ENABLING LEARNERS' EXPLORATIONS IN ECONOMICS

MODULE - 1

FOUNDATIONS OF ECONOMICS - SEVERAL FACETS

2016-17

स्वाध्यायान्मा प्रमदः

STATE COUNCIL OF EDUCATIONAL RESEARCH & TRAINING

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Foreword

In the changing scenario of business world and fast changing technology subject like Economics poses a challenge for teachers to update their knowledge by keeping pace with these changes and preparing students in these globallycompletive economies. Economics education is directly linked with such changes. The recent times have seen drastic change at the international level like Brexit, demonetization in India have impacted almost every economy. The IT has taken in a massive way not only in doing business; modes of selling and making payments have also changed.

CBSE has been making provision for these changes by introducing Project work, VBQs, HOTS, and Case Studies in Assessment etc. to bring children close to the real world of work. SCERT organises Capacity Building Programs to orient them to carry out effectively in the classroom. This time SCERT has re-designed its training by developing 6 modules based on critical components identified across the XI & XI syllabus at Senior Secondary level. Teachers are given an option to attend any 2 Modules based training out of 6 based on their felt needs; however all the modules will be made available for their reference.

I, hereby, extend a sincere word of appreciation for the entire team of contributors who have brought these modules in present shape. It was a tremendous task which would not have been possible without the vision and passion of the people who have incorporated interactive activities, recent changes in syllabus, innovative methodology of teaching- learning processes and enriching reading material for teachers.

I extend a deep sense of reverence and gratitude to all concerned authorities; DOE, NCERT and CBSE for extending all academic support for incorporating required content in the Modules for capacity building of Lecturers in Economics . We look forward for your continued supports and academic associations for quality education and capacity building of teachers.

I sincerely wish and hope teachers will also take it enthusiastical y with same zeal and passion to their classrooms. Your observations and suggestions are welcome on the modules.

Anita Satia

Director, SCERT

Editorial

If we look around, we will find the principles of economics working in every sphere of life. The very famous quote by Thomas Sowell, the Economist emphasises that;

'The first lesson of economics is scarcity: there is never enough of anything to fully satisfy all those who want it. The first lesson of politics is to disregard the first lesson of economics.' This states the fact that how the Politics and Economics are so close.

The curious task of economics is to demonstrate to men how little they really know about what they imagine they can design. It turns out that advancing equal opportunity and economic empowerment are both moral y right and good economics, because discrimination, poverty and ignorance restrict growth, while investments in education, infrastructure and scientific and technological research increase it, creating more good jobs and new wealth for all of us, as stated by William J. Clinton.

Geography has made us neighbours. History has made us friends. Economics has made us partners, and necessity has made us allies.

Economics is a discipline that can help us answer these questions. Economics can actually be defined in different ways: it's the study of scarcity, the study of how people use resources, or the study of decision-making. Economics often involves topics like wealth, finance, recessions, and banking, leading to the misconception that economics is all about money and the stock market. actually, it's a much broader discipline that helps us understand historical trends, interpret today's headlines, and make predictions for coming decades.

Economic study ranges from the very small to the very large. The study of choices by individuals (like how someone decides to budget their pay check each month) is called microeconomics. Researchers have used the tools of microeconomics to measure the link between health and economic well -being, study the impact of micro loans in poor countries, and understand why people never seem to save as much for retirement as they would like.

The study of Governments, industries, central banking, and the boom and bust of the business cycle is called macroeconomics. Macroeconomics can help us answer some of the biggest questions about how and why recessions occur, how surges in immigration or gas prices will affect the economy, or what the aging of the Baby Boomer generation could do to the national debt.

Important public policy debates revolve around questions of economics. Governments the world over employ economists to help understand how government health programs will af ect the incentives of doctors, whether farm subsidies will raise or lower prices at the grocery store, and the best ways to fight poverty.

Much of economics involves using data gathered by Governments, businesses, or in the laboratory to test hypotheses about whether a certain program, event, or incentive will have the expected ef ect. Another branch of economics focuses on using economic theory to make predictions about how people and markets will behave.

Use of Statistics in Project Work, Changed approach for teaching Dynamics of Indian Economy in class XI, Understanding in the dealing Mechanisms of Mathematical Portion in Class XI Economics, Analysis of Class XI Papers and discussion on improving Students Performance, Gaming in Economics for effective Joyful Learning, Blooms Taxonomy and Question Paper Design, HOTS, Understanding Budget and Government Policies implicating Economy are major areas that will be addressed during the Capacity Building Program for teachers along with hard spots and reading material from class XI syllabus also.

These Modules address the significant changes in Curriculum, Assessment Practices and provides the useful reading material that will help you in your classroom teaching–learning processes. As Teachers play an important role in implementing all new changes taking place in the curriculum and also the new technologies in the field of education, SCERT and DIETs have been orienting the teachers in implementing the same effectively in classrooms. FAQs on Project work will provide an insight on all aspects and stages of project work. A list of 30 suggestive Projects are also given to improve the quality of Projects corresponding to the learning objectives stated by CBSE.

NCERT and CBSE have brought in the desirable changes in the textbooks and examination pat ern to connect the text with real world of work in true sense. NCF 2005 also strongly emphasizes on the departure from rote learning to child cantered-processes which is the core of constructivist approach. The support material developed by SCERT /DIET is an initiative in this direction for capacity building of teachers.

I appreciate team of Contributors who have worked tirelessly and brought these Modules in the present shape. I take this opportunity to express a deep sense of reverence and gratitude to Ms. Anita Satia, Director, SCERT, Dr. Nahar Singh, Joint Director, SCERT and Late Dr. Pratibha Sharma, Former Joint Director, SCERT for their continuous support and encouragement. I owe special thanks to Dr. Dushyant Kaur, Principal DIET Moti Bagh and all my colleagues; Academic and Administrative Staf for facilitating and extending unconditional support at all stages of completing this assignment. My sincere thanks are

extended to Ms. Sunita Rani, Lecturer, DIET, Moti Bagh who has provided her valuable inputs and has been a constant support at all stages of development of these Modules. Special thanks are extended to the team of Contributors, Subject Experts, and their concerned authorities, Faculty of various Col eges/Institutes, DDEs and Officials of Directorate, Principals and Teachers of Government Schools, Aided / Public Schools for providing valuable suggestions and support at all stages of development of these Modules. I wish all Stakeholders an insightful reading.

The observations, suggestions and comments related to the Manual are welcome.

*The brief of all Modules are given in the following pages.

Dr. Seema Srivastava

ABOUT THE MODULES-

An Introductory Note

The present enrichment material is integrative in nature and contains 6 Modules. Each module deals with a different set of selected topics from the senior secondary CBSE syllabus of Economics, applicable from session 2016-17 onwards. Every Module covers syllabus topics from both Class XI and XI . The topics have been included after a thoroughbrainstorming with experts and feedback received from in-service teachers of economics, especially those recently promoted in to teaching of economics.

The objective is very clear: to enable the teachers to upgrade their knowledge and develop their capacity to become better facilitators in teaching-learning Economics. To this end many current related news/ happenings, links to websites, topic wise key terms, photographs/pictures and games and projects, guide notes for teachers, Value Based Questions, Life Skills and Higher Order Thinking Skills (HOTS) have been included in every module. Use of these will surely make every class of economics abuzz with discussion, debate and activity. Difficult topics have also been explained. Without going overboard, it can be stated to serve as a quick reckoner and repository of related material for teachers. A brief description of the 6 Modules, divided into topical units, is as fol ows so teachers can decide to go through these as per their individual requirement and choice. all modules will be uploaded on SCERT website for reference.

Module- I- Foundations of Economics-Several Facets

This contains four units. The first unit deals with India's development experience since independence and focuses on why Planning was adopted as a tool to development. Long termobjectives of planning, a tabular display of plan-wise objectives, brief on five year plans I-V and discussion of Industrial Policy Resolution, 1956, Green Revolution and small ScaleIndustries have been included. Supporting images for each can either be shown to theclass or displayed on the digital board or computer to generate the rightenvironment. A critical evaluation of economic policies and MCQ's completes Unit- I. Unit-I deals with economic reforms post 1990. The NEP, 1991 has been explained in the lightof LPG and its impact on domestic and international economy has been dealt with followedby a critical review and HOTS. In Unit -I I we sail through the basic concepts of Micro andMacro Economics, economic problems, central problems, PPC, opportunity cost and MRTwith use of tables, diagrams, smart art ending with MCQ's and MDQ's. HOTS in Hindi havealso been included. Unit IV is on Consumer Equilibrium and Demand. Meaning ofConsumer Equilibrium has been explained followed by the Utility Approach Theory byMarshal and Hicks' Indifference Curve Analysis and Demand Analysis. Mathematicaltreatment of each of these theories and dif iculties arising in specific areas has beencovered with worked out examples and MCQ's.

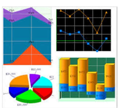
Module- II -Current challenges Facing Indian Economy and Producers' Behaviour

This has been presented in two units. The first unit deals with the challenges of Poverty, Rural Development, Human Capital Formation, Inflation, Employment Generation, Infrastructure Development and Sustainable Development.Poverty covers absolute and relative poverty, measure of poverty, a box containing World Bank Report has been given to initiate a report on India's place in world poverty and another one to compare the state of poor in developed and developing countries. Rural Development deals with measures and rural credit- institutional and non- institutional credit, agricultural marketing and the need for diversification of agricultural activities. Human Capital includes the problems and challenges facing its formation in India especially with provision of education and training at all levels. Employment defines unemployment, jobless growth, casualisation and informalisation of work force and causes of unemployment. Details of a project on unemployment to acquaint students with the gravity of unemployment and use tools of Statistics and an interview has been suggested to begin a discussion in the class and thereby sensitize to Life Skil Development towards the right career choice. The topic of Inflation discusses the present Consumer Price Index (CPI), types of inflation and causes of inflation. A research project has been provided as an activity integrating it with Statistics. Infrastructure covers energy and the challenges within this sector, road network and healthcare with economic growth, using related diagrams and images. Sustainable development has been included here to relate its need for sensitizing students towards the environment and their domestic and global responsibility towards it as individuals and society, especially in Indian context. Each topic has its own Value Based Questions (VBQ's), HOTS, suggestive activity and exemplar Unit Tests with suggestive answers. Unit- II covers Producer Behaviour and Supply. This deals with Production function, Cost, supply, Revenue and Producer's equilibrium. Relationships between the concepts of marginal, average and total have been explained with ample use of examples, numerical, tables and diagrams as well as concept mapping. Shapes of different curves have also been shown and reasoned out in a quick sum up.

Module- III-Development Experiences: India, Pakistan and China: OTBA, Projects inEconomics, Forms Of Market and Price Determination

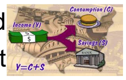
Unit- I deals with the Development Experience of India- Comparison with Pakistan and China. This is examined as Open Text Book section. The three countries have been compared using data from World Development Report, Human Development Report, World Health Report and Indian Economic Survey. Suggested new areas of comparison are agricultural land as a percentage of land area, irrigated land as percentage of agricultural area, access to electricity, time required to start business, market capitalisation of listed companies, women employed in non- agricultural sector, health expenditure etc. Exemplar case studies have been included for OTBA examination. A very interesting section under the first unit appears as Simulation Games in Economics. Simulation of a Market, suggestions for more games and a game of Snakes and Ladders on Economic Policy will prove to be a definite stress buster in your economics period! The important aspects of Perfect Competition, Monopolistic Competition, Monopoly and Duopoly deal with their features, profit maximization conditions and existence in real world are covered in unit –I . Test yourself and interesting cartoons make this unit more relevant.

Module- IV- Introduction to Statistics, Col ection, Organisation Presentation of Data and National Income Aggregates



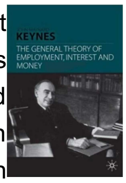
Unit- I is based on an explanation of what statistics is and how it is useful in Economics. Functions of Statistics and sources for primary and secondary data have been presented interestingly. Sampling techniques, organisation of data into tables and

different types of classification has been dealt with. The display of statistical information as tables, graphs and diagrams is included. Each topic has its own set of HOTS, FAQs and MCQs. Unit- I - National income and its Aggregates begins with types of goods and services, circular flow of income and matures to the three methods of measuring national income with interesting diagrams to assist easy understanding and recall . Questions and tips to improve understanding have been included.



Module- V -Measures of Central Tendency and Dispersion, Components of Macro Economics

Unit-I provides a deeper understanding of Mean, Median and Mode. It explains the need for a central tendency and when to use each one of these with ample examples and reports from publications that have used them to draw conclusions. Partition values have also been dealt with and their calculation and usage explained. Relative and Absolute dispersion values such as Range, Quartile Deviation, Mean Deviation and Standard Deviation have been worked out and their use clarified. The unit ends with MCQ's and numerical with solutions. Unit- I is based on Money and Banking and Determination of Income. Barter system and its deficiencies, definition of various functions of money and the four measures of money supply have been dealt with. An explanation of CRR and how banks create credit and increase money supply has been demonstrated. Concept mapping of instruments used by RBI to control supply of money and a case study depicting each of these instruments has been included. Under income determination, propensity to consume and save, aggregate supply and aggregate demand have been explained. Derivation of investment multiplier and role of government in wiping out excess demand and excess supply has been explained with use of examples and concept mapping. This unit too has ample exercises for guidance and practice.

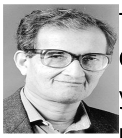


Module- VI-Correlation, Index Numbers, Global Economic Scenario (New Initiatives and Government Policies), Government Budget and Balance of Payment

Unit- I includes concepts of Correlation and Index Numbers. The difference between correlation and causation has been explained in a lucid and simple manner with examples from real life. Positive and negative, linear and non- linear correlations and degrees of correlation coef icient have been clarified. Examples il ustrate the application of formulae and interpretation of diagrams. MCQ's HOTs and exemplary unit test has also been included. The topic of Index Numbers begins with an activity to initiate this topic in class. Important components in construction of an index and which Index is to be used in a situation are the highlights of this unit. Il ustrations and suggested projects are some other value-additions in this topic.

