

Biyani's Think Tank

Concept based notes

Macro Economics

BA

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Preface

I am glad to present this book, especially designed to serve the needs of the students. The book has been written keeping in mind the general weakness in understanding the fundamental concepts of the topics. The book is self-explanatory and adopts the “Teach Yourself” style. It is based on question-answer pattern. The language of book is quite easy and understandable based on scientific approach.

Any further improvement in the contents of the book by making corrections, omission and inclusion is keen to be achieved based on suggestions from the readers for which the author shall be obliged.

I acknowledge special thanks to Mr. Rajeev Biyani, *Chairman* & Dr. Sanjay Biyani, *Director (Acad.)* Biyani Group of Colleges, who are the backbones and main concept provider and also have been constant source of motivation throughout this endeavour. They played an active role in coordinating the various stages of this endeavour and spearheaded the publishing work.

I look forward to receiving valuable suggestions from professors of various educational institutions, other faculty members and students for improvement of the quality of the book. The reader may feel free to send in their comments and suggestions to the under mentioned address.

Author

Syllabus

Micro economic Analysis and Macro economic Analysis, Basic concepts of macro Economics, Components and measurements of National Income. Accounting Conceptual difficulties involved in estimating national income.

Money—Nature, Scope, Functions and Importance. Quantity Theory of Money (Transaction, Cash Balance and Keynesian).

Value of money and its changes.

Section - B

Complete Classical Model of employment and Income, Say's law. Keynesian Model of Employment and Income (without IS-LM Curves). Concept of Multiplier and Accelerator, Trade Cycles Causes and Remedial Measures.

Section - C

Functions of Central Bank with special reference to India, Functions of Commercial Banks. Multiple credit creation.

Multiple agency. Approach to Institutional Credit. Monetary Policy in India during the past two decades and its Role in promoting Economic Development and Price Stability.



Section A

Chapter 1

Basic concepts of Macroeconomics

Q1. What is economics all about?

Ans. Economics is all about satisfying unlimited wants in limited resources. Three important points to be kept in mind are:

1. Humans have unlimited wants.
2. Resources are limited.
3. Limited resources have alternative uses.

Q2. Define Economic Analysis.

Ans. Economics Analysis deals with the study of how human behavior or individual economic agents behave against problem of scarcity and react to observed changes.

Two main parts of Economic:

1. Microeconomics: It is the study of individual economic agents. E.g. per capita consumption.
2. Macroeconomics: It is the study of aggregates and overall changes in an economy. E.g. overall price level, national output.

Q3. Explain the origin of Macroeconomics with special emphasis on its major concerns?

Ans. Economic events of the 1930s, the decade of the Great Depression, spurred a great deal of thinking about macroeconomic issues, especially unemployment. Before great depression economists applied microeconomics, they were referred to as classical models, to economy-wide problems. However the unexpected events of 1930s gave way to new line of thinking called Keynesian view based on macroeconomics. Keynes was the first economist to study macroeconomic aspect through his book '*The General Theory of Employment, Interest and Money*' in 1936. Keynes mainly about two important points which are as follows:

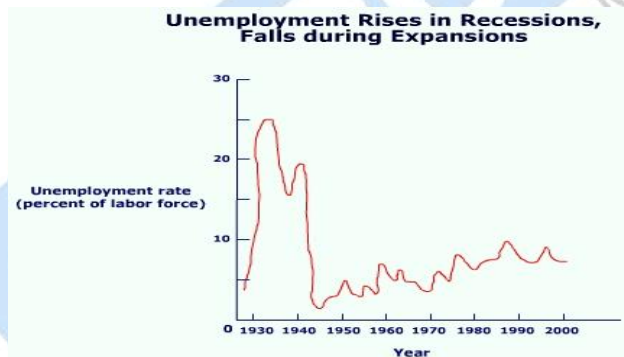
- It's the level of **Aggregate Demand** for goods and services that affect the level of employment.
- **Government intervention** is necessary to correct market inefficiencies.

1. Major Macroeconomic concerns

- **Inflation:** prices stability is desirable. Consumer price index (CPI) is the most commonly used measure of overall price level in an economy. CPI is

the measure of the cost of different types of goods bought by the average customer. Inflation denotes the rise or fall in general price level in the economy. Inflation rates, shows the rate of change in the price index. When the inflation is high, the purchasing power of the customers reduces.

- **Output Growth:** The ultimate aim of any economy is to provide the desired goods and services. The economy should be in a position to offer these goods and services in ample number. To measure the output of any economy, Gross Domestic Product (GDP) is the most comprehensive estimate. GDP measures the market value of the entire output in a country during a particular year.
- **Unemployment:** Low level of unemployment is necessary for a better economy. It is imperative on any government that it should ensure full employment to the citizens of its country. Unemployment rate shows different patterns in different phases of business cycles. In the given figure , it can be seen that unemployment rate in the US was too high between 1930 and 1940. During this period, the economy witnessed one of the worst depressions.



Q4. What is the role of Government in Macro economy?

Ans. There are three kind of macroeconomic policies adopted by Government. They are as follows:

- **Fiscal policy:** Fiscal policy is concerned with the use of taxes and government expenditures. Government has to meet various expenditures like salaries, defense expenses, infrastructure development, etc. Another part of government expenditure also goes in the form of transfer payments like financial assistance to the elderly and unemployed.
- **Monetary Policy:** Monetary policy is the second most widely used macroeconomic policy instrument. Monetary policy helps government,

managing the nation's money, credit, and banking system. There are various entities that are part of the monetary system of an economy. Central bank regulates the monetary system.

- **Growth or Supply-Side policy:** Government policy that stimulates aggregate supply to stimulate aggregate output and employment level. Some major tax reforms are part of these growth policies.

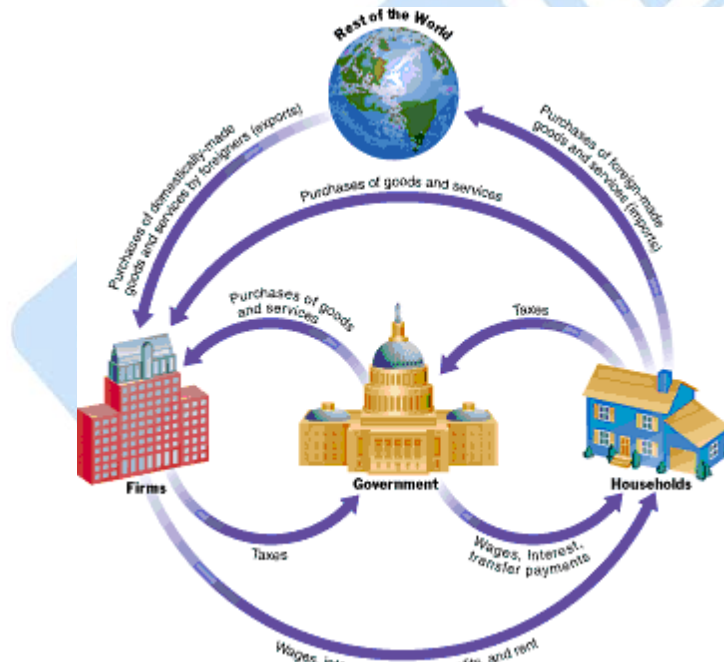
Q5. State the components of Macro economy and show their interaction with the help of a diagram.

Ans.5. There are four main parts of macroeconomics, which are as follows:

- Household
- Firms
- Government
- Rest of the world

The circular flow of diagram shows the interaction between these four parts of an economy.

THE CIRCULAR FLOW DIAGRAM



Q.6. Explain the concept of microeconomic analysis?

Ans. Microeconomic analysis is that part of economic analysis which studies the following individual economic variables-

1. Individual consumer'

2. Input price
3. Individual producer
4. Individual firm
5. Commodity price

Microeconomic analysis is also called:

1. Price theory
2. Theory of value
3. Price system and revenue allocation

The term "micro" has been borrowed from the Greek word "Mikros" meaning small.

Scope of Microeconomic Analysis

Following studies are made in microeconomic analysis-

- (I) Allocation of resources in the production of goods and services. In this we study
 1. Theory of product pricing
 - a) Theory of demand
 - b) Theory of cost of production
 2. Theory of factor pricing
 - a) Determination of price (remuneration) of factors of production.

Factors of Production

1. Land
2. Labor
3. Capital
4. Entrepreneur

price/remuneration

rent
Wages
Interest
Profit

- (II) Allocative Efficiency

Allocating efficiency in welfare economics include-

Related to individual welfare:

1. Efficiency in production
2. Efficiency in Consumption

Related to social welfare

1. Optimum efficiency

Role of microeconomic analysis in formulation of business policies and business decision making

- i. Used in understanding the functioning and working of an economy.

- ii. Useful in analyzing environmental policies.
- iii. Used in welfare economics
- iv. Helpful in managerial decision making.
- v. Helps in solving internal problems of operations.
- vi. Helpful in determining prices
- vii. Useful in analysis of taxation problems.
- viii. Useful in demand forecasting and prediction.
- ix. Helpful in cost and production analysis.
- x. Used in profit planning and control.
- xi. Helpful in building Microeconomic models.
- xii. Measures managerial efficiency of a firm.



Multiple Choice Questions

1 In economics the central problem is

- a) Allocation
- b) Consumption
- c) Production
- d) Scarcity

Ans. D

2 Macroeconomics deals with

- a) The behavior of electronic industry
- b) The activities of individual units
- c) Macroeconomic aggregates
- d) The behavior of firms

Ans. C

3 The study of inflation is a part of

- a) Normative economics
- b) Macroeconomics
- c) Microeconomics
- d) Descriptive economics

Ans.B

4 A recession is

- a) A period of very rapidly declining prices.
- b) A period of declining unemployment.
- c) A period of declining prices.
- d) A period during which aggregate output declines.

Ans.D

5 The circular flow of goods and incomes shows the relationship between

- a) Income and money.
- b) Wages and salaries.
- c) Firms and households.
- d) Goods and services.

Ans. C

6 In a planned economy, all decisions are taken by

- a) Voters
- b) Workers

- c) Government
- d) Consumers

Ans. C

7 Which one of the following is a normative statement

- a) The proportion of people's income paid in taxes is higher under this government than under the previous one.
- b) The richest 10 per cent of the population has had a bigger percentage increase in incomes over the past 10 years than the poorest 10 per cent.
- c) Inequality in the distribution of income is a more serious problem than unemployment.
- d) Inflation is rising.

