facing firms. Rising wages will push up prices as firms have to pay higher costs.
4. **Higher Taxes:** Higher VAT and Excise duties will increase the prices of goods. This price increase will be a temporary increase.
5. **Higher Food Prices:** In western economies food is a smaller percentage of overall spending, but in developing countries, it plays a bigger role. So some increase in food prices results in increased prices in other sectors also.

Conclusion:

Cost push inflation could be caused by a rise in oil prices or other raw materials. Imported inflation could occur after a depreciation in the exchange rate which increases the price of imported goods.

Q-11 Explain inflationary gap with the help of diagram. (4 Marks, 2015)

Introduction:

It is useful and important to understand the concept of inflationary gap because with it we are able to know the main cause of the rise in general level of prices. The equilibrium of an economy is established at the level of full-employment when aggregate demand or total expenditure is equal to the level of income corresponding to full-employment.

Inflationary gap:

Consider Fig. 5.10 where OY_F is national income corresponding to the level of full-employment. Equilibrium at national income OY_F would be established only when aggregate demand or total expenditure (C + I + G) is equal to Y_FE.
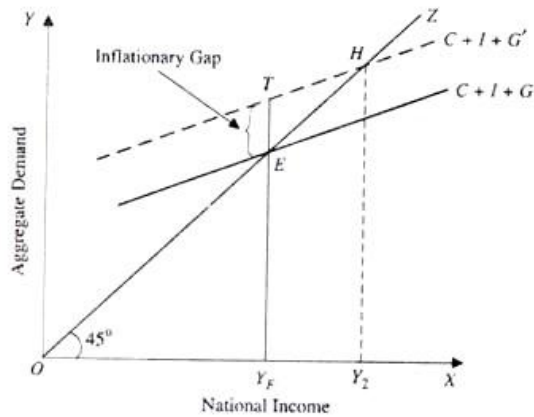

Fig. 5.10. *Inflation Gap*

Real national income cannot increase beyond OY_F because when all means of production including labour are fully employed, there is no possibility of further rise in production or real national income. Since OY_F is full-employment level of national income, actual production cannot increase beyond that but there would be rise in prices which would raise the money value of OY_F production. The amount by which the actual aggregate demand exceeds the level of national income corresponding to full employment is known as inflationary gap because this excess of aggregate demand causes inflation or rise in prices in the country.

In Fig. 5.10 this excess of aggregate demand or inflationary gap is equal to ET. It would be seen from Fig. 5.10 that the aggregate demand curve C + I + G' intersects 45° line (OZ line) at H so that equilibrium level of national income would be OY_2.

Conclusion:

J.M. Keynes in his revolutionary book "General Theory of Employment, Interest and Money" did not discuss the concept of inflationary gap because he was then preoccupied with the analysis of the state of depression and deflation. During the Second World War when the problem of inflation cropped up, then Keynes applied his macroeconomic analysis to explain inflation as well and in this connection he put forward the concept of inflationary gap.

1 Mark questions:

1. Which type of fluctuation is known as business cycle in an economy? (seasonal, long term, causal, cyclical)
2. Upper turning point of trade cycle is known as …. (expansion, peak, contraction, through)
3. How many phases business cycle has? (two, three, four, five)
4. Generally how is the pure interest than gross interest? (more, less, equal, none)
5. According to which economist, interest is a return for self restraint? (Prof. Senior, Prof. Marshall, Prof. Keynes, Prof. Fisher)
6. Which economist said that interest is a pure monetary phenomenon? (Marshall, Keynes, Fisher, Robertson)
7. In which principle of interest, both real and monetary factors are considered? (classical, Keynes, loanable fund, none)
8. What is the relation between rate of interest and demand for money? (straight, inverse, equal, unequal)
9. According to Keynes in short run, how is the supply curve of money? (positive, negative, parallel to OX axis, parallel to OY axis)
10. For what purpose the demand for money is absolute from rate of interest? (speculative, transaction, security, none)
11. What is the relation between interest rate and price of securities? (correlation, inverse, causal, none)
12. Who has presented the structural principle of inflation? (Keynes, Fisher, Charles Schulz, Friedman)
13. Which type of inflation resulted into flood – type inflation? (controlled, open, expected, war-induced)

Ans. 1. Cyclical 2. Peak 3. Four 4. Less 5. Prof. Senior 6. Keynes 7. Loanable fund 8. Inverse 9. Parallel to OY axis 10. Speculative 11. Inverse 12. Charles Schulz 13. Open