Unit-II is on Government Budget. The structure of budget and various types of receipts and expenditures have been shown using relationship diagrams. A number of questions and tips for teachers are important components of this unit. Balance of payments is considered tough and its scanty delivery in text book makes this worse. This topic therefore discusses common errors made by students. This is followed by the exchange rate, fixed and floating exchange rates and depreciation and devaluation. The global economic scenario relates current changes in the world and Indian economy. Globalization in India, emergence of Brexit, current development policies and other measures by the government will update all . The unit also suggests a class activity.

The 6 Modules as briefly described above are support material and teachers will gain by making use of these in their class. It should be clear that in no way at all this is an exhaustive material. It is meant to complement and not substitute the text books. This is a teacher's teaching aid. Using this will surely make your students look forward to their Economics class!



This contains the syllabus for the year 2016-17, CBSE Board Papers including Foreign Centre Question Paper-2016 and Marking Scheme of CBSE Papers. Sample Paper of CBSE for the year 2016 is also included. An Exemplar Question Paper by NCERT is also given for classroom practice. Common Errors commit ed by the students are also detailed out to provide you an insight to prepare students to score bet er. Contributions of few eminent economists like Chanakya, Samuelson, Keynes and Amartya Sen, Bengt Holmstro - british born Harvard economist, Oliver Hart - Nobel prize in economics in 2016 and also the contribution by Robert Kiyosaki, an investor, businessman, best sel er and author of the book 'Rich Dad Poor Dad' will provide you interesting facts and principles of economics and about life that hold water even today. Encourage students to explore more and discuss their contributions in the class. Project Work remains a neglected area in terms of its true spirit to make the students understand the real world of economics. The genuineness and authenticity of the project work largely depend on teachers' guidance and monitoring. As far as possible, project work should be executed in school, under the teacher's guidance and facilitation. The different aspects of Project formulation and different stages of project have been addressed in form of Frequently Asked questions (FAQs). Newspapers cut ings and print material are the most important and ef ective teaching tools in teaching of economics. An exemplar has been given and you may build up your own library to discuss and debate with real data and news items. You will be amazed to find out what you teach in theory will enable students to find meaningful application in daily newspapers. This will also develop the habit of reading newspapers among students and sharpen their analytical ability too. Everyone loves watching movies. How movies communicate strong messages for students has also been covered in this Handbook which you will find interesting. Movies not only entertain, they also strongly showcase the fabric of society. Explore and watch good movies and encourage students to discuss and debate in class. Few movies like Nil Battey Sannata (2016), The Man Who Knew Infinity (2016), Mother India (1957) and Beautiful Mind (2001) have been briefly discussed for your reference. Simulation and Games in Economics can play a major role in making the teaching of economics a joyful experience. A chapter on the same from NCERT site has been included which elaborates its need and how to use it. You may develop your own games as well . Key features of Budget-2016 have been briefly discussed in the supplementary module for you to discuss and provide an understanding to students in the classroom to highlight the priority sectors and all ocations. Brief of various government initiatives and programs have also been included. The brief abstract on research findings on Constructivist Approach in teaching of economics has been included to explore and use its research applications in classroom. The assessment and evaluation in economics will enable you to guide students to perform better in boards.

It would be our endeavor to bring back the glory to this noble task of teaching and meaningfully contribute to ef ective teaching- learning processes to make the students globallycompetitive. all the best and hope that creativity of users of these modules gets inspired to take flight beyond this resource. Take this with the same zeal and compassion to make the teaching of economics joyful and meaningful.

Your observations, comments and suggestions on the Modules are welcome.

Dr. Seema Srivastava

MODULE - 1

FOUNDATIONS OF ECONOMICS - SEVERAL FACETS

UNIT - I

INDIAN ECONOMY- DEVELOPMENT EXPERIENCE1947 -1990

Learning outcomes

- State the features of the Indian economy at the time of independence.
- Identify the chal enges faced by the Indian government at the time of independence.
- Explain the reasons for adopting economic planning and five year plans.
- Critical y evaluate the economic policies adopted during this period.

Abstract

Though the chapter on Indian economy on the eve of independence has been removed by CBSE, it is important for us to know the chal enges faced by the nation after attaining independence from the long colonial rule of the British. As a student of Economics, it is crucial to impart to learners, a brief understanding of the aftermath of British Rule impacting the Indian economy in al sectors i.e. trade, investment and other areas including education, Though they have studied the same at the secondary level under Social Sciences, it has to be narrated in the class like a story. This will reveal where we were at that point in time to where India has moved in the present Globalised world. India was the richest country in the world and had the world's largest economy until the 16th century AD.
the outset, when India became independent from the British empire in 1947, the Indian economy was already facing the adverse consequences of second world war coupled with the repercussions of Indo-Pak partition. Indian economy had to deal with several chal enges i.e. il iteracy, poverty, low social and economic development and other problems.
fol owing text will give a brief overview of Indian Economy during 1947- 1990 just before the Economic Reforms that took place in 1991. The purpose of this section is to analyse how much India has actual y achieved/progressed from 1947 to 1990 before the great Economic Reforms in 1991.

Key Terms

Planning: Economic planning is the resource al ocation mechanism that is contrasted with the market mechanism. As a coordinating mechanism for socialism, ***economic planning*** substitutes for factor markets and are considered as a direct al ocation of resources; contrasted with the indirect al ocation mechanism of the market.

Land tenure system: system of land taxation.

Deindustrialisation: decline of existing industries due to lack of demand.

Commercialisation: production for sale in the market.

Demography: study of population and its features.

Introduction

The colonial rule left India with the fol owing features:

1. **Agriculture:** backward and stagnant with no technical progress or irrigation facilities. Commercialization led to food shortage.

2. **Industry:** deindustrialization or decline of handicrafts industry for which India was world famous. This mainly happened due to decline of princely states, ruthless competition from imports from England and biased tariff policy of the British in favour of British made imports.

3. **Foreign trade:** India was converted from an exporter of finished goods to an exporter of raw material and importer of finished goods. The proceeds of the trade surplus were used to meet administrative expenses, thus, leading to DRAIN OF WEALTH of the Indian economy.

4. **Demography:** very low literacy rate, high birth rate and death rate, fluctuating rate of growth of population, high infant mortality rate and very low literacy rate were some key features of the Indian economy during this time.

5. **Occupational structure:** we were majorly dependent on agriculture which was anyways backward.

6. **Infrastructure:** Little infrastructure development was undertaken to ease the communication and trade of the government and not as such for development and convenience of the nation

The folowing section will now build on the above status of the economy. We will discuss the process of development and the policies adopted by the government of independent India to revive the economy and heal it from the scars of colonial system.

*The textbook already contains details of the Indian Planning process and various five year plans til the 12th five year plan (since 1951-2017).

When India became independent, the biggest chal enge before the Government was to deal with the aftermath of colonial rule and also to resurrect the economy. Its important to discuss with students and give them an overview of Development Experience during 1947-1990 while focusing on the planned economic development approach that the Planning Commission of India adopted to develop planned strategy in the form of Five Year Plans .

The details of all Five Year Plans are given in the Textbooks; however few highlights of each Five Year Plan til 1990 are given below for detailed discussion with students by you as teacher in the classroom to make them understand the significance of learning and exploring the various dimensions of Economic Planning.

Objective of India's development strategy has been to establish a socialistic pattern of society through economic growth with-

- Self reliance
- Social reforms
- Alleviation of poverty

* Explain here the concept of India being a Mixed Economy- **We adopted economic planning i.e. five year plans on the pattern of the then USSR.**

How it is a mix of Socialism and Capitalism with coexistence of the Public and Private Sectors. India is predominantly an agrarian economy but it has industrialized and also has an expanding tertiary sectors.

HIGHLIGHTS OF VARIOUS 5 YEARS PLANS (IN TERMS OF AIMS / OBJECTIVES) OBJECTIVES OF FIVE YEAR PLANS:

Since the Economy was in shambles after the colonial rule, it was important that the Government adopted a major role in the development process. There are certain long term objectives which have been common to all plans and short term objectives which are specific to an individual plan. The short term objectives are basical y smal targets to achieve long term goals.

LONG TERM OBJECTIVES

1. Economic Growth: refers to increase in flow of goods and services in the economy over a stipulated period of time.

2. Equity: aims at reducing inequalities in distribution of income and bring about economic and social justice.

3. Mordernisation: refers to adoption of new techniques and innovative methods in the process of production for social welfare.

4. Self–Reliance: doing away with dependence on imports of commodities which can be produced domestically.

PLAN WISE SHORT TERM OBJECTIVES

FIVE YEAR PLAN	TERM	MAIN OBJECTIVE
FIRST	1951-56	Agricultural Growth
SECOND	1956-61	Import Substitution and development of Heavy and Basic Industries
THIRD	1961-66	Economic Self Reliance
ANNUAL	1966-67	Implementing New Agricultural Strategy to meet the food shortage
ANNUAL	1967-68	
ANNUAL	1968-69	
FOURTH	1969-74	Improvement in Farming Techniques, Growth and Stability
FIFTH	1974-79	Poverty Alleviation
ANNUAL	1979-80	No concrete plans due to change of government
SIXTH	1980-85	Food and Fuel Planning
SEVENTH	1985-90	Development of Human Resource
ANNUAL	1990-91	Economic Reforms as the New Economic Policy, 1991
ANNUAL	1991-92	
EIGHTH	1992-97	Privatisation, Liberalisation and Globalisation
NINTH	1997-2002	Growth with Equity and Social Justice
TENTH	2002-07	Growth with Equity and Social Justice
ELEVENTH	2007-12	Fast, Widespread and Sustainable Growth
TWELFTH	2012-17	Faster, Inclusive And Sustainable Growth

India has come a long way since the first five year plan. (1951-56). India is currently fol owing the 12th 5 year plan (2012-2017)

Highlights of Various Plans

1. First Five Year Plan (1951-56)

a) to raise domestic savings for growth

b) to recover from the repercussions of colonial rule.

2. Second Five Year Plan (1956-61)

Industrialization strategy emphasizing on heavy industries demarcating dominant role for the public sector in the economy was the focus of Second Five Year Plan.

(Nehru - Mahalanobis plan)

(*Here you can explain the change of focus from Agriculture to Industrialisation as large scale of economics had to be acquired by becoming capital intensive and also to compete with the advanced nations which already had industrialized significantly.)

Your Discussion may revolve around the objectives of Industrial Policy that are listed below as an exemplar-

1. achieving high growth rate.

2. reduction of foreign dominance

3. enhancing indigenous capacity

4. national self- defense

5. encouraging smal scale industries

6. to achieve balanced regional development

7. prevention of concentration of economic power

Reduction of income inequalities and social income .The target growth rate was 4.5% and the actual growth rate was 4.27%.

Key Features

1. Establishment of heavy and basic industries

2. Import substitution

3. Balanced regional growth

***Discussion of Industrial Policy Resolution is integral when you discuss Second Five Year Plan**

Industrial Policy Resolution – 1956

The Industrial Policy Resolution - 1956 was shaped by the Mahalanobis Model of growth, which suggested that emphasis on heavy industries would lead the economy towards a long term higher growth path. The Resolution widened the scope of the public sector. The objectives were-

1. Government support for industrialization, including a direct role in the production of capital goods.

2. Economic growth and boost the process of industrialization as a means to achieving a socialistic pat ern of society.

Given the scarce capital and inadequate entrepreneurial base, the Resolution accorded a predominant role to the State to assume direct responsibility for industrial development. All industries of basic and strategic importance and those in the nature of public utility services besides these requiring large scale investment were reserved for the public sector. The

Industrial Policy Resolution - 1956 classified industries into three categories.

The first category comprised 17 industries (included in Schedule A of the Resolution) exclusively under the domain of the Government. These included interalia, railways, air transport, arms and ammunition, iron and steel and atomic energy.

The second category comprised 12 industries (included in Schedule B of the Resolution), which were envisaged to be progressively State owned but private sector was expected to supplement the efforts of the State.

The third category contained al the remaining industries and it was expected that private sector would initiate development of these industries but they would remain open for the State as well . It was envisaged that the State would facilitate and encourage development of these industries in the private sector, in accordance with the programmes formulated under the Five Year Plans, by appropriate fiscal measures and ensuring adequate infrastructure.

Despite the demarcation of industries into separate categories, the Resolution was flexible enough to al ow the required adjustments and modifications in the national interest

Another objective spelt out in the Industrial Policy Resolution - 1956 was the removal of regional disparities through development of regions with low industrial base. Accordingly, adequate infrastructure for industrial development of such regions was duly emphasized.

Given the potential to provide large-scale employment, the Resolution reiterated the Government's determination to provide all sorts of assistance to small and cottage industries for wider dispersal of the industrial base and more equitable distribution of income. The Resolution, in fact, reflected the prevalent value system of India in the early 1950s, which was centred on self-suf iciency in industrial production. **The Industrial Policy Resolution – 1956 was a landmark policy statement and it formed the basis of subsequent policy announcements.**

IMPORTANCE OF THE SECOND FIVE YEAR PLAN

The second five year plan (1956-61) holds great significance in the growth path of India. The Second Plan was particularly in the development of the public sector and "rapid Industrialisation". The plan folowed the Mahalanobis model, an economic development model developed by the Indian statistician Prasanta Chandra Mahalanobisin 1953.

Hydroelectric power projects and five steel plants at Bhilai, Durgapur, and Rourkela were established with the help of Russia, Britain (the U.K) and West Germany respectively. Coal production was increased. More railway lines were added in the north east.

The Tata Institute of Fundamental Research and Atomic Energy Commission (AEC) was established as research institutes. In 1957 a talent search and scholarship program was begun to find talented young students to train for work in nuclear power. The total amount al ocated under the Second Five-Year Plan in India was Rs.48 bil ion.This amount was al ocated among various sectors: power and irrigation, social services, communications and transport, and miscelaneous.


Industrial Growth


Encouragement to Private Industry

Employment Generation

Infrastructure : Power Generation

3. THIRD AND FOURTH PLAN: GREEN REVOLUTION 1965-70

The Green Revolution in India started in mid sixties in first phase and in mid seventies in second phase to increase the agriculture yields due to improved agronomic technology. It was to overcome chronic food deficits in India and to make India self reliant in food grains. It was started in India in the early 1960s and led to an increase in food production, especial y in Punjab, Haryana and Ut ar Pradesh during the early phase. The main Impact of Green revolution was on wheat a

nd rice production. The introduction of high-yielding varieties of seeds (hybrid seeds) and the increased use of chemical fertilizers and irrigation contributed in the b

umper increase in the production of wheat and rice. It was the need of the time to make India self-suf icient in food grains.