Ans. C

8 In a free market system, the amount of goods and services that any one household gets depends upon its:

- a) Wealth
- b) Income and wealth
- c) Income
- d) Wages and interest income

Ans.D

9 Periods of less than full employment correspond to

- a) Either points inside or outside the production possibility curve.
- b) Points inside the production possibility curve.
- c) Points outside the production possibility curve.
- d) Points on the production possibility curve.

Ans. B

10 A graph showing all the combinations of goods and services that can be produced if all of society's resources are used efficiently is a:

- a) Circular-flow diagram
- b) Lorenz curve
- c) Capital consumption curve.
- d) Production Possibility Curve.

Ans.D

Chapter 2

National Income Accounting

Q.1. What do you mean by GDP and how is it measured?

Ans. Gross Domestic Product (GDP) is defined as the value of all final goods and services produced in the economy within a given period of time.

Three approaches to measuring GDP:

- The *expenditure approach* measures GDP by adding together the expenditure of all sectors in the final product market. That is, consumers' expenditure, firms' investment, government expenditure of goods and services and the net of exports minus imports. From a statistician's point of view, this is the easiest way to calculate GDP.

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

- The *income approach* measures GDP by aggregating all the incomes paid by firms and government to households for factors of production, and this includes wages and salaries, interest on capital, rent for land and profits. GDP is calculated using this approach, although some figures, such as income earned by the self employed, have to be imputed as they are difficult to measure directly.

$$GDP = NY + Dep. + (Indirect taxes - subsidies) + NFIA + other$$

- The *output approach* measures GDP by adding together the value added of each sector of the economy, such as agriculture, manufacturing, transport, banking and finance and so on. This measure of GDP is conceptually straightforward but is in fact difficult to calculate.

Q2. What are the factors affecting National Income?

Ans.2 Factors Affecting National Income are as follows:

- **Factors of Production**

Normally the more efficient and richer the resources, the higher the level of national income or GNP will be.

- **Land**

Resources like coal, iron & timber are essential for heavy industries so that they must be available and accessible. In other words, the geographical location of these natural resources affects the level of GNP.

- **Capital**
Capital is greatly determined by investment. Investment in turn depends on other factors like profitability, political stability etc.
- **Labor & Entrepreneur**
The quality or productivity of human resources is more important than quantity. Manpower planning and education affect the productivity and production capacity of an economy.
- **Technology**
This factor is more important for nations with little natural resources. The development in technology is affected by the level of invention and innovation on production.
- **Government**
Government can help to provide a favourable business environment for investment. It provides laws and order, regulations that affect exchanges. In HK, the government promotes free trade and competition which encourage economic activities.
- **Political Stability**
A stable economic and political system helps the allocation of resources. Wars, strikes and social unrests will discourage investment and business activities.

Q.3. What are the uses of National Income Statistics?

Ans Uses of National Income Statistics

- **Standard of Living**
The per capita GDP allows us to compare the standard of living of different nations. In general, a nation has a higher standard of living if its per capita GDP is greater than that of another nation.
- **Policy Formulation**
In the compilation of GDP statistics, the government had already gathered a lot of information of the economy. The government can base on these figures to plan and decide its policies.
- **International Comparison**
By converting the local GDP figures into a common unit (usually in US\$), we can compare the standard of living of different nations. It helps to show the rate of growth or development of different nations.
- **Business Decision**
The GDP figures can show the level of development of different industries and sectors of an economy. It helps the businessmen to plan for production.

Q.4. Show by chart the relation between different concepts/ components of National Income/ Concepts of National Product.

Ans. Relation between Different concepts of National Income

Gross domestic product at market price

= Market value of all final goods and services produced within the domestic territory.

+Net factor Income from Abroad (NFIA)

= **Gross domestic national product at market price**

-Depreciation or consumption of fixed capital

= **Net national product at market price**

- Net factor Income from Abroad (NFIA)

= **Net Domestic Product at Market Price**

-Indirect Taxes

+Subsidies

= **Net Domestic Product at Factor Cost or Domestic Income**

+depreciation

=**Gross Domestic Product at Factor Cost**

+ Net factor Income from Abroad (NFIA)

=**Gross National Product at Factor Cost**

-Depreciation

=**Net National Product at Factor Cost**

-Property and entrepreneurial income of the government

-Saving of Non-departmental enterprise

- Net factor Income from Abroad (NFIA)

=**Factor income from Net Domestic Product accruing to Private Sector**

+interest rate on National debt

+Net current transfer payments from the government

+Net current transfer payments from Abroad

+ Net factor Income from Abroad (NFIA)

=**Private Income-Corporate Sector**

-Saving of Corporation (Less Net retained earnings of foreign companies)

=**Personal Income**

-Direct Taxes

-Miscellaneous receipts of government administrative departments i.e. fees, fines etc.

=**Disposable Income**

=**Consumption +Saving**

Q5. What are the difficulties in the measurement of National Income?

Ans. Many difficulties are faced to estimate national income properly. These difficulties are theoretical as well as practical.

Conceptual difficulties

- I. Difference between final and intermediate goods leading to problem of double counting
- II. Change in price.
- III. Services without reward e.g. Work of a housewife.
- IV. Income of Multinationals within domestic territory.

Practical Difficulties

- I. Existence of Barter system of exchange in backward regions of underdeveloped nations
- II. Unreliable statistics
- III. Lack of occupational classification
- IV. Production for self consumption
- V. Errors in calculation
- VI. Regional disparities
- VII. Public do not take interest in study and calculation of national income
- VIII. Problem of depreciation accounting
- IX. Problem of accounting for capital gains and losses

Multiple Choice Questions

1 The three approaches to measuring economic activity are the

- a) Cost, income, and expenditure approaches.
- b) Product, income and expenditure approaches.
- c) Consumer, business, and government approaches.
- d) Private, public, and international approaches.

Ans. B

2 To ensure that the fundamental identity of national income accounting holds, changes in inventories are

- a) Treated as part of expenditure.
- b) Treated as part of saving.
- c) Ignored.
- d) Counted as consumption.

Ans. C

3 To what extent is homemaking and child-rearing accounted for in the government's GDP accounts?

- a) Not at all
- b) Only to the extent that they are provided for pay
- c) Only to the extent that taxes are paid on them
- d) All homemaking and childrearing are accounted for

Ans. A

4 Intermediate goods are

- a) Capital goods, which are used up in the production of other goods but were produced in earlier periods.
- b) Final goods that remain in inventories.
- c) Goods that are used up in the production of other goods in the same period that they were produced.
- d) Either capital goods or inventories.

Ans. C

5 GDP differs from GNP because

- a) $GDP = GNP - \text{net factor payments from abroad.}$
- b) $GNP = GDP - \text{net factor payments from abroad.}$
- c) $GDP = GNP - \text{capital consumption allowances.}$
- d) $GNP = GDP - \text{capital consumption allowances.}$

Ans. A

6 The income-expenditure identity says that

- a) $Y = C + S + T.$
- b) $Y = C + I + G.$
- c) $Y = C + I + G + NX.$
- d) $Y = C + I + G + NX + CA.$

Ans. C

7 Private disposable income equals

- a) $GNP - \text{taxes} + \text{transfers} + \text{interest.}$
- b) $NNP - \text{taxes} + \text{transfers} + \text{interest.}$
- c) $\text{National income} - \text{taxes} + \text{transfers} + \text{interest.}$
- d) $\text{National income} - \text{taxes} - \text{transfers} + \text{interest.}$

Ans. C

8 Consumer spending is spending by _____ households on final goods and services produced _____.

- a) domestic; domestically and abroad
- b) domestic; domestically
- c) domestic and foreign; domestically and abroad
- d) domestic and foreign; domestically

Ans. B

9 Which of the following is *not* a category of consumption spending in the national income accounts?

- a) Consumer durables
- b) Nondurable goods
- c) Services
- d) Housing purchases

Ans. D

10 If $C = \text{Rs.}500$, $I = \text{Rs.}150$, $G = \text{Rs.}100$, $NX = \text{Rs.}40$, and $\text{GNP} = \text{Rs.} 800$, how much is NFP ?

- a) -Rs.10
- b) -Rs.5
- c) Rs.5
- d) Rs.10

Ans. D

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Chapter 3

Money: Meaning, Scope and Function

Q1. What do you mean by Money?

Ans Money is anything that is accepted as the medium of exchange i.e. Whenever an article is generally acceptable in exchange in a community so that B will take it from A in exchange for what A wants, not because B desires the article but because he knows that practically all other persons will take it from him in exchange for the things which they have and which he wants, that article is known as money.

Q2. Explain the functions of Money.

Ans Money performs five important functions:

- **Medium of exchange:** Purchase of goods and services can be made i.e. goods and services are exchanged for money.
- **Measure of value:** Exchange value of commodity can be expressed in terms of money. For e.g. we can say that 10 metres of Cotton Cloth cost \$220 dollars or Rs.10, 000 rupees only.
- **Store of value:** Money being generally acceptable and its value being more or less stable, it is ideal for use as a store of value.
- **Standard or Deferred payment:** Future transactions can be carried on in terms of money. The loans, which are taken at present, can be repaid in money in the future. The value of the future payments is regulated by money.
- **Transfer of value:** Value of any asset can be transferred from one person to another or to any institution or to any place by transferring money. Transfer of purchasing power, which is necessary in commerce and other transactions, has become available because of money.

Q.3. What is the importance of Money?

Ans. Money plays very important role in the process of industrialization and economic development of a country. The importance of a well developed money market is as follows:

1. Financing Trade:

Money Market plays crucial role in financing both internal as well as international trade. Commercial finance is made available to the traders through bills of exchange.

2. Financing Industry:

Money market contributes to the growth of industries in two ways:

- (a) Money market helps the industries in securing short-term loans to meet their capital requirements through the system of finance bills, bonds, securities, commercial papers, etc.
- (b) Industries generally need long-term loans, which are provided in the capital market. Money market indirectly helps the industries through its link with and influence on long-term capital market.

3. Profitable Investment:

Money market enables the commercial banks to use their excess reserves in profitable investment by losing their liquid cash and using them in profitable investment ventures. The main objective of the commercial banks is to earn income from its reserves as well as maintain liquidity to meet the uncertain cash demand of the depositors

4. Self-Sufficiency of Commercial Bank:

Developed money market helps the commercial banks to become self-sufficient. In the situation of emergency, commercial banks can meet their requirements by recalling their old short-run loans from the money market.

5. Help to Central Bank:

Money market helps the central bank in two ways:

- (a) The short-run interest rates of the money market serves as an indicator of the monetary and banking conditions in the country and guide the central bank to adopt an appropriate banking policy,
- (b) The sensitive and integrated money market helps the central bank to secure quick and widespread influence on the sub-markets, and thus achieve effective implementation of its policy.