GREEN REVOLUTION:
RAPID INCREASE IN AGRICULTURAL OUTPUT AND PRODUCTIVITY WITH USE OF NEW VARIETY OF SEEDS, IRRIGATION AND PESTICIDES

NOTE: the chapter deals with the major developments with some extra insights. However, pure textual material is not being mentioned in detail as it already exists in the books which we consult for our classes.

4. FOURTH FIVE YEAR PLAN (1969-74)

The IVth 5 year plan served as a stepping stone for economic growth. The main events and major highlights that you can discuss in detail are as under-

a. At the outset with the adverse setbacks of 1962 at acks and 1965 Indo-Pak war, it was also struck by major drought and also had a stint of recession. Due to economic recession, famine and drought, India did not pay much attention to the long term goals rather focused on measures to overcome the crisis.

b. Food grain production increased to bring self –sufficiency in production Gap widened.

c. The need for foreign reserves was felt .Growth in Exports was seen due to substantial at ention by the Government to widen Industrial platform.

5. FIFTH FIVE YEAR PLAN (1974-79)

A shift on policy was seen which emphasised on growth with redistribution. Mild version of economic liberalization was started in the mid of 1980's to to accelerate the process of production to align it with contemporary realities.

ANNUAL	1979-80	No concrete plan due to frequent change of govt.
SIXTH	1980-85	Food and Fuel Planning
SEVENTH	1985-90	Development of Human Resource

Discuss in Class three important commit ees that were set up in the early 1980's

- Narsimha Commit ee on (Shift from Physical Control to Fiscal Controls)
- ¬˄ Sen Gupta Committee on the public sector.

- ¬ʎ Hussain Commit ee on
- Trade Policy.

All were aimed at reorienting the Economic Policies. The resultant aspect was that some progress was seen in the process of deregulation during the 1980's. Hence the liberalisation programme had already started in the late 80's and it final y resulted in the New Economic Policy, 1991 as discussed in Unit II .

(An important question here is to collectively find out the reasons for failures/shortfal s of the planning process.)

* Planning after 1990 has been discussed in the next chapter with the new economic policy. SOME OTHER SECTORS WHICH NEED DISCUSSION

A. SMALL SCALE INDUSTRIES

Characteristics of Smal Scale Industries

Smal -scale industries have certain unique features, which distinguish it from the Large-scale sector.

1. In most smal businesses the owners themselves are managers and so they can operate independently. They can give customized service to their clients, which in many cases is their USP (Unique Sel ing Point).

2. Since most smal businesses are a one-man show and they do not have to go through a hierarchy to get permissions to make changes.

3. Smal business can respond quickly to environmental trends.

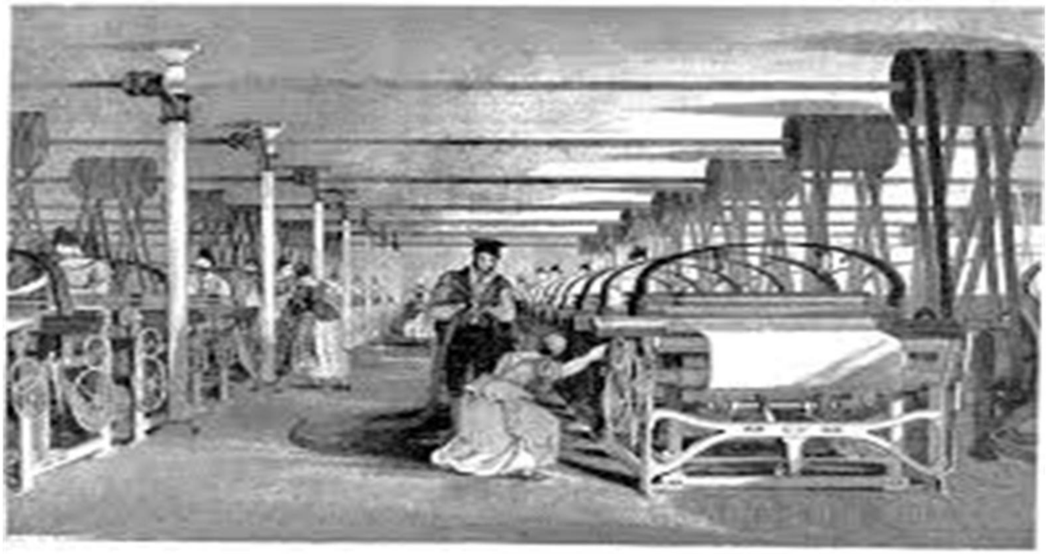
4. Nimbleness and agility are characteristics that al ow smal entrepreneurs to understand market conditions and rapidly respond to changes.

5. Smal businesses have tremendous capacity for employment generation through their labour intensive techniques. Smal businesses actual y create more jobs than big businesses.

6. Smal businesses are largely local in operation; however the market for its products may be local, regional or even international.

7. The capital investment in the smal sector is general y low and the time taken for production to

commence is also less. As a result of short gestation period the units give quick returns and consequently the pace of economic development quickens.



After Independence, the foremost task for the government was to achieve rapid industrialization of the country within the overal framework of a welfare state. The plan objective of economic growth with social justice was kept in view in the overal strategy of industrial development. Large, medium and smal industrial units have been assigned a mutual y complementary role with a view to facilitate an integrated and harmonious growth of industrial sector as a whole. Small business has played a very crucial role in transforming the Indian economy from a backward agrarian economy to its present stature. Its benefits range from creating job opportunities for mil ions of people, including many with low levels of formal education. It has nurtured the inherent entrepreneurial spirit in far flung corners of the nation resulting in the growth and development of all regions. It has been instrumental in raising the standard of living of the multitudes.

Contribution of The smal and medium sector in the fol owing areas:

1. The Smal and Medium Enterprises (SME) sector in India is the second largest manpower employer in the country next only to the agriculture sector. For every Rs.0.1 mil ion of investment, the smal -scale sector provides jobs to 26 people as compared to 4 jobs created in the large-scale sector.

2. It helps in industrialization of rural and backward areas.

3. The most significant contribution of the SME has been in the field of exports. There has been a significant increase in the exports from this sector of both traditional and non-traditional goods including jewel ery, garments, leather, hand tools, engineering goods, software etc.

The problems/ chal enges of SME's are classified as under:

1. Market Structure Problems

2. Logistic Problems

3. Managerial Problems

4. Economic Problems

5. Communication Problems

6. Socio-psychological Problems

As a result, they are not able to compete with imported goods produced by MNCs. They lack quality and brand loyalty. This has led to emergence of sick units which has adverse ef ects on industrial growth as well as employment generation in the economy.

The small scale industries play a vital role in the growth of the country. The government announced some policies and programs to support entrepreneurs of handlooms to sustain employment in rural areas and to improve the quality of life for handloom weavers. Various steps were taken to improve credit flow. The government has also introduced various schemes and incentives for their promotion and provide institutional infrastructure. With liberalization and globalization, government's support and subsidies are bound to decrease, therefore, strengthening of SME's for export competitiveness is very important in India.

B. OCCUPATIONAL STRUCTURE

Here we will discuss the sectoral distribution of employment in the economy over the years since 1950.

The table below will give an insight into the percentage of people employed in the three sectors since 1951 to 2010

Sector	1951	1961	1971	1981	1991	2001-02	2004-05	2010
Primary	72.1	71.8	72.1	68.8	66.8	60.8	58.4	37.1
Secondary	10.7	12.2	11.2	13.5	12.7	17.7	Peter18.2	18.7
Tertiary	17.2	16.0	16.7	17.7	22.1	22.1	23.4	44.2

Observations-

1. There has been a significant decrease in the employment in the primary sector from 1951 to 2010.

2. The fal in the employment in primary sector has not been significantly absorbed by the secondary sector.

3. The fal out has been majorly absorbed by the tertiary sector.

4. The transformation in the occupational structure can be only seen in primary and tertiary sector.

Therefore, we can say that the contribution of the secondary sector in economic growth of India has been less than expected.

C. FOREIGN TRADE

The period before 1991 was marked with the fol owing features of foreign trade:

1. Inward looking trade policy with focus on import substitution.

2. Protection to domestic industries from outside competition by imposing tarif and quotas.

3. The trade policy was liberalized to a lit le extent in the 1980s which proved to be a foundation for the major reforms of 1991.

Focus on -

1. Between 1950-1990 - India's growth rate averaged less then 4% p.a. at a time when developing world, including sub-saharan Africa and other least developed countries showed a growth rate of 5.2% p.a.
2. Discuss the failures of important assumption in the choice of post-independence development strategy was generation of public savings which could be used for higher levels of investment, which did not happen. (Discuss how public sector instead of becoming a generator savings for community good became overtime a consumer of community savings?)

2. Early seventies showed heavy Govt. borrowings not only to meet its own revenue expenditure but also to finance public sectors deficit and investments. 3. There is lit le or no accountability of public sector which is the major cause of its downfal in terms of performance in almost all sectors. However the other factors were also majorly responsible for low achievements levels. The abnormal increase in population added to its resource crunch and neutralized the development pace.

Discuss these in Classroom and explain-

1. How Government had an important role in al eviating poverty since 1951?

(Hint : A series of plans that guarded the country's economic development.)

2. India's continued food shortages, towards the end of Nehru's term as Prime Minister to self sustenance.

3. Trade deficit and its impact since 1950 that increased in 1960's.

4. Government's interventions by issuing Bonds to RBI resulting in money supply leading to inflation.

5. The cut ing off of the foreign aid in 1966; leading to devolution of rupee and pressurizing India to liberalize its trade policies.

6. Five year plans - its objectives, focus achievements and shortfal s.

LET'S SUM UP

The planning process in India started with a major role of public sector in industrialization and adoption of the five year plan as the path to development. We grew at a decent pace til the 1970s with achievements like rapid industrialization and green revolution in agriculture. However, things started fal ing apart when the domestic industries were given unreasonable protections and the system became infected with high degree red-tapism and corruption. By the end of 1980s, the Indian economy had fallen prey to huge debts, unemployment, double digit inflation and balance of payments crisis. all these problems gave way to what is popularly known as NEW ECONOMIC POLICY 1991.

CHECK YOUR PROGRESS

A QUESTION FOR UNDERSTANDING OF THE CHAPTER:

Study the table below and answer the fol owing questions.

Year	India's GDP at Current Prices(in crore rupees)	Real Growth rate %
1950-51	10,036	
1951-52	10,596	2.3
1952-53	10,449	2.8
1953-54	11,378	6.1
1954-55	10,689	4.2
1955-56	10,861	2.6
1956-57	12,965	5.7
1957-58	13,255	-1.2
1958-59	14,827	7.6
1959-60	15,574	2.2
1960-61	17,049	7.1
1961-62	17,992	3.1

1962-63	19,238	2.1
1963-64	21,986	5.1
1964-65	25,686	7.6
1965-66	26,895	-3.7
1966-67	30,613	1
1967-68	35,976	8.1
1968-69	37,938	2.6
1969-70	41,722	6.5
1970-71	44,382	5
1971-72	47,221	1
1972-73	51,943	-0.3
1973-74	63,658	4.6
1974-75	74,930	1.2
1975-76	79,582	9
1976-77	85,545	1.2
1977-78	97,633	7.5
1978-79	1,04,930	5.5
1979-80	1,14,500	-5.2
1980-81	1,36,838	7.2
1981-82	1,60,214	5.6
1982-83	1,78,985	2.9
1983-84	2,09,356	7.9
1984-85	2,30,526	4
1985-86	2,62,717	4.2
1986-87	2,92,924	4.3
1987-88	3,32,068	3.5
1988-89	3,96,295	10.2
1989-90	4,56,540	6.1

1. In which year did we experience highest real growth in the decade 1950 to 1960? What factors do you think were responsible for it?

2. When was the growth rate lowest? Site reasons.

3. What do you think was the main cause behind the 8.1% real growth in GDP in 1967 – 68? Why was it negative before this?

4. Where can you see the maximum decline in GDP? What factors, in your opinion were responsible for this.

MULTIPLE CHOICE QUESTIONS (MCQs)

1. The industrial policy resolution 1956 was based on a model proposed by

a. Jawaharlal Nehru

b. Mahatma Gandhi

c. B. R. Ambedkar

d. P. C. Mahalanobis

2. Structural composition of an economy refers to

a. The political composition

b. Contribution of primary secondary and tertiary sectors

c. The structure of the government

d. None of the above

3. Smal scale industry is defined as a production unit with an investment of

a. 30 lakhs or less

b. 10 crore or less

c. 1 crore or less

d. With 30 or less employees

4. The ministry governing the smal scale industries is

a. Home ministry

b. Ministry of human resource development

c. Ministry of MSME

d. Smal industries development bank of India (SIDBI)

5. A major achievement of economic planning in the mid-1960s

a. Green revolution

b. White revolution

c. Control ed population growth

d. High industrial growth

VALUE BASED QUESTIONS

1. Ramesh wants to set a smal scale unit of producing automobile spare parts. What is the minimum investment required? How according to you will it contribute to economic growth? What chal enges is he expected to face in the above venture?

2. Why was it important for the Government to play a major role in industrialization in the initial years of planning? What do think were the reasons to bring about reforms in the early 1990s?

UNIT - II

ECONOMIC REFORMS

Abstract

The module introduces and assesses the economic reforms undertaken in India during early 1990's after four decades of Development Planning. In the era of globalisation, the economic reforms aiming at the integration with the global economy focused on export led growth strategy. The key impact was seen in India's service sector, which grew at a high pace. The inducement of foreign investment flows brought in efficiency and attainment of global standards in productivity.

Key Terms

Trade Balance : The dif erence between the value of Exports and Imports of a country. Balance of Payment on Current Account includes three items: (i) Visible trade relating to exports and imports; (i) Invisible items, viz. receipts and payments for such services as shipping, banking, insurance, travel, software services, etc. and (ii) Unilateral transfers such as donations.

Direct Investment : It includes equities held by: (a) Government and Reserve Bank of India, (b) Nonresident Indians(Foreign Direct Investment), (c) Acquisition of shares in incorporated bodies, (d) Equity Capital of unincorporated bodies, (e) Reinvested earnings and (f) other capital or inter-company debt transactions of FDI companies

Portfolio Investment: It includes (a) Global Depository Receipts (GDR) /American Depository Receipts (ADR), (b) Investment by Financial Institutional Investors and (c) Of Shore Funds, etc.

INTRODUCTION

After at ainment of independence, India adopted the regime of economic planning with a glorious vision of a resurgent India. It aimed at marching firmly onto the path of progress while ensuring an equitable distribution of the nation's wealth. Policies relating to licensing focussed on public sector, put ing infant industry argument for imposing trade barriers, import-substitution policies, etc. This gamut of policies led to over-protection, inefficient resource utilization, high revenue deficits, mismanagement of firms and economy, poor technological development and shortage of foreign exchange. The resultant stress and pressures compel ed the government to revisit the policy framework. The outcome came to be a set of changes in economic policies, which in a broad sense came to be identified as economic reforms. The principal aim of economic reforms was to enter an era of Globalization which meant –

a) free flow of goods and services,

b) free flow of technology,

c) free flow of capital, and free movement of human beings, especial y labour from

one country to another.

Economic reforms, therefore, required integrating the Indian economy with world economy and the emphasis in economic reforms shifted to export-led growth strategy from import substitution strategy.

RATIONALE OF ECONOMIC REFORMS Indian economy was highly regulated and infested with various types of controls during the first four decades of economic planning (1950-1990). The five-year plan objectives were based on the heavy-industries oriented Mahanalobis strategy which focussed on development of public sector for set ing up heavy and basic industries, self-reliance, import substitution strategies, nationalization and state-interventionist regime. While on one hand it helped in set ing up some key industries like SAIL, ONGC, IOC, BHEL, etc., on the other hand it restricted the growth of private sector, and brought about bureaucracy-led corruption, sick public sector enterprises, deteriorating trade balance, economic and financial crisis in early 1990s. India had to borrow foreign exchange from IMF and comply with the conditionality imposed by it such as stabilisation and structural stability programme, reduction of trade barriers, revision of fiscal and monetary policies, active role for market and integration of the Indian economy with the world economy.
The three basic elements of economic reforms were Liberalisation, Privatisation and Globalisation (also known as LPG strategy) of the Indian economy.

KEY FEATURES OF ECONOMIC REFORMS

The New Economic Policy (NEP) during the economic reforms process reflected neo-liberalism. It was aimed at giving more freedom to the market forces. The rationale of economic reforms was provided by the Industrial Policy announced by the Government in 1991. Its basic philosophy was summed up as 'continuity with change'. The key objectives can be summarised as:

a) to set free the Indian industrial economy from the shackles of unnecessary bureaucratic controls;

b) to introduce liberalisation with a view to integrate the Indian economy with the world economy;

c) to remove restrictions on foreign direct investment (FDI) and also to lessen the restrictions on

Monopolies and Restrictive Trade Practices (MRTP) Act for the domestic entrepreneur;

d) to dilute the monopoly of public sector enterprises and encourage competition from new private enterprises.

Some of the important features of the reforms process have been as follows:

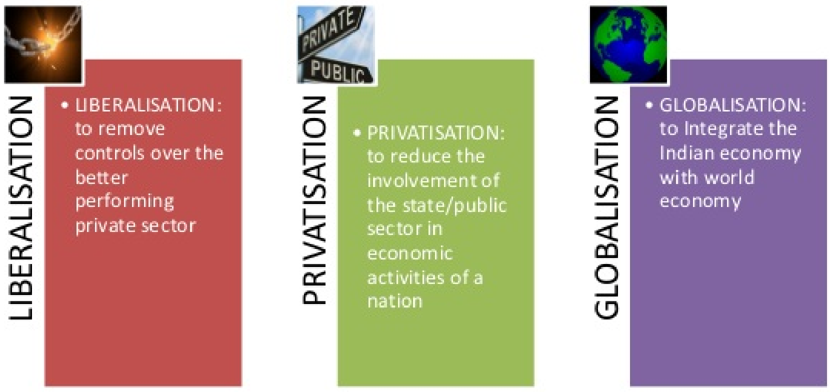
1) The approach towards reforms has been conservative, with an appropriate sequencing of measures. It has been complemented with reforms across sectors (for example, the monetary, fiscal and external sectors) and the development of institutions relating to different sectors of the economy.

2) The pace and sequencing of liberalisation has been responsive to domestic

developments, especial y in the monetary and financial sectors.

3) The approach to reform was ‘gradual but steady’ rather than a ‘big bang’ approach.

4) The major thrust driving the reform process was the quest for higher growth and efficiency, along with macro-economic stability. At the same time, several steps were taken to make these reforms ‘inclusive’ in the sense that the benefits of reforms were to be shared by all sections, in particular the vulnerable ones.



Liberalisation

The structural reforms programme adopted during early 1990’s, was aimed to counter the financial crisis included the fol owing measures:

a) All industrial licensing was abolished except for 18 industries relating to security and strategic concerns, social sectors, hazardous chemicals, environmental reasons and items of elitist consumption industries.

b) To promote domestic and global competition, reservation of Smal -scale industry (SSI) items is being reduced gradual y since 1990s. Currently, no item is reserved for SSIs but it was 836 in 1996.

c) MRTP Act was amended to account for removal of pre-entry restrictions, concentration of economic power, threshold limits of assets in respect of dominant undertakings and MRTP companies. (Subsequently, the MRTP Act has been withdrawn and the MRTP commission stands disbanded). The competition Commission of India has replaced this act.

Privatisation

Privatisation refers to any process that reduces the involvement of the state/public sector in economic activities of a nation. Contrary to the post-independence thrust on a dominant role for public sector, the economic reforms of 1991 recognised private sector as the engine of growth. Policies were framed to increase the role of private sector in general and market forces in particular in the process of development. Privatisation in a mixed economy like India can take several forms such as:

a) **Total denationalisation,** implying complete transfer of state ownership of productive assets into private hands.

b) **Joint venture**, implying partial induction of private ownership from 25 to 50 percent or even more in a public sector enterprise, depending upon the nature of the enterprise and state policy in this regard.

c) **Worker's co-operative** is another form of privatisation where a loss-making public sector firm is transferred to the workers. A classic example of the Indian case is the Indian Coffee Houses.

d) **Token Privatisation,** also known as deficit privatisation or disinvestment, implying sale of 5-10 per cent shares of a profit-making public sector enterprise in the market with the objective of obtaining revenue to reduce budget deficits.

Globalisation

Globalisation is a process of integrating the domestic economy with the different economies of the world. It also implies a reduction in the barriers to the flow of goods and services, technology, capital and human capital. It comprises of the fol owing components:

a) Dismantling of trade barriers in the form of both tariff as well non-tarif barriers so as enable free flow of goods and services among different economies.

b) Enabling environment for free flow of capital in general and investments in particular among different economies.

c) Establishing legal and institutional framework for free flow of technology.

d) Appropriate regulatory framework for free flow of labour and human resources among different economies of the world. Essential y, globalisation is liberalising an economy international y. Hence, it signifies internationalisation plus liberalisation. In India, the process of globalisation began with

the adoption of LPG model during economic reforms since 1990s.

Public Private Partnership (PPP)

It signifies encouraging private participation in key development projects. It has advantages of both private sector as well as public sector. The main advantages of public-private partnerships are efficient and speedy delivery of projects, al eviation of capacity constraints in the economy, innovation and diversity in provision of world-class facilities, value for money of the tax-payer through optimal risk transfer and risk management, etc.

Model of Economic Management in India

From Licence, Quota Restrictions (LQR) to Liberalisation, Privatisation and

Globalisation (LPG)

	Pre-ReformStrategies	Economic Reform Strategies
Liberalisation	License dominatedregime	Delicensing, deregulations, Debureaucratisation
	Politicallyadministered prices	Market determined prices at Large
	State-led economicgrowth	Market-determined economic Growth

	Restrictions on currency movement	Liberalisation of restrictions
	Under developed capital market	Reforms in capital market
	High tax rates	Tax reforms
Privatisation	PSUs as engines of growth	Private investment as engine of growth
	Philosophy of natural monopoly	Minimise gap between public and private sectors
Globalisation	Closed economy	Open economy
	Self-reliance	Integration with world markets
	Import-substitution strategies	Export oriented strategies
	Restrictions on FDI and MNCs	Inducement to FDI and MNCs

IMPACT OF NEW ECONOMIC POLICY

The Impact of New Economic Policy has been to boost our exports, develop new technology and increase employment. The rate of growth has gone up.

EXTERNAL SECTOR

It is gratifying to record that over the last two decades the government management of the external sector has been characterised by a judicious combination of 'outward orientation', investment liberalisation, and vigilance in the matter of convertibility of rupee. The economy has been less af ected by the aftershocks of 2008 financial crisis. Our resilient financial system withstood that crisis.

A remarkable achievement in our export sector has been more diversification and sustainable growth in terms of both composition as well as direction of trade. The available data suggests that the export intensity of the private corporate sector (manufacturing exports per unit of sales) has almost doubled from 13.37 per cent in 1998-99 to 24.23 per cent in 2008-09.

The product composition of our exports is undergoing a gradual but decisive transformation from primary and natural resource based products towards technology- intensive and high value products. This is indicated by a surge in auto exports which has even exceeded export of software in the current decade.

Surprisingly, corporates have emerged as net foreign exchange earners of the country. Foreign investment flow is now two-way flow. There has been global exposure to the corporate India through joint ventures, acquisitions and licensing arrangements. A clear and transparent export-incentive system with tax-breaks is in place instead of the old clumsy system infested with corruption and red-tapism. There has been complete removal of restrictions on foreign investments. India has relied heavily on imported technology designs and equipment through foreign col aborations and FDI with far too little at ention and effort at building indigenous capability. 'Make in India' is an initiative in the right direction. As private equity and hedge fund investments grow, foreign institutional investors and shareholders will start demanding conditions that could hurt the Indian economy.

The service sector has taken a lead in terms of share in our GNP. The manufacturing sector has lagged behind in that respect. Whether it will sustain in future or not, is a moot question? Of the total income that has accrued to the services sector in the post- globalisation period, as much as one-third of this has been the earnings of foreign nationals.

INTERNAL SECTOR

Phenomenal success has been achieved by the Indian economy during this period through productivity improvements, reducing capacity overhangs and proper sequencing of policies. The manufacturing sector is noted with significant capacity and technology upgradation.

There has been a surge in productivity. The surge in productivity stems from the need to satisfy demanding employers as well as consumers. Growth impulses are now widely distributed across the economy; but some sectors like agriculture are left behind al sectors of the economy. Agriculture has experienced an increase in costs and an increase in price volatility. Liberalisation has created an environment of risk for the economic agents.

High growth rate yielded a bonanza of revenue for the government. The government went for major social initiatives including the Mahatma Gandhi National Rural Employment Guarantee Scheme, Bharat Nirman, Sarva Shiksha Abhiyan, and the Right to Education Act. It has increased social spending for the government. The most important thing is the fact that economic reforms have resulted in a change of mindset. An emerging new middle class is main driving force behind liberalisation and reforms. There are greater fluctuations in a large number of key macro-economic variables, including GDP and its various components, which requires changes in the regulatory framework and institutional set up of the economy. Industrial performance across the entire sector has been slower in the post-reforms period as compared to that in the pre-reforms period. There are at least three complementary reasons: one, due to labour laws, industry in India is increasingly outsourcing its activities so that growth in industry is actual y being counted in growth in services. Two, due to some key binding constraints in areas of labour laws and power, large-scale firms are stil unwil ing to enter the market. Final y, large fiscal deficits continue to crowed out private investment.

The NEP seems to have overlooked the inclusion of the excluded i.e. poor, dalits, tribals etc.

EXPLANATION FOR FAILURES /SHORFALLS OF REFORMS

Jean Dreze offers the fol owing explanations for the limited success of the NEP in India, so far:

There has been a lack of preparedness of the Indian economy for the kind of economic take-of that has followed market-oriented reforms in other countries such as China and Vietnam. These include extensive land reforms, near-universal literacy in the younger age groups, high levels of nutrition and health, social security arrangements and a well developed rural infrastructure.

In China there has been an egalitarian distribution of land cultivation rights that followed the de-col ectivisation of 1978. In most parts of India for the poor, there is no similar rural safety net.

There have been growing economic disparities in the post-reform period. To promote the cities-centred boom, rural lands are increasingly being grabbed, with the active connivance of the State, resulting in what Amit Bhaduri has called ‘developmental terrorism’— a situation in which the government becomes a ruthless promoter of the corporate interests in search of higher growth.

Reform programme has remained preoccupied with issues of fiscal and trade policy, financial markets and capital account convertibility, and constraints on corporate investment, to the neglect of the governance structure in the delivery of basic social services for the poor that we have in large parts of the county (in education, health, drinking water, child nutrition, etc.).

SECOND GENERATION REFORMS

Unlike the first-generation reforms that were crisis-ridden, the second generation reforms are known as consensus-ridden aimed at improving the existing bot lenecks in the road towards development. The agenda for second-generation reforms can be identified as below:

1. **Fiscal reforms**

Steps like reducing the revenue and fiscal deficits so as to limit the public and foreign debt improving the transparency and quality of governance.

2. **Promoting competition in product markets**

Encouragement to private players, foreign investments, improved quality of products at local markets can enable India to reap ef iciency gains from the product markets.

3. **Reforms in factor markets**

Flexibility in labour markets, amendments in laws related to bankruptcy and corporate control, policies oriented towards self-employed workforce, innovations in social safety nets and creation of human capital particularly through enlargement of education facilities are the much awaited reforms in factor markets.

4. **Financial sector reforms**

Steps like technology-dif usion in rural banks, cooperative banking sector, smal and medium enterprises (SMEs), strategic planning for ful er capital account convertibility can help improve the credibility of India's financial sector.

5. **Reforms in Agriculture**

Creation of a comprehensive safety net system, expansion of rural credit, debt-waiver policies, hedging and mitigation of risks, fixing of market support prices, agricultural marketing, dealing with issues on agriculture at WTO are the key policy areas proposed for second generation reforms.