Q4. How is money classified?

Ans. Money can be classified into different categories:

1. Commodity (full bodied money)

Money whose face value is equal to its commodity value is called commodity money. Example- Gold.

2. Representative (full bodied) money

Money made of paper but whose value is equal to the gold kept in reserve.

3. Credit money

Money whose face value is more than its commodity value (intrinsic value).

Example- Token money, bank deposits and promissory notes.



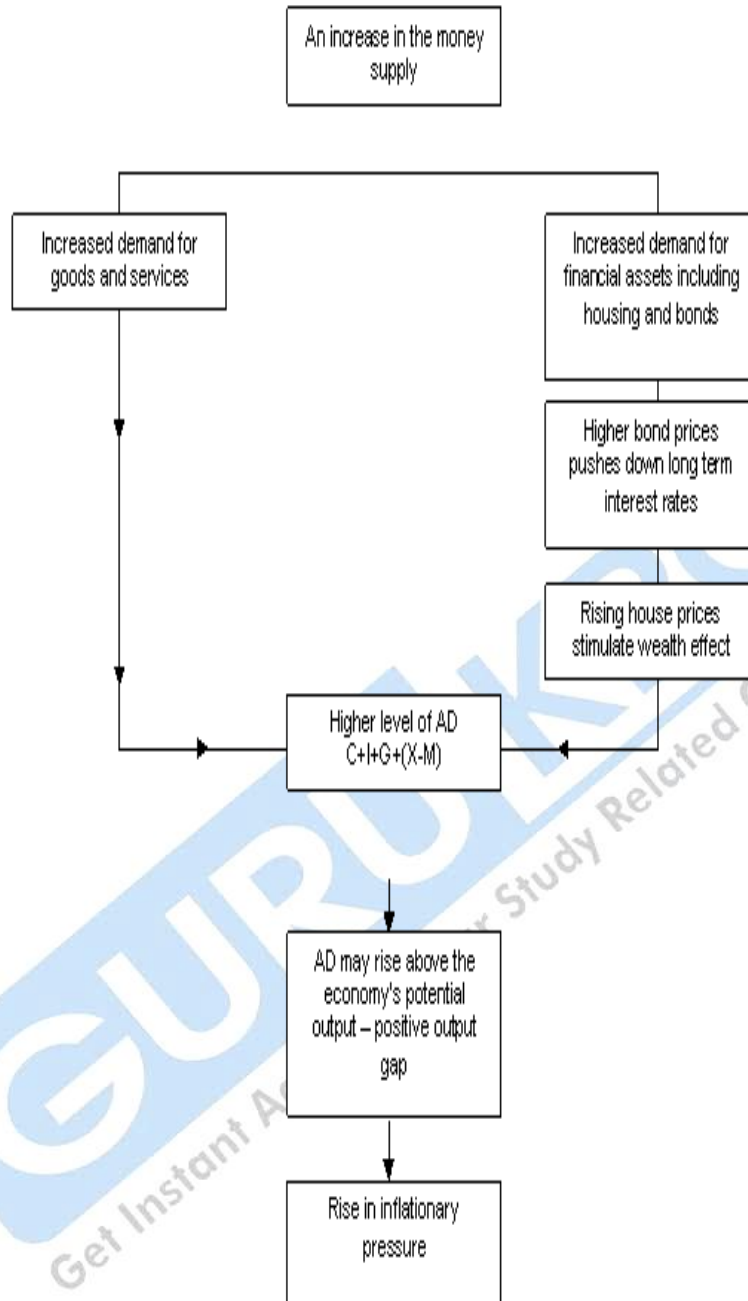
Chapter 4

Monetarism and Keynesian approach to theory of Money

Q1. What are the basics of monetarism?

Ans. Monetarism is an economic school of thought that stresses the primary importance of the money supply in determining nominal GDP and the price level. The "Founding Father" of Monetarism is economist Milton Friedman. The key features of monetarist theories are as follows:

1. Excess supply of money leads to inflation in an economy.
2. Tight control on money supply and credit is required for price stability.
3. Fiscal policy has a role to play in stabilizing the economy providing that the government is successfully able to control its own borrowing.
4. The key is for monetary policy to be **credible** – perhaps in the hands of an independent central bank – so that people's expectations of inflation are controlled.



Q2. Explain the classical approach to the Quantity Theory of Money and give its assumptions.

Ans. The Quantity Theory of money was first developed by Irving Fisher in the inter-war years to explain the theoretical explanation for the link between money and

the general price level. This is sometimes known as the **Fisher identity** or the **equation of exchange**. This is an identity which relates total aggregate demand to the total value of output (GDP).

$$M \times V = P \times Y$$

Where

- M is the money supply
- V is the velocity of circulation of money i.e. the no. of times a unit of currency changes hands
- P is the general price level
- Y is the real value of national output (i.e. real GDP)

Assumptions:

1. Velocity of money is treated to be constant as it is predictable.
2. It is assumed that real value of GDP is not affected by monetary variables.

Hence, assuming V and Y to be constant, changes in supply of money will be equated by changes in general price level.

We can further modify this relationship by dividing both sides by V:

$$M = (1/V) \times PY$$

Since V is constant we can replace (1/V) with some constant, k, and when the money market is in equilibrium, $M_d = M$. So our equation becomes

$$M_d = k \times PY$$

So under the quantity theory of money, money **demand is a function of income and does not depend on interest rates.**

Q3. What are the three motives of holding money as given by Keynes and also explain Keynes Liquidity Preference Theory?

Ans. John M. Keynes explained his liquidity preference theory through his famous book, 'The General Theory of Employment, Interest Rates, and Money' in 1936. He believed that there are three motives of holding money. They are as follows:

- **Transactions motive.** Money is a medium of exchange, and people hold money to buy stuff. So as **income rises, people have more transactions and people will hold more money**

- **Precautionary motive.** People hold money for emergencies (cash for a tow truck, savings for unexpected job loss). Since this also depends on the amount of transactions people expect to make, **money demand is again expected to rise with income.**
- **Speculative motive.** Money is also a way for people to store wealth. Keynes assumed that people stored wealth with either money or bonds. **Under the speculative motive, money demand is negatively related to the interest rate.**

Keynes modeled money demand as the REAL demand for money holding (Real balances) or M/P .

$$M/P = f(i, Y)$$

The big difference between Keynes and Fisher is the importance given to interest rate in Keynesian theory. Consider the two equations:

$$MV = PY \dots \dots \dots \text{Fisher approach}$$

$$M/P = f(i, Y) \dots \dots \dots \text{Keynesian approach}$$

So $M = PY/V$ in the first equation.

Substituting in the second equation:

$$Y/V = f(i, Y) \text{ or } V = Y / (f(i, Y)).$$

This implies that velocity is not constant in Keynesian approach as it changes with interest rate. In fact, velocity and interest rates will move in the same direction. Both are **procyclical, rising with expansions and falling during recessions.**

Q.4. What is the value of money and what are the harmful effects of changes in the value of money?

Ans. The value of money means the purchasing power of money over goods and services in a nation. Therefore, terminology "Value of Money" is a relative concept which explains the association of unit of money and the goods and services that can be acquired with it. This shows that the value of money is associated to the price level for the reason that goods and services are purchased with a money unit at given prices.

The changes in the value of money are associated with the changes in the general price level. Thus, inflation measures the change in value of money. Increase in the

value of money is called deflation and increase in the value of money is known as inflation.

If money is to serve its good purpose its value must remain stable. Changes in value of money lead to harmful consequences in the economy at large.

Some broad effects of changes in value of money are traced below:

1. Price fluctuation implies that the value of money is unstable. This adversely affects the confidence in money as money fails to serve as a good store of value.
2. Even as a means of payments it loses its growth since prices of all goods do not change in the same order, the relative price structure is distorted.
3. Price variations in product and factor markets are not uniform. Thus, the cost-functions and revenues in different categories of production differ. As a result, profitability of firms and industry tend to differ.
4. When value of money changes incoherently in different types of real and financial assets, assets portfolio management becomes a difficult task. It also distorts the pattern of wealth distribution and position of the wealth holders.
5. Effects of rising prices in general inflation effects are also different from the effects of falling prices in general the deflation effects. Economic development is disturbed due to instability in the value of money. It also adversely affects the course of economic planning and programming both at macro and micro levels.

Multiple Choice Questions

1 Money appears to have a major influence on

- a) Inflation
- b) Business cycles
- c) Interest rates
- d) Each of the above

Ans. D

2 In India, monetary policy is implemented by the

- a) Indian Congress
- b) Finance Ministry
- c) Reserve Bank of India
- d) Planning commission of India

Ans. C

3 The financial system provides all of the following financial services except:

- a) Risk sharing
- b) Provision of liquidity
- c) Reduction of information costs
- d) The elimination of public debt

Ans. D

4 A higher interest rate might induce households to _____ but businesses to _____.

- a) Save more, borrow less
- b) Save less, borrow more
- c) Save more, borrow more
- d) Save less, borrow less

Ans. A

5 An increase in the growth rate of the money supply is most likely to be followed by

- a) A recession
- b) A decline in economic activity
- c) Inflation
- d) All of the above

Ans. C

6 Which of the following are true statements?

- a) Inflation is defined as a continual increase in the money supply.
- b) Inflation is a condition of a continually rising price level.
- c) The inflation rate is measured as the rate of change in the aggregate price level.
- d) Only (b) and (c) of the above are true statements.

Ans. D

7 When a nation's money supply persistently increases at a faster rate than the nation can increase its output of goods and services, which of the following happens?

- a) budget deficits increase
- b) inflation occurs
- c) real output accelerates
- d) living standards rise

Ans. B

8 When you purchase shares of corporate stock, then:

- a) you have loaned money to the corporation
- b) you own part of the corporation
- c) you have made new funds available to the corporation
- d) all of the above

Ans. D

9 Monetary policy consists of:

- a) controlling taxes to influence consumer and business spending
- b) influencing the availability of bank credit by changing interest rates
- c) adjusting the level of government expenditures to stimulate economic activity
- d) all of the above

Ans. B

10 The interest rate is:

- a) the cost of using borrowed funds
- b) a key variable that influences investment in capital goods
- c) strongly influenced by monetary policy actions
- d) all of the above

Ans. D

Section B
Chapter 1
**Different approaches to Income and
Employment Determination.**

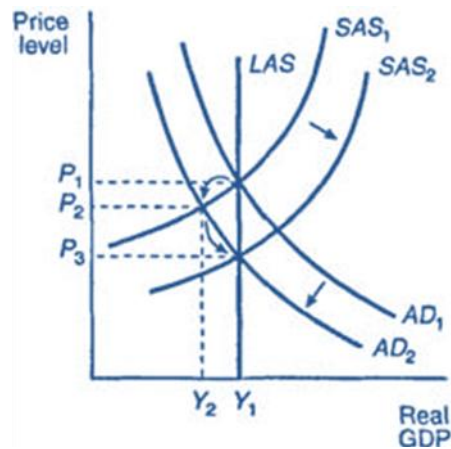
Q1. Give the basic principles underlying Classical Theory of Employment and Income?