REVIEW OF NEW ECONOMIC POLICY (NEP) , 1991

The key feature of economic reforms was the LPG model put forth by the Government with a view to integrate the Indian economy with the global economy. It was aimed to introduce liberalisation, restrict bureaucratic controls, and remove restrictions on direct foreign investment and to encourage privatisation with a view to decompress the load on public sector enterprises.

The impact of economic reforms has been positive in terms of GDP growth and also the increase in foreign investments has been satisfactory. But, it neglected the broade social problems such as poverty and unemployment. The agricultural growth has also been neglected due to too much concern for control ing the government's budget deficits. It resulted in near stagnation of capital investments which also led to a decline in private investments. Economic reforms have also not been successful in accelerating industrial growth.

In the post-economic reforms period, India has experienced a change in the structure of the economy and its implications in the long-run. India's tertiary sector is leading the economy, whereas the growth in the manufacturing sector has been low. Whether, this kind of growth is sustainable in future, is yet to be empirically established.

However, a near stagnation in the secondary sector and sharp decline of contribution of primary sector is a mat er of great concern. Two key implications are the rising inequalities in growth and lack of suf icient employment.

LET'S SUM UP

The New Economic Policy aimed at integrating the Indian Economy with the world economy. The Impact of New Economic Policy has been to boost our rate of growth and exports, develop new technology and increase employment. The NEP seems to have overlooked the growth of secondary and agricultural sector and the inclusion of the excluded i.e. poor, dalits, tribals etc. Hence it has had a limited impact.

CHECK YOUR PROGRESS

MULTIPLE CHOICE QUESTIONS (MCQ)

1. Economic reforms were started in-

(a) 1991

(b) 1995

(c) 1996

(d) 2001

2. The term ‘LPG’ stands for-

(a) Liberalisation

(b) Privatisation

(c) Globalisation

(d) All the three

3. India’s economic growth since 1991 has-

(a) Increased

(b) Decreased

(c) Remained constant

(d) None of the above

4. Which of the folowing methods are used for privatisation?

(a) Disinvestment

(b) Joint Venture

(c)

Worker’s Co-operative

(d) All the above

5. World Trade Organisation was established in -

(a) 1995

(b) 1990

(c) 2000

(d) 2005

*Answer Key 1. (a) 2. (d) 3. (a) 4. (d) 5. (a)

VALUE-BASED QUESTIONS

1. Does devaluation always cause an increase in export earnings?

Ans Devaluation causes the price of domestic currency to fal with respect to the foreign currency. In other words, the domestic currency becomes cheaper as compared to a foreign currency. It makes domestic goods cheaper to the foreigners (i.e. our exports) and our imports expensive to the domestic residents. It results in an increase in our exports and a decrease in our imports. Our export earnings will only increase if the demand for exports is elastic.

2. Give your opinion about the need for inclusive growth for an economy like India. Whether, a country which has adopted LPG programme, could achieve inclusive growth?

Ans Inclusive growth is such a development process which ensures that distribution improves poverty declines and unemployment declines in the economy. The LPG programme is based on the giving encouragement to the market forces. It also gives more power to the private sector which is based on sheer profit motive. Hence, under these situations, inclusive growth seems more like a political slogan rather than a serious objective.

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UNIT - III

INTRODUCTION - MICRO & MACRO ECONOMICS

Learning outcomes

- understand the concept of 'an economy'.
- differentiate between micro economics and macro economics.
- understand positive and normative economics and dif erences between the two.
- understand economic problem and its causes
- comprehend central problems of an economy: what, how and for whom to produce and why they arise.
- draw the PPC and explain its characteristics
- understand opportunity cost and marginal opportunity cost.

Abstract

Students of class XII are to be acquainted with meaning of Economics, Economy and Economic activities. This unit will start from meaning of economics and lead them to two main branches of economics (1) Micro economics and (2) Macroeconomics. Difference between micro economics and macroeconomics will make students understand the concept better. Positive and normative economics and difference between them has been added to the syllabus this year. Problem of choice general y known as economic problem is faced by all individuals and societies. Causes of economic problems are (1) Resources are Scarce, (2) Unlimited wants and (3) Alternative uses of resources. Economic problems faced by economies are called central problems of an economy they are (1) what to produce? (2) How to Produce and (3) for whom to produce. Production possibility frontier (Curve) helps one to understand and solve the central problems of an economy. Production possibility curve is drawn on some assumptions to understand the efficient all ocation of resources for their maximum utilisation. To increase the production of one commodity, an economy has to give up some units of another commodity. The rate at which one good is sacrificed to obtain one unit of other good is known as Marginal Rate of Transformation. Characteristics of PPC are also discussed in this unit. Opportunity cost and Marginal opportunity cost plays a vital role in al ocation of resources to tackle central problems of an economy.

परिचय

सूक्ष्म तथा वृहत अर्थशास्त्र

'अर्थशास्त्रधान का शास्त्र है।' समाज में अधिकांश व्यक्ति अर्थशास्त्रको इसी रूप में देखते हैं।अर्थशास्त्रका विषय इससे बहुत विस्तृत है। अर्थशास्त्रउपभोक्ता, उत्पादक तथा अर्थव्यवस्था केव्यवहार का अधययन करता है। अर्थशास्त्रदुर्लभ संसाधानों से असीमित आवश्यकताओं को संतुष्टकरने तथा सर्वोत्तम विकल्प को चुनने में मदद करता है।अर्थशास्त्र आर्थिक अभिकताओं (एजेन्ट) के व्यवहार का अधययन करता है। अर्थशास्त्रको मुख्यत: दो
भागों में बाँटा जाता है (1) सूक्ष्म अर्थशास्त्रतथा (2) वृहत अर्थशास्त्र। अर्थशास्त्र की दोनों शाखाऐंएक दूसरे विषय वस्तु में भिन्न है किन्तु किसी आर्थिक सि)न्त को समझने के लिए एक दूसरे के पूरक की तरह कार्य करते है। सूक्ष्म (व्यष्टि) अर्थशास्त्रवैयक्ति आर्थिक अभिकर्त्ताओं का बाजार मेंव्यवहार का अधयन करता है कि वह कैसेवस्तु की कीमत तथा मात्र का निर्धारण करते हैं। वृहत (समष्टि) अर्थशास्त्रमें अर्थव्यवस्था के स्तर पर समग्र मांग, समग्र पूर्ति, रोजगार, कुल उत्पादन,राष्ट्रीय आय आदि का अधययन किया जाता है।

इस इकाई में आर्थिक समस्याओं तथा उनके कारणों की विस्तृत चर्चा की गई तथा अर्थव्यवस्था कीकेन्द्रीय समस्याओं को बताया गया है। केन्द्रीय आर्थिक समस्याओं को समझने के लिए उत्पादनसंभावना वक्र सहायक होता है। उत्पादन संभावना वक्र की विशेषताएं तथा अवसर लागत, अर्थव्यवस्था को चयन करने और निर्णय लेने में सहायता करता है। सकारात्मक अर्थशास्त्रतथाआदर्शात्मक अर्थशास्त्र वास्तविक स्थिति तथा आदर्श स्थिति को समझने में सहायक होगा। इसइकाई का अधययन करके आप आर्थिक समस्याओं को जान जाएंगे तथा अगली इकाई में उन्हें हलकरने का अधययन करेंगे।

KEY TERMS

Economy, Micro Economics, Macro Economics, Scarcity, Production Possibility Curve, Marginal rate of transformation, Opportunity Cost, Marginal Opportunity Cost, Central y planned economy, Market Economy

Economy An Economy is a system that provides people with means to work and earn their livelihood in the process of production and consumption. This is also known as an economic system.

Micro Economics is the branch of economics that studies the behaviour and economic actions of the individual units, i.e. consumers, industry, firms, households etc.,

Macro Economics is the branch of economics that studies the behaviour and performance of aggregate variables and those issues which af ect the whole economy.

Scarcity Resources (i.e. land, labour, capital, etc.) are limited in relation to their demand and economy cannot produce all what people want. When demand of resource is more than its supply even at zero price, it is considered as scarcity. Production Possibility Curve locus of different possible combination of two goods which an economy can produce by ful and ef icient use of given resources at given technology.

Marginal Rate of Transformation (MRT): Rate at which economy has to reduce the production of one commodity to increase the production of one unit of the other commodity while moving along the production possibility curve.

Opportunity Cost- Price of next best alternative forgone is known as opportunity cost.

Marginal Opportunity Cost- is the rate at which one good must be sacrificed in order

to produce one more unit (or marginal unit) of another good, assuming that both goods require the same scarce inputs. Central y planned economy is an economic system in which economic decisions are made by the state or government rather than by the interaction between consumers and businesses.

Market Economy is an economy in which decisions regarding investment, production, and distribution are based on market determined supply and demand, and prices of goods and services are determined in a free price system. Every individual needs many goods and services in everyday life including food, house, clothing, education, postal service, transport services and medical services etc. He use his resources to fulfil his needs but has unlimited resources compared to his needs. As a result every individual is forced to make a choice between the different goods and services that are available. Just as the resources of an individual are scarce, the resources of the society are also scarce in comparison to what the people in the society collectively want to have. Economics studies the problem of choice faced by the Economic Agents1. Economics is mainly divided into two parts Micro Economics and Macro Economics. In this unit we will study economic problem faced by the individuals and economy. Economic problem is the problem of basical y making the choice of the use of scarce resources for satisfying unlimited human wants. Cause of economic problems is (a) Unlimited Human Wants (b) Limited Economic Resources (c) Alternative uses of Resources. Every Economy face the problem of choice known as Central Problems of an Economy (1) What to produce? (2) How to produce? (3) For whom to produce? Production possibility frontier shows all possible combinations of two goods that an economy can produce with given resources and available technology, assuming that all resources are fully and efficiently utilised. Production Possibility Curve helps in understanding the central problems of an economy and in determining how to al ocate the scarce resources to produce goods and services among the individuals within the economy. In last we will discuss the opportunity cost and marginal opportunity cost.

Meaning of Economics

'Economics' is defined as the study of how the humans work together to convert limited resources into goods and services in order to satisfy their wants (unlimited) and how they distribute the same among themselves. Economics is all about making choice in the presence of scarcity. Economics has been divided into two broad parts i.e. Micro Economics and Macro Economics.

Micro Economics

Microeconomics is the branch of economics that studies the behavior and performance of individual, household, firm or a smal group of individual units in decision making and al ocation of resources. Its main tools are Demand and Supply. Microeconomic study deals with what choices people make, what factors influence their choices and how their decisions affect the goods markets by af ecting the price, the supply and demand. e.g. law of demand, law of supply, price determination etc.

Macro Economics

Macroeconomics is the branch of economics that studies the behaviour and performance of aggregate variables and those issues which af ect the whole economy. It includes regional, national and international economies and covers the major areas of the economy like unemployment, poverty, general price level, GDP (Gross Domestic Product), imports and exports, economic growth, globalization, monetary/ fiscal policy, etc.

Differences between Micro and Macro Economics

BASIS FOR COMPARISON	MICROECONOMICS	MACROECONOMICS
Meaning	The branch of economics that studies the behaviour of an individual consumer, firm, family is known as Microeconomics.	The branch of economics that studies the behaviour of the whole economy, (both national and international) is known as Macroeconomics.
	Covers various issues like	

Scope	demand, supply, product pricing, factor pricing, production, consumption, economic welfare, etc.	Covers various issues like, national income, general price level, distribution, employment, money etc.
Importance	Helpful in determining the prices of a product along with the prices of factors of production (land, labour, capital, entrepreneur etc.) within the economy.	Helpful in maintaining stability in the general price level and resolves the major problems of an economy like inflation, deflation, unemployment and poverty as a whole.
Importance	it is based on unrealistic assumptions, i.e. In microeconomics it is assumed that there is full employment in the society which is not at all possible.	It has been analyzed that 'Fallacy of Composition' involves, which sometimes doesn't prove true because it is possible that what is true for aggregate may not be true for individuals too.

As microeconomics focuses on the al ocation of limited resources among the individuals, the macro economics examines that how the distribution of limited resources is to be done among many people, so that it will make the best possible use of the scarce resources. Micro and Macro Economics are not contradictory in nature, in fact, they are complementary. As every coin has two aspects- micro and macro economics are also the two aspects of the same coin, where one’s demerit is others merit and in this way they cover the whole economy. The only important thing which makes them different is the area of application.

Positive Economics and Normative Economics

Positive economics is objective and fact based, while normative economics is subjective and value based. Positive economic statements do not have to be correct, but they must be able to be tested and proved or disproved. Normative economic statements are opinion based, so they cannot be proved or disproved. Positive economics deals with what it is and normative economics deals with what ought to be.

Basis	**Positive Economics**	**Normative Economics**
Meaning	It deals with what it is or how the economic problems are actually solved	It deals with what ought to be or how the economic problems should be solved.
Verification	it can be verified with actual data.	It cannot be verified with actual data.
Study	We study how the different mechanisms function.	We try to understand whether these mechanisms are desirable or not.
Judgement	It does not give any value judgement.	It gives value judgement
Examples	government-provided healthcare increases public	government should provide basic healthcare to all citizens

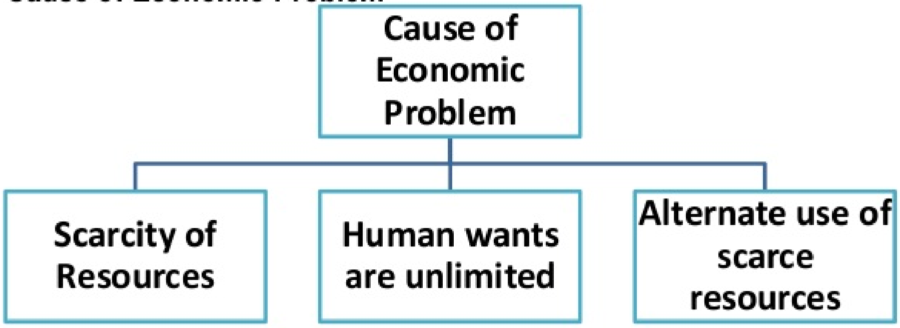
	expenditures	

Economic Problems

Eminent English Economist Lord Robbins defines economics in terms of economic problem. According to him, ”Economic is a science which studies human behaviour as a relationship between ends and scarce resources which have alternative uses.” Ends refer to wants which are considered to be unlimited. Human wants are unlimited and productive resources such as land and other natural resources, raw materials, capital equipment with which to produce goods and services to satisfy those wants are scarce and limited. The problem of scarcity of resources is felt not only by individuals but also by the society as a whole.