Ans. The basic principles of Classical theory of Employment and Income are as follows:

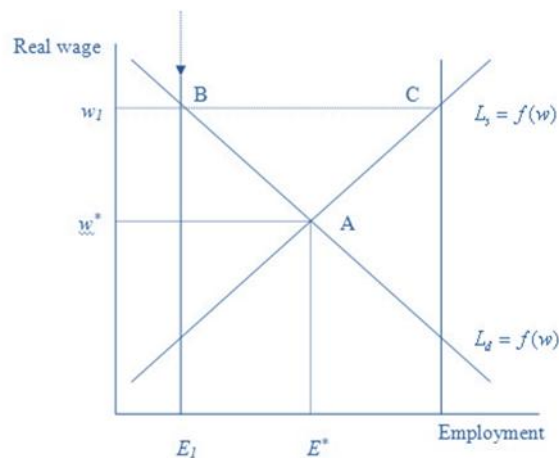
1. Economy is self-correcting.
2. Market provides the most efficient outcome i.e. they believe in the idea of laissez faire.
3. Market achieves the natural level of GDP and Employment through invisible hand.

The classical theory is based on two important beliefs:

- **Say's law-** It states that supply creates its own demand. When an economy produces a certain level of real GDP, it also generates the income needed to purchase that level of real GDP. Hence, the economy is always capable of achieving the natural level of real GDP.
- **Flexible prices and wages-** The flexibility of the interest rate as well as other prices is the self-adjusting mechanism of the classical theory that ensures that real GDP is always at its natural level.
 - Flexibility of Prices ensures equilibrium in the **goods and services market**, keeping GDP at its natural level.



- Flexibility of the wage rate keeps the **labor market** or the **market for workers**, in equilibrium all the time. If the supply of workers exceeds firms' demand for workers, then wages paid to workers will fall so as to ensure that the work force is fully employed.



Q2. Explain the theory of Keynesian Model of Employment and Income.

Ans.2. Keynesian theory evolved after the Great Depression of 1930s when markets failed to work efficiently. Keynes gave his theory based on following principles:

1. Keynes emphasized that it's the level of **aggregate demand** that affects output and employment and not the level of prices and wages.
2. **Government** needs to intervene when market fails to work efficiently.
3. The Keynesian theory is a **rejection of Say's Law** and the notion that the economy is self-regulating. Keynes stated that wages and prices are **Sticky**. The stickiness of prices and wages in the downward direction prevents the economy's resources from being fully employed and thereby prevents the economy from returning to the natural level of real GDP.

Keynes's income-expenditure model

Four components of GDP:

- Aggregate expenditures on consumption (C)
- Aggregate expenditures on Investment (I)
- Aggregate expenditures on Government (G)
- Aggregate expenditures on Net exports (NX)

Aggregate consumption = $C' + cY$ = Aggregate Expenditure

Where,

C' is the autonomous consumption.

c is the marginal propensity to consume

Y is the income level

Equilibrium real GDP in the income-expenditure model is found by setting current real national income, Y , equal to current aggregate expenditure, AE . Algebraically, the equilibrium condition that $Y = AE$ implies that

$$Y = A + cY$$

$$(1-c) Y = A$$

$$Y^* = 1/(1-c) * A$$

$$Y^* = m * A$$

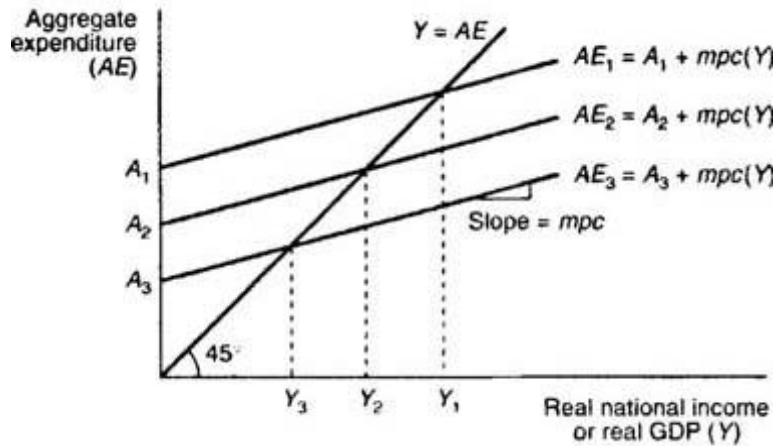
Where, $m = 1/(1-c)$ and $0 < c < 1$, $m > 1$

Y^* is known as the equilibrium level of output and m is known as the **Keynesian Multiplier**. The above equation implies that equilibrium real GDP, Y^* , is always a *multiple* of autonomous aggregate expenditure, A , which explains why m is referred to as the Keynesian multiplier.

Q.3. Give graphical representation of Keynesian Income-Expenditure method?

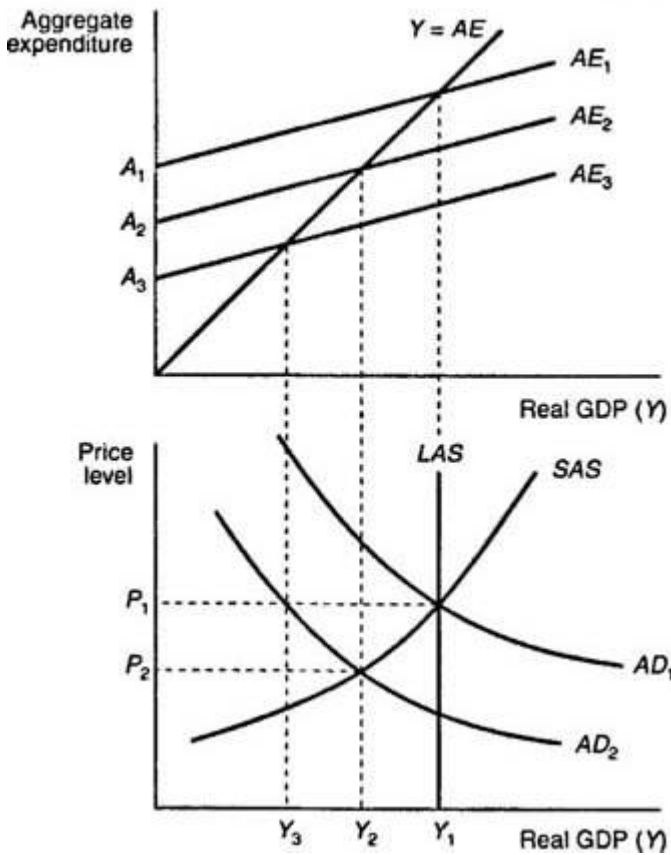
Ans.3. The determination of equilibrium real national income or GDP using the income-expenditure approach can be depicted graphically, as in the following figure. The figure shows three different **aggregate expenditure curves**, labeled AE_1 , AE_2 , and AE_3 , which correspond to three different levels of autonomous expenditure, A_1 , A_2 , and A_3 . The upward slope of these AE curves is due to the positive value of the mpc . As real national income Y rises, so does the level of aggregate expenditure. The Keynesian condition for the determination of equilibrium real GDP is that $Y = AE$. This equilibrium condition is denoted in Figure by the diagonal, 45° line, labeled $Y = AE$.

To find the level of equilibrium real national income or GDP, you simply find the intersection of the AE curve with the 45° line. The levels of real GDP that correspond to these intersection points are the *equilibrium* levels of real GDP, denoted in figure as Y_1 , Y_2 , and Y_3 . Note that each AE curve corresponds to a different equilibrium level for Y . Note also that each Y is a *multiple* of the level of autonomous aggregate expenditure, A , as was found in the algebraic determination of the level of equilibrium real GDP.



Q4. Give graphical representation of Keynesian Theory?

Ans. The Keynesian theory of the determination of equilibrium output and prices makes use of both the income-expenditure model and the aggregate demand-aggregate supply model, as shown in the following figure:



Suppose that the economy is initially at the natural level of real GDP that corresponds to Y_1 in the above figure. Associated with this level of real GDP is an aggregate expenditure curve, AE_1 . Now, suppose that autonomous expenditure declines, from A_1 to A_3 , causing the AE curve to shift downward from AE_1 to AE_3 . This decline in autonomous expenditure is also represented by a reduction in aggregate demand from AD_1 to AD_2 . At the same price level, P_1 , equilibrium real GDP has fallen from Y_1 to Y_3 . However, the intersection of the SAS and AD_2 curves is at the lower price level, P_2 , implying that the price level falls. The fall in the price level means that the aggregate expenditure curve will not fall all the way to AE_3 but will instead fall only to AE_2 . Therefore, the new level of equilibrium real GDP is at Y_2 , which lies below the natural level, Y_1 .

Keynes argues that prices will not fall further below P_2 because workers and other resources will resist any reduction in their wages, and this resistance will prevent suppliers from increasing their supplies. Hence, the SAS curve will not shift to the right as in the classical theory and the economy will remain at Y_2 , where some of the economy's workers and resources are *unemployed*. Because these unemployed workers and resources earn no income, they cannot purchase goods and services. Consequently, the aggregate expenditure curve remains stuck at AE_2 , preventing the economy from achieving the natural level of real GDP. The above figure therefore illustrates the Keynesians' rejection of Say's Law, price level flexibility, and the notion of a self-regulating economy.

Q5. How does Keynesian theory of Employment and Income contradicts classical view?

Ans. Keynesian theory contradicts the classical economist by stating that usually GDP remains below its normal level. Keynes used his **income-expenditure** model to argue that the economy's equilibrium level of output or real GDP may not correspond to the natural level of real GDP. In the income-expenditure model, the equilibrium level of real GDP is the level of real GDP that is consistent with the current level of aggregate expenditure. If the current level of aggregate expenditure is not sufficient to purchase all of the real GDP supplied, output will be cut back until the level of real GDP is equal to the level of aggregate expenditure. Hence, if the current level of aggregate expenditure is not sufficient to purchase the *natural* level of real GDP, then the equilibrium level of real GDP will lie somewhere *below* the natural level.

Multiple Choice Questions

1 Prices that do not always adjust rapidly to maintain equality between quantity supplied and quantity demanded are:

- a) Fixed prices
- b) Regulatory prices
- c) Sticky prices

d) market prices

Ans c

2 The economists who emphasised wage-flexibility as a solution for unemployment were:

a) New-Keynesian

b) Keynesian

c) Classical

d) Post-Keynesian

Ans c

3 According to the classical economists, the economy:

a) Requires fine tuning to reach full employment.

b) Can never deviate from full employment.

c) Will never be at full employment.

d) Is self correcting.

Ans.d

4 According to classical models, the level of employment is determined primarily by:

a) The quantity of money.

b) Prices and wages.

c) The level of aggregate demand for goods and services.

d) Interest rates.

Ans.b

5 Keynesian economics became popular because it was able to explain:

a) Stagflation in the late 1970s.

b) Demand-pull inflation in the 1960s.

c) Low growth rates in the 1950s.

d) The prolonged existence of high unemployment during the Great Depression.

Ans. D

6 According to Keynes, the level of employment is determined by:

a) Price and wages.

b) The behavior of trade unions.

c) The level of aggregate demand for goods and services.

d) The quantity of money.

Ans. c

7 The notion that the government can stabilise the macroeconomy is known as:

- a) Microeconomic foundations of macroeconomics.
- b) Fine tuning.
- c) Monetarism.
- d) The classical model.

Ans. a

8 The quantity theory of money implies that a given percentage change in the money supply will cause:

- a) a larger percentage change in nominal GDP.
- b) a smaller percentage change in nominal GDP.
- c) an equal percentage change in real GDP.
- d) an equal percentage change in nominal GDP.

Ans. d

9 If the demand for money depends on the interest rate, the velocity of circulation is:

- a) Constant and the quantity theory of money do not hold.
- b) Not constant and the quantity theory of money does not hold.
- c) Constant and the quantity theory of money do hold.
- d) Not constant and the quantity theory of money does hold.

Ans b

10 People are said to have rational expectations if they:

- a) Assume that this year's inflation rate will be equal to the average inflation rate over the past 10 years.
- b) Merely guess at the inflation rate.
- c) Use all available information in forming their expectations.
- d) Assume that this year's inflation rate will be the same as last year's inflation rate.

Ans. c

11 Listed in order, the phases of a complete business cycle are

- a) Contraction, trough, expansion, peak.
- b) Contraction, recession, depression, expansion.
- c) Trough, expansion, boom, bust.
- d) Expansion, contraction, trough, peak.

Ans. A

12 Which of the following macroeconomic variables is procyclical?

- a) the velocity of money

- b) the nominal money stock
- c) the real interest rate
- d) the unemployment rate

Ans. c



Chapter 2

Business Cycles

Q1. What do you mean by Business Cycles? Give their causes and remedies.

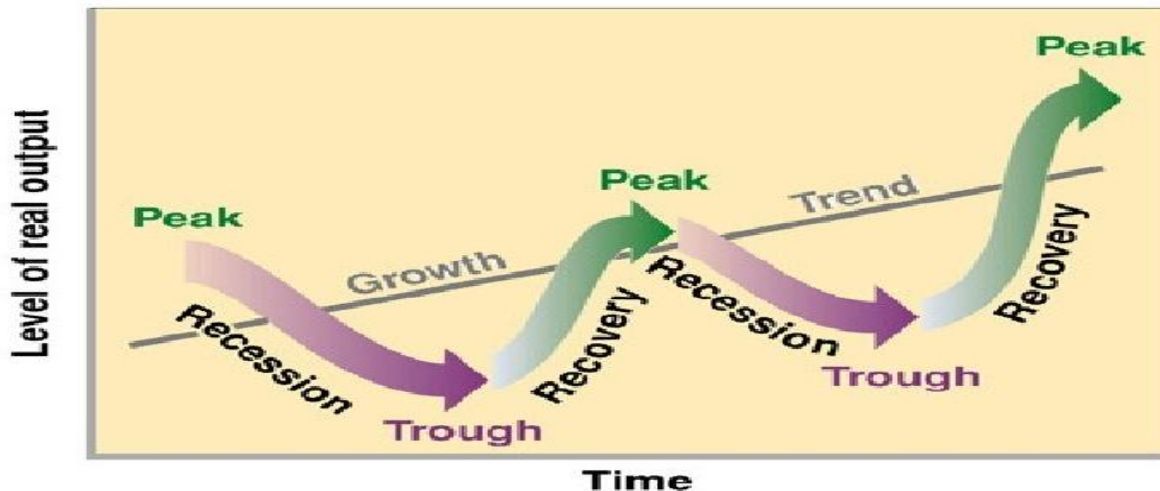
Ans. In the most basic terms, business cycles refer to fluctuations in the economic growth of a nation's economy. Sometimes, business cycles are simply referred to as ups and downs in the economy.

There are four stages in any business cycle. They are as follows:

- ❖ Stage 1- Creation
- ❖ Stage 2- Growth
- ❖ Stage 3- Maturity
- ❖ Stage 4- Recession

The four stages can be shown diagrammatically as follows:

Four stages



Q2. What are the factors that lead to business cycles?

Ans. Causes: There are a multitude of factors that are considered responsible for causing business cycles. They can be broadly characterized as

1. The demand side (the aggregate demand from all sections – consumers, investors, government, and foreign – for the economy's goods and services)
2. The supply side (which pertains to factors relevant to supply of goods and services, such as changes in input costs, technological advances, etc.).

Business cycles or fluctuations in the economy result from shifts in the aggregate demand curve, the aggregate supply curve, or both. A **rightward shift in the aggregate demand curve leads to an expansion** (putting, in general, an upward pressure on the price level) and a leftward shift leads to an opposite effect. Similarly, a **rightward shift in the aggregate supply curve leads to an expansion** (generally putting down-ward pressure on the price level) and a leftward shift has the opposite effect. A number of key factors do that lead to business fluctuations.

Q.3. What are the remedial measures to tackle the problem of Business cycles?

Ans Business cycles can be controlled through Government intervention. Government adopts different policies to control expansionary or recessionary business cycles. Important policies adopted by Government to control business cycles are as follows:

- ❖ **Monetary policy:** Government controls the supply of money to avoid business cycles. The government expands money supply during recessionary period to increase aggregate demand and decreases money supply during inflationary or boom periods.
- ❖ **Fiscal policy:** Government can increase or decrease its spending during recessionary or inflationary/boom period, respectively.

Section C

Chapter 1

Financial Institutions

Q1. What are the functions of Central Bank?

Ans. The entity responsible for overseeing the monetary system for a nation is known as the Central Bank of that nation. Central banks have a wide range of responsibilities, from overseeing monetary policy to implementing specific goals such as currency stability, low inflation and full employment.

Example- Reserve Bank of India, Federal Reserve System in U.S.

Functions of the Central Bank:

1. Monopoly of Note-Issue:

Note-issue primarily is the main function of a central bank in every country. These days, in all the countries where there is a central bank generally it has got the monopoly or the sole right of note-issue.

2. Banker, Agent & Adviser to the Government:

As banker to the government, central bank performs following functions:

- It operates the accounts of the public enterprises.
- It manages government departmental undertakings and government funds and when there is a need gives loans to the government.
- It looks after the management of public debt.
- It accepts the payment of taxes from the public on behalf of the government and makes payment for the cheques issued by the government.
- It also undertakes transactions relating to foreign currencies on behalf of the government.

3. Custodian of Cash Reserves of Commercial Bank:

Central bank is the bank of banks. It regulates commercial banks by provides security to their cash reserves, gives them loan at the times of need, gives them advice on financial and economic matters and works as clearing house among various member banks.

4. Custodian of Nation's Reserves of International Currencies:

Central bank is the custodian of the foreign currency obtained from various countries in order to stabilize the external value of the currency.

5. Lender of the Last Resort:

Central bank works as lender of the last resort for commercial banks because in the times of need it provides them financial assistance and accommodation by discounting their bills and securities.

6. Clearing House Function:

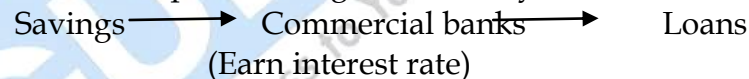
All the commercial banks have their accounts with the central bank. Therefore, central bank settles the mutual transactions of banks.

7. Credit Control:

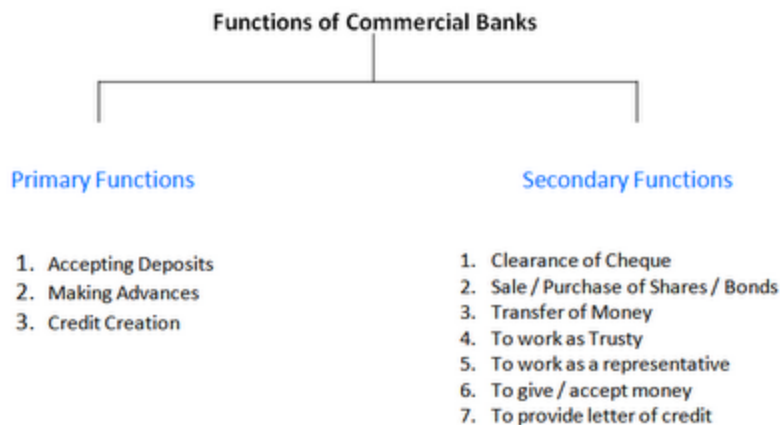
The most important function of central bank is to control the volume of credit for bringing about stability in the general price level and accomplishing various other socio-economic objectives. There are number of methods which a central bank may use for controlling the volume of credit such as **bank rate, open market operations, change in reserve ratio and various selective controls.**

Q2. What do you mean by Commercial banks and state their functions?

Ans. A commercial bank is a profit-seeking business firm which deals in money and credit by accepting deposits of money from the public to keep them in its custody for safety. This can be explained diagrammatically as follows:



The functions of a commercial bank can be divided into:



Q.3. How does banks create money?

Ans. Credit creation is one of the important functions of a commercial bank. Other financial institutions transfer money from the lenders to the borrowers. Commercial banks while performing the same function, they create credit or bank money also. **Professor Sayers** says, "Banks are not merely purveyors of money, but in an important sense, they are the manufacturers of money".