This gives rise to the problem of how to use scarce resources to at ain maximum satisfaction. This is general y called ‘the economic problem’ as it lies at the root of all economic problems faced by the society. An economic problem is basical y the 'problem of choice' which arises due to scarcity of resources which have alternative uses.

Cause of Economic Problem



(i) **Scarcity of Resources:** Resources (i.e. land, labour, capital, etc.) are limited in relation to their demand and economy cannot produce all what people want. Scarcity is universal and applies to all individuals, organisations and countries. There would have been no economic problem, if resources were not scarce.

(ii) **Human wants are unlimited:** Human wants are never ending, they can never be fully satisfied. Wants of the people are unlimited and keep on multiplying and cannot be satisfied due to limited resources. Human wants also dif er in priorities, are not of equal intensity. People al ocate their resources in order of preference to satisfy some of their wants. If all human wants had been of equal importance, then it would have become impossible to make choices.

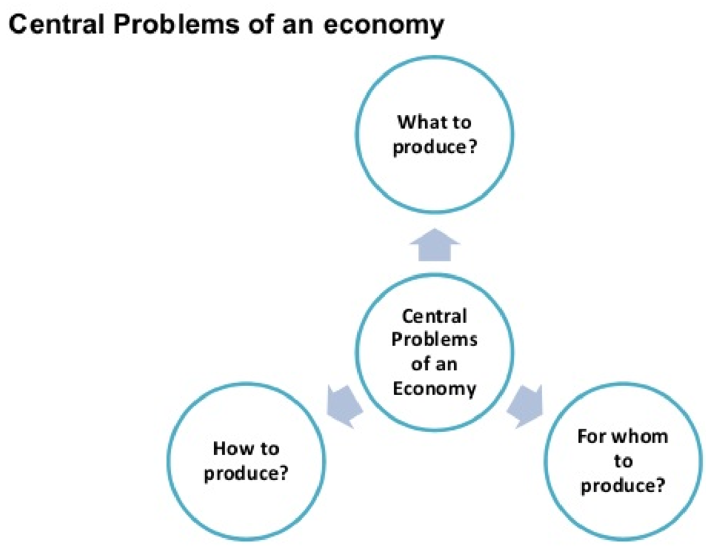
(iii) Alternate uses of resources: Resources are not only scarce, but they can also be put to alternative uses. The same resource can be used at a time for only one purpose. For example, Electricity is used in homes, for running machines, production, etc. As a result, economy has to make choice between the alternative uses of the given resources.

Hints for Teachers: Two characteristics of resources, which give rise to economic problem, are (i) Economic resources are Limited and (i) Economic resources have alternative uses.

Central Problems faced by an Economy

Production, Consumption and distribution of goods and services are the basic economic activities of life. In the course of these activities, every society has to face scarcity of resources. Because of this scarcity, every society has to make a choice in the alternative use of resources. Every economic system, be it capitalist, socialist or mixed, has to contend with this central problem of scarcity of resources relative to wants for them. Poor countries, developing countries and developed societies face the same problem of scarcity. Scarcity of resources requires that ef icient and optimum use of resources be made so that we should get most out of them and thus maximum possible satisfaction of the people is achieved. If it is decided to use more resources to produce more of one commodity, then some resources must be withdrawn from another commodity.

In narrow sense, Prof Samuelson defines central problem as 'what, how and for whom to produce it?' These in fact are three aspects of the main central problem of 'al ocation of resources' Al ocation of resources refers to the problem of assigning the scarce resources in such a manner so that maximum wants of the society are fulfil ed. As resources are limited in relation to the unlimited wants, it is important to economize their use and utilize them in the most efficient manner.



1. What to Produce

Every economy have to choose which good out of the many possible goods and services should be produced and in what quantity. This problem involves selection of goods between consumer goods and war goods; necessary goods and luxury goods. Since every economy has limited resources, all goods and services desired cannot be produced. More of one good or service usual y means less of others. For example, production of more butter is possible only by reducing the production of guns. Production of more war goods is possible only by reducing the production of consumer goods. Guiding Principle of 'What to Produce': Al ocate the resources in a manner which gives maximum aggregate satisfaction.

2. How to Produce

This problem refers to selection of technique to be used for production of goods. A good can be produced using different combination of inputs, known as techniques of production. Techniques are classified as: Labour intensive techniques and Capital intensive techniques. Availability of factors and their relative prices helps in determining the technique to be used. Guiding Principle of 'How to Produce': Combine factors of production in such a manner so that maximum output is produced at minimum cost, using least possible scarce resources.

3. For Whom to Produce

This problem is concerned with distribution of income and output produced in the economy. Who will ultimately consume the goods, whether to produce goods for poor or rich. Goods are produced for those people who have the paying capacity. The capacity of people to pay for goods depends upon their level of income. It means, this problem is concerned with distribution of income among the factors of production (land, labour, capital and enterprise), who contribute in the production process. (i) Personal Distribution:

how national income of an economy is distributed among different groups of people. (i) Functional Distribution: It involves deciding the share of different factors of production in the total national product of the country. Guiding Principle of ‘For whom to Produce’: Ensure that urgent wants of each productive factor are fulfil ed to the maximum possible extent.

Production Possibility Curve

Production possibility curve is the locus of all possible combinations of two goods which an economy can produce with ful and ef icient use of its given resources and given technology. If an economy decides to al ocate more resources to increase the production of one good, it has to withdraw resources from the production of another good. Given the amount of resources, the economy has to operate on the given production possibility curve. If the given resources are being fully used and technology remains constant, an economy cannot increase the production of both the goods. Production possibility curve is also known as Production possibility frontier because it shows the maximum amount of one good that can be produced for any given amount of other good and vice-versa.

Production Possibility Curve is based on the fol owing assumptions:

1. Only two goods are produced in the economy.

2. The resources available in the economy are fixed (given), but these resources can be transferred from one use to another.

3. The technology is given and remains unchanged.

4. The resources are fully and efficiently utilised.

5. The resources are not equally efficient in production of all products. So, when resources are transferred from production of one good to another, the productivity decreases;

The last assumption determines the shape of the Production possibility curve. If this assumption changes, the shape of PPC also changes. Efficiency in production means output per unit of an input. Suppose a worker is employed in the production of butter as he is ef icient in it. The economy decides to reduce production of butter and increase the production of Guns. The worker is transferred to the production of guns. He is not equally ef icient in production of guns as he was in butter. His productivity in guns will be low, and opportunity cost of production is high.

The implication is clear. If the resources are transferred from one good to another, the less and less efficient resources will be transferred leading to rise in the marginal opportunity cost which is technical y termed as Marginal Rate of Transformation (MRT).

The concept of PPC can be bet er understood with the help of fol owing imaginary (hypothetical) schedule and diagram:

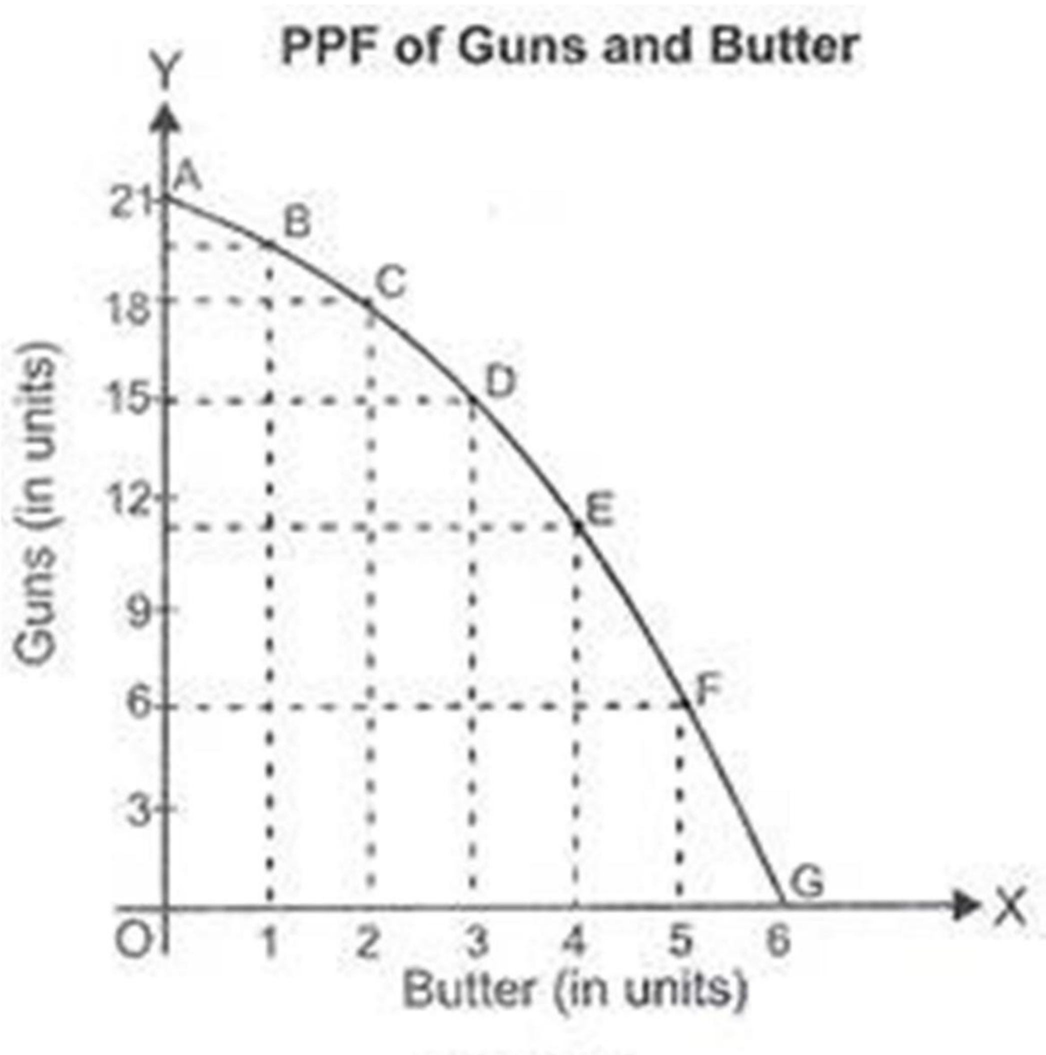
Possibilities	Guns (in units)	Butter (in units)	MOC	MRT= ∆Guns/∆ Butter
A	21	0	—	—
B	20	1	1	1G:1B
C	18	2	2	2G :.1B
D	15	3	3	3G:1B
E	11	4	4	4G:1B
F	6	5	5	5G:1B
G	0	6	6	6G: 1B

i. If the economy uses all its resources to produce only guns, then maximum of 21 units of guns and no butter can be produced (point 'A').

ii. On the other hand, if all resources are used for butter, then maximum 6 units of butterand no guns can be produced (point 'G').

iii. In between, there are various possibilities with different combinations of guns and butter.

iv. When points A, B, C, D, E, F and G are joined, we get a curve AG, known as 'Production Possibility Frontier'. AG curve shows the maximum limit of production of guns and butter.



Only two goods are taken: The two goods have been taken just for the sake of simplicity and easy understanding. However, the analysis involved can be applied equally well , to any combination of goods.

Marginal Opportunity Cost (MOC): MOC refers to the number of units of a commodity sacrificed to gain one additional unit of another commodity. In case of PPC, MOC is always increasing, i.e. more and more units of a commodity have to be sacrificed to gain an additional unit of another commodity.

Marginal Rate of Transformation (MRT):

MRT is the ratio of number of units of a commodity sacrificed to gain an additional unit of another commodity. MRT = ∆Units Sacrificed/∆ Units Gained. In the given example of guns and butter MRT = ∆ Guns/ ∆ butter

Characteristics of Production Possibility Frontier:

The two basic characteristics or features of Production Possibility Frontier are:

1. Production Possibility Frontier slopes downwards:

PPF shows all the maximum possible combination of two goods, which can be produced with the available resources and technology. In such a case, more of one good can be produced only by taking resources away from the production of another good. As there exists an inverse relationship between changes in quantity of one commodity and change in quantity of the other commodity, PPF slopes downwards from left to right

It must be remembered that Production Possibility Frontier does not show the point at which the economy will actually operate. It only shows the maximum available possibilities, which an economy can produce. The exact point of operation depends on how well the resources of the economy are used.

1. Economy will operate on PPF only when resources are fully and efficiently utilised.
2. Economy will operate at any point inside PPF if resources are not fully and efficiently utilised.
3. Economy cannot operate at any point outside PPF as it is unattainable with the available productive capacity.

It means:

i. Economy can either operate on PPF or inside PPF, known as 'Attainable Combinations'.

ii. But, economy cannot operate outside PPF, known as 'Unattainable Combinations'.

2. Production Possibility Frontier is Concave to the origin:

Production Possibility Frontier is concave to the origin because of increasing marginal opportunity costs, i.e. more and more units of one commodity are sacrificed to gain an additional unit of another commodity. In the given example, units of guns sacrificed keep on increasing each time to increase production of one unit of butter. Due to increasing marginal opportunity cost, PPF becomes more and more steep as we move from points A to G.

Can PPF be a straight line? PPF can be a straight line if we assume that MRT is constant, i.e. same amount of a commodity is sacrificed to gain an additional unit of another commodity. It is possible only when we assume that all the resources are equally efficient in production of all goods.

Can PPF be Convex to the Origin?