The process of credit creation occurs when banks accepts deposits and provide loans and advances. When the customer deposits money with the bank, they are called **primary deposits**. This money will not be withdrawn immediately by them. Hence banks keeps a certain amount of deposits as reserves which is known as cash reserve ratio and provide the balance amount as loans and advances. Thus, every deposit creates a loan. Commercial banks give loans and advances against some security to the public. But the bank does not give the loan amount directly. It open an account in the name of the borrower and deposits the amount in that account. Thus, every loan creates a deposit. The loan amount can be withdrawn by means of checks. They create a deposits while lending money also. These deposits created by banks with the help of primary deposits are called **derivative deposits**.

Customers use these loans to make payments. While paying they issue a checks against these deposits. The person who receives the checks, deposit it in another bank. For that bank, this will be the primary deposit. A part of the deposit will be kept as a reserve and the balance will be used for giving loans and advances. This process is repeated by other banks. When all the banks involve in this process, it is called **Multiple Credit Creation**.

Multiple Choice Questions

1 Banks create money when they:

- a) reduce loans and sell securities
- b) expand loans and sell securities
- c) reduce loans and buy securities
- d) expand loans and buy securities

Ans. D

2 Which of the following directly increases the money supply?

- a) the public withdraws cash from banks
- b) the public deposits cash into banks
- c) banks sell securities to dealers
- d) none of the above

Ans. A

3 The simple deposit expansion multiplier is equal to:

- a) one minus the reserve requirement percentage
- b) one time the reserve requirement percentage
- c) one divided by the reserve requirement percentage
- d) none of the above

Ans. c

4 The demand for the monetary base is composed of demand by:

- a) Banks and the Indian Treasury
- b) Banks and the RBI
- c) Banks and the public
- d) The Treasury and the RBI

Ans. c

5 The sum of vault cash and bank deposits with the RBI minus required reserves is called

- a) The monetary base.
- b) The money supply.
- c) Excess reserves.
- d) Total reserves.

Ans. c

6 If a bank reduce its holdings of excess reserves by making loans,

- a) The monetary base will decrease.
- b) The money supply will increase.
- c) Both (a) and (b) of the above will occur.
- d) Neither (a) nor (b) of the above will occur.

Ans. c

7 Depositors often withdraw more currency from their bank accounts during the Christmas season. Therefore, one would predict that

- a) The money multiplier will tend to fall during Christmas season.
- b) The money multiplier will tend to rise during Christmas season.
- c) Discount borrowing will tend to fall during Christmas season.
- d) None of the above will occur.

Ans. b

8 If a member of the nonbank public purchases a government bond from the Reserve Bank of India with currency, then

- a) Both the monetary base and reserves will fall.

- b) Both the monetary base and reserves will rise.
- c) The monetary base will fall, but reserves will remain unchanged.
- d) The monetary base will fall, but currency in circulation will remain unchanged.

Ans. c

9 When the RBI wants to reduce reserves in the banking system, it will

- a) Purchase government bonds.
- b) Extend discount loans to banks.
- c) Print more currency.
- d) Sell government bonds.

Ans. A

10 When the RBI simultaneously purchases government bonds and extends discount loans to banks,

- a) The money supply unambiguously falls.
- b) The money supply unambiguously rises.
- c) The net effect on the money supply cannot be determined because the two RBI actions counteract each other.
- d) The RBI action has no effect on the money supply.

Ans. B

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Chapter 2

Monetary Policy in India

Q.1. What is the monetary policy framework in India?

Ans. The basic objectives of any monetary policy is price stability and ensuring credit flow to support growth which have remained unchanged in India, but the underlying operating framework for monetary policy has undergone a significant transformation during the past two decades. The relative emphasis placed on price stability and economic growth is modulated according to the circumstances prevailing at a particular point in time and is clearly spelt out, from time to time, in the policy statements of the Reserve Bank.

FRAMEWORK:

Mid-1980s- Broad money was used as the nominal anchor to maintain stable relationship between money, output and prices.

1990s- NEP introduced the multiple indicator approach whereby interest rates or rates of return in different financial markets along with data on currency, credit, trade, capital flows, fiscal position, inflation, exchange rate, etc., are juxtaposed with the output data for drawing policy perspectives.

20th century- liquidity management in the system is carried out through open market operations (OMO) in the form of outright purchases/sales of government securities and daily reverse repo and repo operations under a Liquidity Adjustment Facility (LAF) and repo and reverse repo rates have emerged as the main instruments for interest rate signaling in the Indian economy.

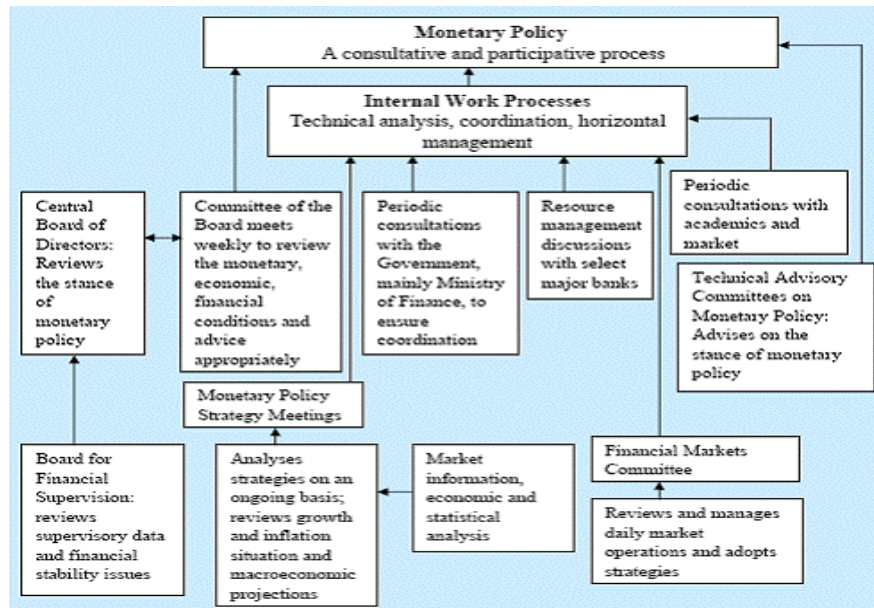
The armory of instruments to manage, in the context of large capital flows and sterilization, has been strengthened with open market operations through Market Stabilization Scheme (MSS), which was introduced in April 2004. Under the MSS, the Reserve Bank was allowed to issue government securities as part of liquidity sterilization operations in the wake of large capital inflows and surplus liquidity conditions.

Some of the important factors that shaped the changes in monetary policy framework and operating procedures in India during the 1990s were:

- The delinking of budget deficit from its automatic monetization by the Reserve Bank,
- Deregulation of interest rates

- Development of the financial markets with reduced segmentation through better linkages
- Development of appropriate trading, payments and settlement systems along with technological infrastructure.

Institutional Framework of Monetary Policy in India



Multiple Choice Questions

1 The period for Call Money is _____

- 10 to 15 days
- 1 to 14 Days
- 15 to 30 Days
- One Month

Ans (B)

2 Who regulates the money circulation in India?

- State Bank Of India
- Reserve Bank Of India
- NABARD
- Commercial Banks

Ans (B)

3 Which of the following is not an organized sector in India?

- Nationalised Banks

- b) Regional Rural Banks
- c) Cooperative Banks
- d) Chits and Money lenders

Ans (D)

4 Who will settle the grievances of customers of banks?

- a) Reserve Bank of India
- b) State Bank of India
- c) Local Courts
- d) Ombudsmen

Ans (D)

5 Who introduced the Banking Ombudsmen Scheme?

- a) ARBI
- b) SBI
- c) Ministry of Finance
- d) NABARD

Ans (A)

6 When was Reserve Bank of India established?

- a) 1920
- b) 1925
- c) 1935
- d) 1948

Ans (C)

7 When was Reserve Bank of India Nationalized?

- a) 1947
- b) 1948
- c) 1949
- d) 1950

Ans (C)

8 When was Indian Banking Act come into force?

- a) 1948
- b) 1949
- c) 1950
- d) 1951

Ans (B)

9 How many banks were first nationalised?

- a) 10
- b) 12
- c) 14
- d) 16

Ans (C)

10 When was the second phase of nationalisation done?

- a) 9th July 1969
- b) 10th July 1968
- c) 16th August 1985
- d) 15th April, 1980

Ans (D)

11 Consider the following steps:

- fiscal reforms
- Structural reforms
- financial sector reforms
- Population policy

The New Economic Policy in India includes

- a) 1, 2 and 3
- b) 2 and 3
- c) 1 and 4
- d) 1, 2, 3 and 4

12 Which of the following statements correctly define the meaning of reverse repo rate?

- a) The rate at which apex bank RBI lends money to commercial banks.
- b) The rate at which the apex bank RBI borrows money from commercial banks.
- c) The amount of funds that the commercial banks have to keep with the RBI.
- d) The rate at which apex bank RBI allows finance to commercial banks.

Ans.b

13 Bank rate is defined as

- a) The ratio of the liquid assets to time and demand liabilities
- b) Percentage of [bank deposits](#) which banks are required to keep with RBI in the form of reserves or balances.
- c) Rate of interest charged by the RBI for providing funds or [loans](#) to the banking system.
- d) Rate at which RBI lends to commercial banks generally against government securities.