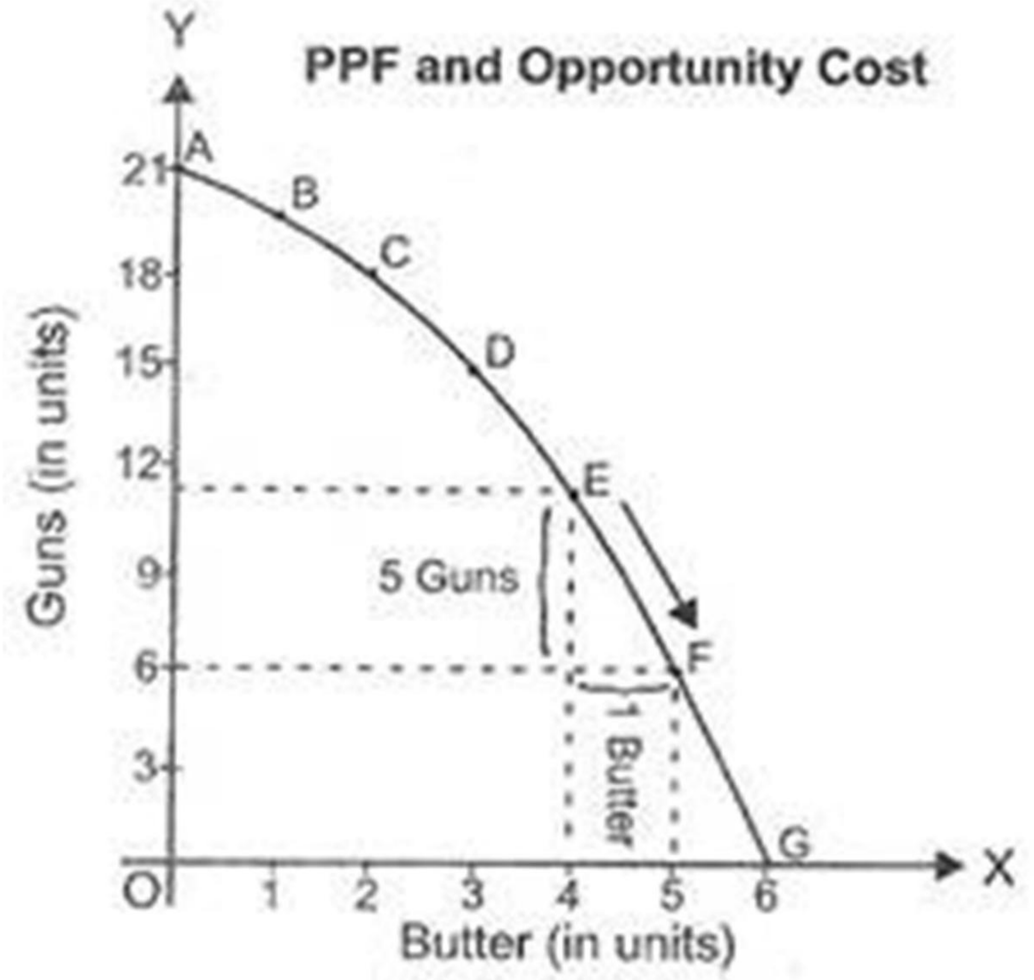
PPF can be convex to the origin if MRT is decreasing, i.e. less and less units of a commodity are sacrificed to gain an additional unit of another commodity.

It must be noted that both these situations (i.e. PPF being a straight line or convex shaped) would not arise, as MRT always increases. So, PPF is always concave shaped.

Production Possibility Frontier and Opportunity Cost:

The opportunity cost of a product is the best forgone price. Production Possibility Frontier illustrates the concept of opportunity cost. The opportunity cost of producing more butter is fewer guns. As we move from

‘E’ to ‘F’, the production of butter rises from 4 units to 5 units, but the number of guns decreases from 11 units to 6 units, i.e. opportunity cost of the 5 th unit of butter is sacrifice of 5 units of guns



Change in Production Possibility Frontier:

The change in Production Possibility Frontier indicates either an increase or a decrease in the productive capacity of the economy. Production Possibility Frontier changes when any of the fol owing change:

1. Change in the availability of resources: The Production Possibility Frontier shifts rightward or leftward, when there is change in availability of the resources in the economy.

2. Change in the technology of production: When there is a technological improvement for production of the commodity on the X-axis, then PPF will rotate to right on X axis. However, in case of technological degradation for production of the commodity on the Y-axis, then PPF will rotate to the left on X-axis.

3. Change in the efficiency of the resources: The efficiency of the resources can be increased with increase in the expenditure on Education, Health and Training. It creates Human Capital which contributes in production process and increase the production possibility of an economy.

What impact does an increase in foreign direct investment have on an economy's PPC ?

When FDI increases, resources of the economy increase, this causes the PPC to shift outward to the right.

Introduction (Question from NCERT Textbook)

Q1. Discuss the Central problems of an Economy.

Ans. In course of basic economic activities, every economy has to face scarcity of resources and scarcity of resources gives rise to the problem of choice. The problem of choice are called central problems of an economy as all other problems revolves around them. There are three central problems of an economy :

1. What to produce? – Every economy has limited resources and can't produce more of all goods. To increase production of one good economy has to reduce the production of other good. Economy has to choose between consumer goods and war goods between necessary goods and luxury goods.

2. How to produce? – This problem refers to the selection of technique to be used for production of goods and services in economy for maximum output at minimum cost using least possible resources. Whether to us labour intensive technique or capital intensive technique.

3. For whom to produce – No economy can satisfy all the wants of its people. Economy has to make choice for which category of people, goods to be produced. Rich people or poor people. This choice depends upon purchasing capacity of people which depend upon their level of income. The problem depends upon distribution of income among the factors of production.

Q3. What is Production Possibility Frontier?

Ans. An economy allocate scarce resources on combinations of different goods and services. Given the number of resources, different combinations of resources give different possible output of goods and service. The collection of different combinations of two goods that can be produced when resources are fully and efficiently utilised in an economy form a curve, the curve is called the production possibility frontier. Points below the production possibility frontier represents combinations of two goods that will be produced when some resources are either unemployed or are utilised inefficiently. Point outside the PPF is unattainable with given resources and technology.

MCQs

Q1. Economic Problem arises due to:

(i) Unlimited wants

(ii) Scarcity of resources

(iii) Obsolete technology

(iv) resources are scarce and have alternative uses

Q2. Which of the fol owing studied under Micro Economics:

(i) Employment level

(ii) Govt. Budget

(iii) Cloth Industry

(iv) Per Capital Income

Q3. If MRT is constant, P.P.C. would be __________.

(i) Convex to origin

(ii) Concave to the origin

(iii) Straight Line

(iv) Positively sloped straight line

Q4. If an economy is producing inside the PPC, the reason is

(i) Decrease in resources

(ii) Inefficient use of resources

(iii) Outdated technology

(iv) Earthquake destroyed industries

Q5. Govt launched ‘Skil India’ programme. Its ef ect on PPC will be:

(i) P.P.C. remains same

(ii) Production in economy increases

(iii) P.P.C. shifts rightward

(iv) Resources in economy increase

F.A.Q.

Q1. Define economy.

Q2. What do we study under micro economics?

Q3. Define opportunity cost.

Q4. What is the ef ect on PPC of an economy when employment schemes started by the Govt.?

Q1. different between Micro Economics and Macro Economics.

Q2. Write three dif erences between Positive economics and Normative economics.

Q3. What are the causes of economic problems.

Q4. Explain ‘what to produce’ central problem of an economy.

Q5. What is production possibility frontier? Write its two properties.

Q6. Show the ef ect on PPC of the fol owing:

(a) Make in India

(b) Beti Bachao, Beti Padhao

(c) Swach Bharat Scheme

(d) RojgarYojna

(e) Tsunami in Chennai

(f) Migration of 50,000 people in economy

PRODUCTION POSSIBILITY FRONTIER

HOTS

केस – 1

PPF में दाईं ओर खिसकाव

अर्थात उत्पादन क्षमता का बढ़ना

तीन कारण :

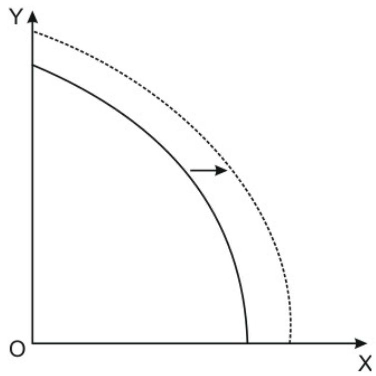
क) **संसाधनों में वृद्धि** –

उदाहरण : जनसंख्या में वृद्धि, पूँजी में वृद्धि, (Shift of China's Two Child Norm from One Child Norm)

ख) नई प्रौद्योगिकी उदाहरण नई मशीन का आविष्कार

ग) **प्रशिक्षण कार्यक्रम (Training Programs)** -

उदाहरण : कौशल विकास योजना (Skill Development Program), Make in India Program



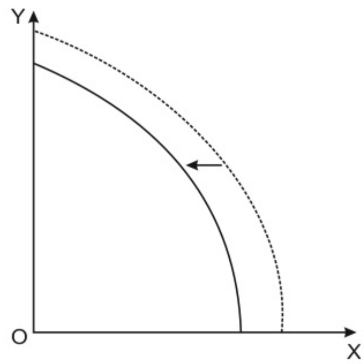
Hint : किसी भी प्रकार के प्रशिक्षण कार्यक्रम से श्रम की उत्पादन क्षमता बढ़ती है –जैसे एक किसान पहले हल चला कर 100 किलो गेहूँ का उत्पादन कर पाता था, परन्तु उस किसान को ट्रैक्टर चलाने की ट्रेनिंग देकर वह अब 200 किलो गेहूँ का उत्पादन कर पाता है।

केस – 2

PPF में बाईं ओर खिसकाव

कारण : संसाधनों की कमी

उदाहरण : बाढ़, भूकंप, Brain Drain

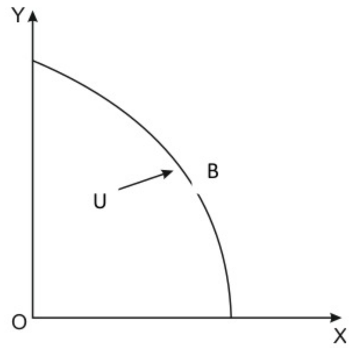


केस – 3

PPF में बिन्दु U से B की ओर

कारण : संसाधनों का कुशलतम उपयोग

उदाहरण : स्वच्छ भारत अभियान, सम–विषम नीति (Odd Even Policy), अंतर्राष्ट्रीय योग दिवस, जन–धन योजना, बेटी बचाओ, बेटी पढ़ाओ अभियान।



एक पार्क जो पहले गंदगी की वजह से इस्तेमाल नहीं हो पाता था, परन्तु अब टॅ। के स्वच्छ भारत अभियान द्वारा उस पार्क की स्फाई करी गई, जिससे अब लोग उस पार्क में सैर करने लगे और बच्चे खेलने लगे। अर्थात् संसाधान (पार्क) पहले से ही उपलब्धा थे, परन्तु अब उसका कुशलतम उपयोग होने लगा। इसलिए च्च्थ् के अंदर बिन्दु ऱ से च्च्थ् की ओर चलन होगा। सम–विषम नियम के कारण सार्वजनिक यातायात जैसे कि मैटो व बसों का कुशलतम उपयोग होने लगा।

इकाई–2 : उपभोक्ता संतुलन तथा माँग – परिचय

आप, मैं हम सब उपभोक्ता हैं। हम सभी विभिन्न प्रकार की वस्तुओं का उपभोग करते हैं। हम सभी का उद्देश्य एक होता है – अपनी आवश्यकताओं की संतुष्टि करना। हर उपभोक्ता एक दूसरे के समान वस्तुओं व मात्र का क्रय नहीं करता है। दोपहर में आप कहीं जा रहे हैं और आपको भूख लगी है। आप अपनी भूख शांत करने के लिए क्या खरीदते हैं आपका यह व्यवहार अनेक बातों से प्रभावित होगा। आपकी आय (यहां आय का अर्थ आप अपने वेतन से मत जोड़ लेना। आपके पास उस समय जो राशि उपलब्धा है वह आय है।) आपकी रुचि, वस्तु की कीमत, अन्य वस्तुओं की कीमत आदि। इस इकाई में हम उपभोक्ता के व्यवहार का अधययन करेंगे। सरलता के लिए हम केवल दो वस्तुओं की स्थिति में उपभोक्ता की चयन की समस्या की चर्चा करेंगे। उपभोक्ता के संतुलन का दो विधियों से विश्लेषण किया जायेगा। (1) उपयोगिता विधि तथा (2) अनाधिमान वक्र विश्लेषण। एक उपभोक्ता की माँग तथा बाजार माँग की चर्चा भी इस इकाई में की जाएगी। माँग को प्रभावित करने वाले कारकों को विस्तार से जानेंगे। प्रायः विद्यार्थी माँग की मात्र तथा माँग में अन्तर नहीं कर पाते, जिससे माँग पर पड़ने वाले प्रभाव को सही प्रकार नहीं लिख पाते। इससे उन्हें आने वाले पाठ में कीमत निर्धारण में कठिनाई आती है। इस इकाई में इस पर चर्चा की जाएगी। अंत में माँग की कीमत लोच तथा माँग की लोच को प्रभावित करने वाले कारकों की चर्चा की जाएगी तथा माँग की लोच ज्ञात करने की विधियां उदाहरण सहित समझाई जाएगी।

The analysis of consumer behaviour uses three approaches:

(i) Marshal ian Approach (in Cardinal Approach): The approach is based on the assumption that utility or satisfaction could be measured in terms of money or on imaginary unit i.e. ‘util’.

(ii) Hicksian& TC Approach (in Ordinal Approach): The approach is based on the assumption that utility or satisfaction could not be measured by the consumer but it could be ranked only.

(iii) Revealed Preference Theory: This approach claims that the choice made by a consumer reveals his preference. This approach is also called empiricist approach.