Ans.c

14 What is the present repo rate in India?

- a) 4.75%
- b) 9%
- c) 8%
- d) 6.73%

Ans.c



Key Terms

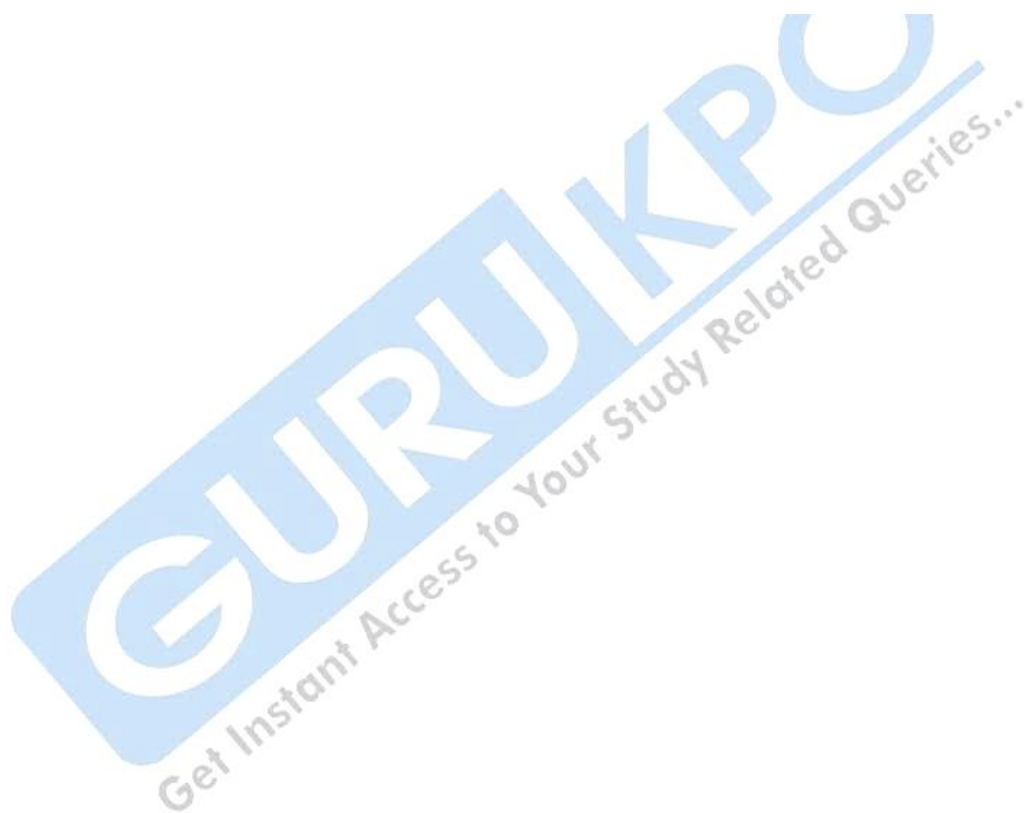
1. **The Accelerator**- A parameter that defines the relationship between national income and required capital stock.
2. **An Asset**- Anything of value *owned* by an individual, institution or economic agent.
3. **Autonomous Expenditure**- Expenditure that takes place independent of national income.
4. **A Bond**- A long term (10+ years) debt instrument.
5. **Business Inventories**- Additions or deletions to existing inventory levels in response to economic conditions (a flow variable).
6. **Business Cycle** - An economic contraction (recession) followed by an expansion.
7. **Capital Gain** -A positive difference between the sale price of an asset and its purchase price.
8. **Capital Loss** -A negative difference between the sale price of an asset and its purchase price.
9. **Consumer**- An economic agent that desires to purchase goods and services with the goal of maximizing the satisfaction (utility) from consumption of those goods and services.
10. **Cyclical Unemployment**- Changes in unemployment attributed to cyclical behavior in economic activity.
11. **Deflation**- A decline in the aggregate price level over some defined time period.
12. **Demand**- A relationship between market price and quantities of goods and services purchased in a given period of time.
13. **Depreciation**- A measure of the wear and tear that affects capital equipment or other intermediate goods.
14. **Diminishing Marginal Productivity (DMP)**-A short run production concept where increases in the variable factor of production lead to less and less additional output.
15. **Direct Finance** - The transfer of loanable funds through the use of capital markets (i.e., the Stock and Bond markets) usually facilitated by *investment banks*.
16. **Disinflation**- A decline in the overall rate of inflation. Prices are still rising but by a smaller amount relative to previous time periods.
17. **Disposable Personal Income**-Personal Income less taxes paid.
18. **Durable Goods**- Goods that deliver consumption services over an extended period of time.
19. **Economic Expansion**- Growth in Real GDP for one fiscal quarter or more.
20. **Economics**- The study of how a given society allocates scarce resources to meet (or satisfy) the unlimited wants and need of its members.
21. **Employment**- A measure of those individuals in the labor force working, at least one hour per week, for pay.
22. **Equilibrium**- A situation where there is no tendency for change.

23. **Exchange Rate**- The value of a domestic currency expressed in terms of a foreign currency or *basket* of foreign currencies.
24. **Factors of Production**- An exhaustive list of inputs required for any type of production.
25. **Financial Intermediation**- A form of *indirect* finance where an institution (a bank) acts as an intermediary to reduce transactions costs and facilitate borrowing and lending.
26. **Final Goods and Services**- Goods and services that are purchased for direct consumption.
27. **Fixed nonresidential Investment**- Additions to the existing stock of plant and equipment used in the production of goods and services.
28. **Fixed Residential Investment**- Additions to the existing stock of housing used to provide housing services.
29. **Flow Variable** - A variable that is measured per unit of time..
30. **Frictional Unemployment**- Unemployment that exists as a natural consequence of market activity where individuals are in-between jobs.
31. **GDP**- Gross Domestic Product: The market value of all final goods and services produced in a given time period.
32. **Gross Investment**- Investment that includes additions to the capital stock as well as the replacement of depreciated capital.
33. **Human Capital/Wealth** -A measure of the skills, ability or productivity of human beings.
34. **Income Producing Asset**- An asset that is used to generate revenue from the production and sale of goods and services.
35. **Indirect Business Taxes**- Taxes that tend to be built into the price of a particular good (i.e., excise taxes).
36. **Income Taxes**- Taxes that are based on and vary with personal or corporate income.
37. **Indirect Finance**- The transfer of loanable funds (deposits) through the use of financial intermediaries (commercial banks).
38. **Induced Expenditure**- Changes in spending due to changes in (national) income. See the *Marginal Propensity to Spend*.
39. **Inflation**- An increase in the price level over some defined time period.
40. **Interest Sensitivity of Investment**- A measure of responsiveness of investment expenditure to changes to the (real) interest rate.
41. **Interest Sensitivity of Money Demand**- A measure of responsiveness of the demand for cash balances to changes in the (nominal) interest rate.
42. **Intermediate Goods and Services**- **Goods** (or services) used to produce other goods (i.e., capital equipment).
43. **Investment**- Changes to the existing capital stock or business inventories.
44. **Labor Force Participation Rate**- The ratio of those in the labor force (the employed and unemployed) and those that are available for work.

45. **Liquidity**- A measure of the ease by which a financial asset can be converted into a form readily accepted as payment for goods and services.
46. **M₁** - A *narrow* money supply measure that includes currency in circulation and the value of demand deposits.
47. **M₂** - A *broad* money supply measure that includes currency, demand deposits, and the value of time deposits.
48. **Marginal Propensity to Consume**-The fraction of each additional dollar of income devoted to consumption expenditure.
49. **Marginal Propensity to Spend**- The fraction of each additional dollar of income devoted to any type of spending (i.e., consumption, investment, government, or net exports).
50. **Market**- A place or institution where buyers and sellers come together and exchange factor inputs or final goods and services. A market is one of several types of economic rationing systems.
51. **Money Market Instrument**- A short term (less than 10 years) debt instrument.
52. **Money Multiplier**- The relationship between changes in the monetary base and the money supply.
53. **Monetary Base**- Also known as *High-powered Money*. Reserves + Currency in the monetary system - the main liabilities of the central bank.
54. **National Income** - The sum of all types of income (wages, net interest, profits, and net rental income) earned in a given time period by any type of economic agent (individuals or corporation).
55. **Natural Rate of Unemployment**- That rate of unemployment where there is neither upward nor downward pressure on prices.
56. **Net Investment** - Investment exclusive of replacement of depreciated capital.
57. **Nominal GDP**-GDP measured at current prices.
58. **Nominal Interest Rate** - The interest rate published as part of a debt contract.
59. **Non-Durable Goods**-Goods that tend to be immediately consumed or deliver consumption services over a short period of time.
60. **Peak**- A point of transition in the business cycle from expansion to contraction.
61. **Permanent Income** - Expected levels of individual income that guide consumption expenditure decisions.
62. **Personal Income** - The income earned by individual households in a given time period.
63. **Potential Output**- A measure of the economy's ability to produce goods and services.
64. **Primary Stock/Bond Market** -The market where new shares of stock or new bonds are bought and sold. Activity in this market represents *direct finance* where actual borrowing and lending activity takes place.
65. **Producer**- An economic agent that converts inputs (factors of production) into output (goods and services) with the goal of maximizing profits from production and sale of those goods and services.
66. **Profits**- The difference between sales revenue and the costs of production..

67. **The Quantity Equation**- Also known as the *Equation of Exchange*, an identity relating the amount of money in circulation to the price level and level of output in an aggregate economy.
68. **Real GDP**- GDP measured at constant (some base period) prices.
69. **Real Interest Rate**- An interest rate that has been adjusted for changes in the price level or changes in purchasing power over some time period.
70. **Recession**- Negative growth in Real GDP for two or more fiscal quarters.
71. **Relative Price**- A ratio of any two prices or one particular price compared to a price index.
72. **Risk**- A measure of uncertainty about the value of an asset or the benefits of some economic activity.
73. **Risk Premium**- An adjustment to a real interest rate to compensate for uncertainty in the ability of a borrower to service a loan.
74. **Savings**- The difference between income and expenditure in the current time period.
75. **Scarcity**- A physical or economic condition where the quantity desired of a good or service exceeds the availability of that good or service in the absence of a rationing system.
76. **Stagnation**- An economic condition where an economy is facing relatively high rates of inflation, little or no growth, and high unemployment.
77. **Secondary Stock/Bond Market** - The market where existing shares of stock or existing bonds are traded. This market provides liquidity to these types of financial assets.
78. **A Share of Stock**- A financial instrument that give the holder a share of ownership in a publicly held corporation.
79. **Shortage**- A market condition where the quantity demanded of a particular good or service exceeds the quantity available.
80. **Speculation**- The purchase of a good or asset not intended for final consumption but rather in the expectation of future sale at some higher price.
81. **Spending Multiplier**- The relationship between an autonomous spending shock and eventual changes in aggregate income.
82. **Standard of Living**- The ratio of the output of an economy and population. Also known as per-capita output.
83. **Stock Variable**- A variable measured at point in time.
84. **Structural Unemployment**- Unemployment that exists as a consequence of structural changes in economic activity.
85. **Supply**- A relationship between market price and quantities of goods and services made available for sale in a given period of time.
86. **Surplus**- A market condition where the quantity supplied exceeds the quantity demanded.
87. **Trough**- A point of transition in the business cycle from contraction to expansion.
88. **Unemployment**- The difference between the number of people in the labor force and those working for pay.

89. **Utility**-A measure of the satisfaction received from some type of economic activity (i.e., consumption of goods and services or the sale of factor services).
90. **Velocity**-The number of times a given quantity (stock) of money changes hands in a given time period (the ratio of expenditure in that time period to a given measure of the money supply).
91. **Yield**- The ratio between the flow of returns (income, revenue, profits) generated by an asset and the purchase price of that asset.



Case Studies

Case study 1 Keynes' Views on the Consumption Function

Keynes argued that consumption depends on the level of current *disposable* income (Y_{dis}) (i.e. income after the payment of taxes). If disposable income is very low, consumption will exceed it. As disposable income rises, so will consumption, but it will account for a decreasing *proportion* of income. Saving, by contrast, will account for an increasing proportion of income.

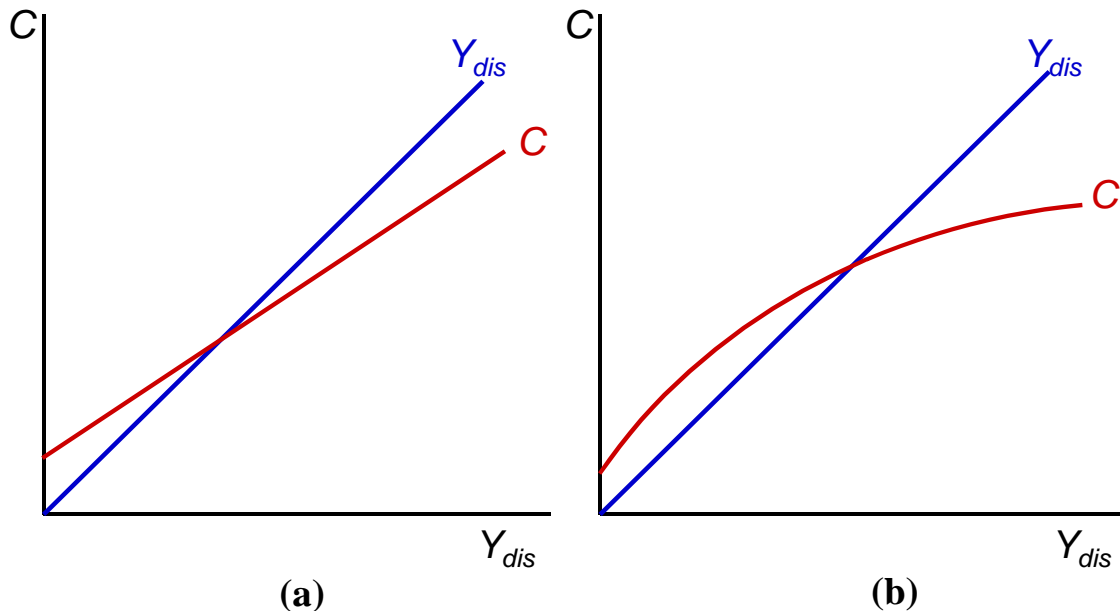
There are two types of consumption function that are consistent with these assumptions. The first has the form:

$$C = a + bY_{dis}$$

and the second:

$$C = a + bY_{dis} - cY_{dis}^2$$

In both cases, provided the term a is a positive figure, consumption will exceed income at very low levels of income: the consumption function will cross the 45° line.



Question

1. Using these two equations, what will be the level of consumption when national income is zero?

Keynes' argument that people's consumption depends on the level of their current income, irrespective of what their previous incomes were or what their future incomes are expected to be, and irrespective of what other people's incomes are, has led economists to call this the '*absolute income* theory of consumption' (see Case Study 16.2).

Question

2. What will happen to the shape of the consumption function in diagram (b) in each of the following cases?
 - (a) When the value of the a term increases.
 - (b) When the value of the b term decreases.
 - (c) When the value of the c term decreases.

Case study 2

The distinction between voluntary and involuntary unemployment

A distinction made by some economists is that between *voluntary* and *involuntary* unemployment. Many economists would regard equilibrium unemployment as voluntary. If people choose not to accept a job at the going wage, even though there are jobs available, then in a sense they could be said to have voluntarily chosen to be unemployed. Disequilibrium unemployment, according to these economists, would be classed as involuntary. Workers want to work at the current wage, but there are not enough jobs available.

Some economists would also include classical unemployment as voluntary.

If people, through their unions, have chosen to demand a higher wage than the equilibrium wage, then they could be said to have collectively 'volunteered' to make themselves unemployed. According to these economists, then, only demand-deficient unemployment would be classed as involuntary.

Some economists go even further and argue that *all* unemployment should be classed as voluntary. If the cause of disequilibrium unemployment is a downward stickiness in real wage rates, then workers, either individually or collectively, are *choosing* not to accept work at a lower wage.

Other economists would go to the other extreme and claim that all disequilibrium unemployment and most equilibrium unemployment is involuntary. Structural unemployment, for example, results from changes in demand and/or supply patterns in the economy and a resulting mismatching of

can be retrained, but retraining takes time, and in the meantime they will be unemployed. Similarly with frictional unemployment, if the cause of some people being unemployed is initial ignorance of job opportunities and hence the time it takes to search for a job, they cannot be said to have volunteered to be initially poorly informed.

The terms 'voluntary' and 'involuntary' unemployment are not only ambiguous, they are also unfortunate because they have strong normative overtones. 'Voluntary' unemployment tends to imply that the *blame* for unemployment lies with the unemployed person and not with 'market forces' or with inadequate government policies. While in one sense, at a low enough wage rate there would probably be a job for virtually any unemployed person, the unemployed cannot be said to be voluntarily unemployed if they are choosing to turn down jobs at pitifully low wages.

Although the concepts of voluntary and involuntary unemployment are commonly used, for the above reasons we shall avoid them.

Question

If I offered a job to someone to clean my house at 1p per hour, and unemployed people chose not to take the job, should they be classed as 'voluntarily' unemployed?

Case study 3

The Attributes of Money

Money has come in many forms. Pigs, cattle, jewels, ornaments and shells are just a few examples. On the South Pacific island of Yap, giant stone wheels are the local currency – hardly suitable as ‘small’ change! In times of war or rampant inflation, cigarettes, nylon stockings, sugar, coffee and various other commodities have been used.

With the possible exception of Yapese stones, these items are all examples of *commodity* money. That is, they have value in themselves. Animals can be slaughtered for food; jewellery can be worn; coffee can be drunk. But although they can all be used as a medium of exchange, in most cases they are far from ideal. So what are the features of an ideal form of money?

Acceptability

If money is to act as a medium of exchange, it must be generally acceptable as a means of payment. If commodity money is to be generally acceptable, it must have a recognised intrinsic value.

Durability

Money must last a reasonable length of time before deteriorating, certainly if it is to be used as a means of storing wealth. Stone wheels are very good in this respect. Fresh fish aren't.

Convenience

It must be easy to use. In the case of money that physically changes hands, this means that it must be light and small to carry around. In the case of bank accounts (or Yapese stone wheels), it must be easy to transfer ownership, by the use of cheques, standing orders, etc.

Divisibility

Money must come in different denominations so as to be able to pay for an item of any value, however large or small. Thus there is use for a 1p coin, for £20 notes and for the ability to transfer any amount from a bank account. In this respect, animals are a poor form of money. You could not exchange half a (live) pig.

Uniformity

Money of the same value must be of uniform quality. This applies particularly to the case where money has intrinsic value. People would be unwilling to part with a young fat cow as payment if it had only the same value as an old thin one.

Hard for individuals to produce themselves

This is an obvious requirement of paper money. It must be hard to forge. In terms

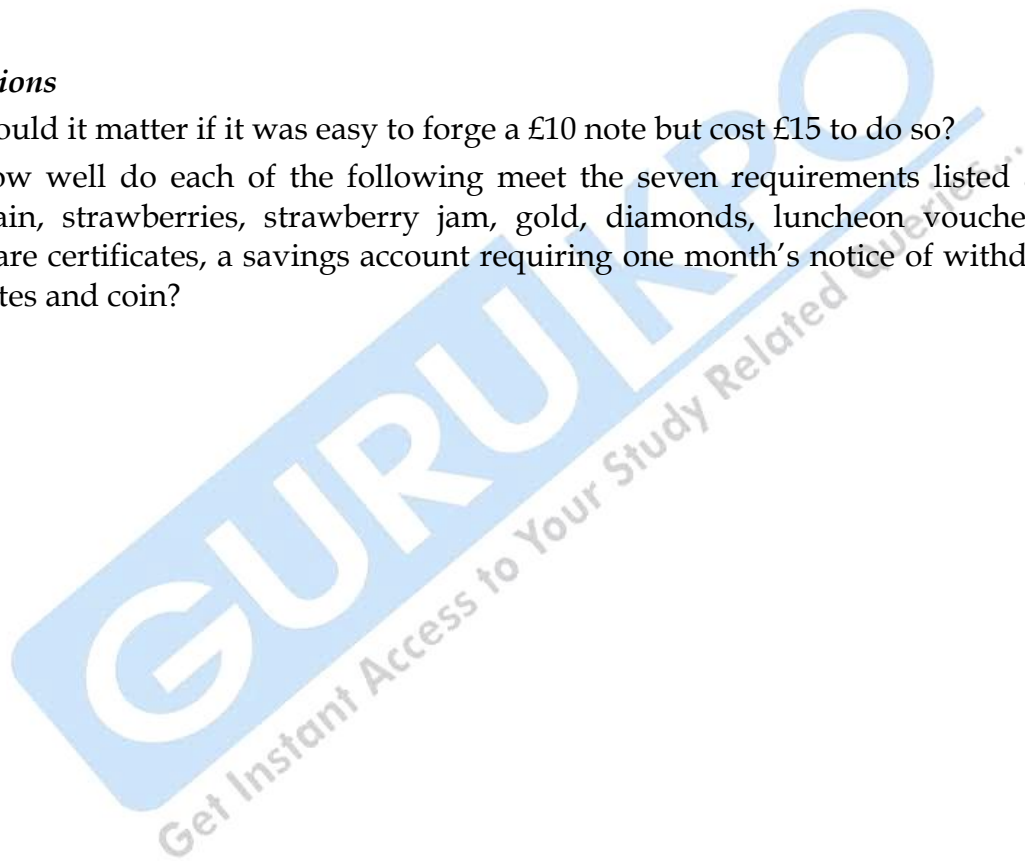
of commodity money, there would only be a problem of individuals producing it themselves if the monetary value of the item exceeded its intrinsic value.

Stability of value

If money is to fulfill its various functions (especially as a store of wealth and as a means of evaluating future payments), it must retain its value. In terms of money produced by the state, the requirement here is that the government keeps its supply under control. In terms of commodity money, it must not be subject to violent fluctuations in supply. Animals would be a poor form of money in countries subject to drought.

Questions

1. Would it matter if it was easy to forge a £10 note but cost £15 to do so?
2. How well do each of the following meet the seven requirements listed above: grain, strawberries, strawberry jam, gold, diamonds, luncheon vouchers, £1 share certificates, a savings account requiring one month's notice of withdrawal, notes and coin?



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