***Teachers to note that only approaches 1 & 2 are a part of CBSE syllabus.**

UNIT - IV

CONSUMER EQUILIBRIUM AND DEMAND

Learning outcomes

- Explain the meaning of consumer equilibrium.
- Distinguish and use two method to explain consumer's behaviour in market (i) utility & (ii) Indifference curve
- Meaning and relationship of Marginal Utility and Total Utility.
- Explain law of diminishing Marginal Utility
- Write conditions of a consumer's equilibrium and explain them in case of (i) onecommodity and (ii) two commodities.
- Define indifference curve and explain its characteristics
- Explain consumer's budget constraint and show that with the help of budget setsand Budget line
- Explain conditions of consumer equilibrium with the help of Indifference curveanalysis.
- Define demand, Demand curve, market demand, demand function.
- Explain the slope of demand curve
- Differentiate between change in Quantity demanded and Change in demand.
- Show the effect on demand due to change in price of good, Price of related good,Income of consumer, taste & preference.
- Explain the meaning of price elasticity of demand.
- Measure price elasticity of demand
- Explain Factors effecting elasticity of demand,

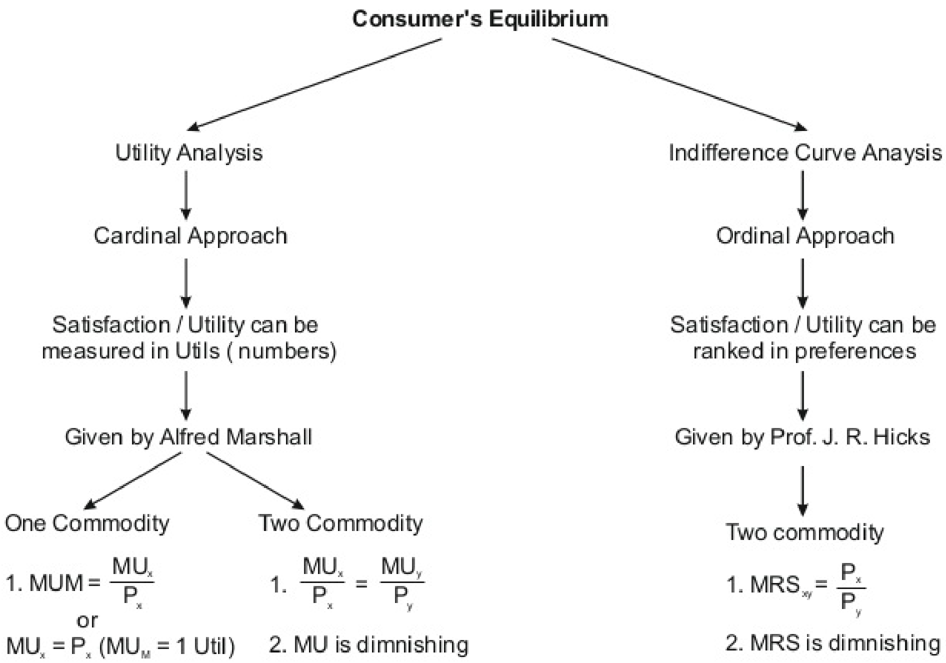
Key Terms

(1) Consumer, (2) Consumer Equilibrium (3) Utility (4) Marginal Utility (5) Util (6) Law of diminishing marginal utility (7) Indifference Curve (8) Monotonic preferences (9) Indifference Map (10) Budget Set (11) Budget Line (12) Marginal Rate of Substitution (13) Demand (14) Market demand (15) Demand function (16) Related goods (17) Electricity of demand

1. **Consumer:** is a person who buys goods and services for satisfaction of her wants from her limited resources/Income.
2. **Consumer's Equilibrium:** is a situation in which the consumer achieves maximum satisfaction in his given income at given prices and he feels no urge to change it.
3. **Utility:** want satisfying capacity of a commodity is called utility.
4. **Marginal Utility:** is the utility consumer gets from one additional unit of a commodity.
5. **Utils:** is an imaginary unit used to measure satisfaction obtained from consumption of a certain quantity of commodity.
6. **Law of diminishing marginal utility:** States that as consumer consume more and more units of a commodity the utility derived from each successive unit goes on diminishing.
7. **Indifference curve:** is locus of different bundles of two goods which give same satisfaction to the consumer and the consumer is indifferent among them.
8. **Monotonic preferences:** A rational consumer always prefers a bundle having more of at least one of the goods and no less of the other goods.
9. **Indifference Map:** family of indifference curves of a consumer representing the consumers' preferences over all the bundles of the two goods.
10. **Budget Set:** is the collection of sets of all possible bundles of two goods that a consumer can buy with his given income at the prevailing market prices. $M > Px.X + Py.Y$
11. **Budget Line:** The line consists of all bundles of two goods which cost exactly equal to the money income of the consumer. It is also known as price line. $M = Px.X + Py.Y$
12. **Marginal Rate of Substitution:** refer to the rate at which consumer give up units of one commodity to

obtain one additional unit of other commodity to remain on same satisfaction level.

13. **Demand:** The quantity of the commodity that a consumer is willing to buy at different prices during a given period of time.
14. **Market Demand:** The market demand for a good at a particular price is the total demand of all consumers taken together.
15. **Demand Function:** Shows the functional relationship between the demand for a commodity and the factors determining demand.
16. **Related Goods:** are goods that affect the demand of consumer for a good when the price of other good change. Two types of related goods (i) substitute goods and (ii) complementary goods.
17. **Price elasticity of demand:** is a measure of the responsiveness of the demand for a good to changes in its price.



Consumer's Equilibrium:

The consumer has to decide on how much of each of different goods he would like to consume with his limited income at prevailing prices. Every consumer has to al ocate his income on alternative bundles of final goods that are available to him, in such a way that gives maximum satisfaction. In economics, we analyse the consumer behaviour to find out optimum bundle of two goods, which give him maximum satisfaction, and he does not want to change it.

Consumer's equilibrium is the situation when consumer gets maximum satisfaction in his given income at prevailing market prices. It is a situation of rest and he does not want to change it.

Consumers' equilibrium is explained through two approaches – (i) utility approach and (ii) Indifference approach.

I. **Utility approach :**

The approach was given by Alfred Marshal , according to this approach a consumer can measure utility he gets from consumption of a good in cardinal (numerical) terms. To measure utility an imaginary unit is used, known as utils.

Meaning of Utility: Want satisfying capacity of a commodity is called utility. A consumer consumes a commodity because of utility. Higher the utility of a commodity more the consumer will ing to use it. Utility depends upon intensity of want for the commodity.

Identify the utility of commodity

(i) Desks of classroom

(ii) Fans in house

(iii) Electricity

Utility: a consumer gets from each unit of a commodity is different as intensity of want

for each unit is different. Let us understand it with two concepts of utility (1) Total Utility

and (2) Marginal Utility.

1. Total Utility: refers to the sum of utility a consumer get from all units of commodity consumed. It expresses the total satisfaction of a consumer from consumption of all the units of a good. Total Utility can be expressed as

$TU_n = U_1 + U_2 + U_3 + \ldots\ldots + U_n$

2. Marginal Utility: is the utility a consumer gets from an additional unit of a commodity. In other words Marginal Utility is the addition to total utility by consuming an additional unit of a commodity.

$MU_n = TU_n - TU_{n-1}$

MU_n = Marginal Utility of nth Unit

TU_n = Total Utility of n units

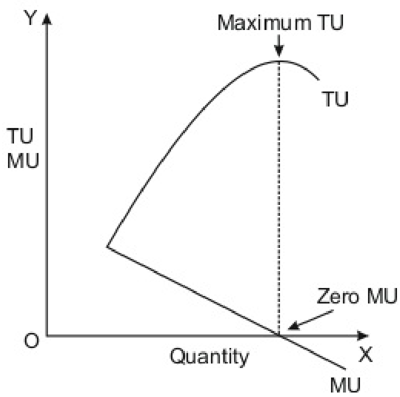
TU_{n-1} = Total Utility of n–1 units

Total utility can be expressed as

TU = Sum of Marginal Utility of all units

$TU = \sum MU$

$TU = \sum MU$



No. of Units	Total Utility	Marginal Utility
1	10	10
2	18	8
3	24	6
4	28	4
5	30	2
6	30	0
7	28	–2

Law of Diminishing Marginal Utility: The Law states that as a consumer consume more and more units of a commodity, the utility he gets from each successive unit goes on decreasing.

It explains the consumers' behaviour, as a consumer consume next unit of a commodity his intensity of want decrease for that commodity. Intensity of want is positively related to the utility a consumer gets from the commodity. This law is based on two basic

assumptions:

(1) Consumer consume standard units of a commodity e.g. glass of water, ful chapati etc.

(2) Consumption is continuous. (Time gap may increase the intensity again, so is utility) Consumer's Equilibrium and law of demand are based on law of diminishing marginal utility. Without understanding this law students may face problem in understanding them.

Consumer Equilibrium (Utility Approach): Equilibrium means state of rest or a position of no change. A consumer is in equilibrium when he does not want to change bundle of two goods and he is get ing maximum satisfaction.

Meaning of consumer's equilibrium – is a situation when consumer get maximum satisfaction in his given income at given prices and he does not want to change it.

Consumer's Equilibrium can be explained under two situations: (1) One Commodity case and (2) Two Commodity case

One Commodity Case: In one commodity case a consumer decide the number of units of a commodity he consumes to maximise the satisfaction. Consumer can't change the price (given) or utility. He can increase or decrease the number of units to reach equilibrium.

Condition of Equilibrium:

$MU_m = MU_x/P_x$

Marginal Utility of one rupee = Marginal Utility we get from per rupee spent on good X In simplified way consumer's at ain equilibrium when marginal utility (MUX) is equal to price of the commodity.

$MU_x = P_x$

Explanation:

If $MU_x > P_x$ then the consumer is not at equilibrium. Consumer is get ing more utility in terms of money from the one addition unit than the price he paid for that unit. Consumer prefers to buy more of that commodity. As he buys more, Marginal utility fal s due to operation of law of diminishing marginal utility. Consumer gets maximum satisfaction and reach equilibrium when Marginal Utility becomes equal to price, i.e. MUX = PX.

When $MU_x < P_x$ then consumer will have to reduce the consumption of X commodity to raise the marginal utility til marginal utility becomes equal to price.

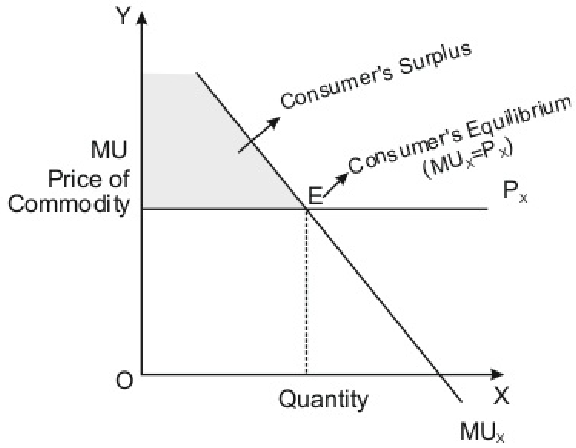
Price	Table Quantity	(Util) TU	(Util) MU	MU in terms of money	Consumer Surplus
4	1	10	10	10÷1=10	6
4	2	18	8	8	4
4	3	24	6	6	2
4	4	28	4	4	0
4	5	30	2	2	-2
4	6	30	0	0	-4

$MU_X > P_X \rightarrow$ Consumer will buy more of the commodity

$MU_X = P_X \rightarrow$ Consumer's Equilibrium

$MU_X < P_X \rightarrow$ Consumer will buy less of the commotity

Consumer's Equilibrium in case of single commodity



Two Commodity Case:

In real life, a consumer normal y consumes more than one commodity. To understand the consumer behaviour, in more realistic situation two commodities are used. In case of two goods a consumer at ain equilibrium when he al ocate his given income in such a way that per rupee marginal utility from consumption of each good is equal.

A Consumer consumes two goods X and Y. He gets 100 utils marginal utility from X good and 50 Utils marginal utility from Y good. Which good he will prefer to buy more? Most of our students will respond that Consumer will buy more of X good. But in realty consumer can’t decide on the basis of this information.

Now provide some more information

	X good	Y good
Marginal Utility	100	50
Price (₹)	₹ 50	₹ 10
Per rupee Marginal Utility	2 Util	5 Util

Now ask again, which commodity he will buy more?

We can compare two commodities when they are on same scale. Here per rupee utility.

Conditions of consumer’s equilibrium in two commodity case:

1. $MU_x/P_x = MU_y/P_y$

2. MU is diminishing.

Explanation:

I. $MU_x/P_x = MU_y/P_y$ then consumer is getting more marginal utility per rupee spent X good then Y good. The consumer will buy more of X good and less of Y good. As he buys more of X good MU of X good decreases due to law of diminishing marginal utility and MU of Y good increases. The process of this change will continue till consumer reach equilibrium point i.e. $MU_x/P_x < MU_y/P_y$

II. $MU_x/P_x = MU_y/P_y$ then consumer is getting less Marginal Utility per rupee spent on X good then Y good. The consumer will buy less of X good and more of Y good. This will lead to increase in Marginal Utility of X good and fal in MU of Y good due to law of Diminishing Marginal Utility. This process of will continue till consumer reach equilibrium condition i.e $MU_x/P_x = MU_y/P_y$

III. MU is diminishing: If Marginal utility of a commodity does not fal with increase in consumption, then the consumer will keep buying one commodity and will never reach the equilibrium point as Marginal utility per rupee of that commodity will always remain more.

Questions

1. Does utility of a commodity change with change in seasons, place or fashion?

2. How much quantity of a commodity a consumer will buy if price of a commodity is 10 Rupees?

3. A consumer will consume unlimited units of a commodity, if given free. Comment with reason.

MCQ

1. Marginal Utility is zero when:

(i) Total Utility is increasing

(ii) Total Utility is decreasing

(iii) Total utility is maximum

(iv) Total utility is zero

2. Total utility increases when

(i) Marginal Utility decreases but positive

(ii) Marginal Utility is maximum

(iii) Marginal Utility is zero

(iv) Marginal utility decrease but negative

3.

If total utility remain same with an additional unit of commodity, then MU is

(i) Constant

(ii) zero

(iii) Positive

(iv) Negative

II. **Indifference Curve Approach**

The Indifference curve approach was presented by Prof. J.R. Hicks, the Nobal Prize winner for economics. Consumers' equilibrium through Indifference curve analysis is considered a bet er approach than utility analysis approach of Marshal . A consumer can rank various different combinations of two goods in order of his preference easily and logical y than measuring the utility numerical y in utils e.g. you can easily tel which gives you more satisfaction (1) a rasmalai or (2) a ladoo than measuring and expressing their utility in utils.

To explain consumer's equilibrium through I.C. approach we need to understand concepts like budget line, Budget sets, Indifference curve and its properties :

I. Budget Set: The consumer cannot buy any and every bundle of two goods that he may want to consume. The consumption bundles available to the consumer depend on the prices of the two goods and income of the consumer. The consumer can afford to buy only those bundles which cost him less than or equal to his income. The set of bundles available to the consumer is called the budget set.

M >Px .X + Py .Y

The col ection of all bundles that the consumer can buy with his given income at given prices is called Budget Set.

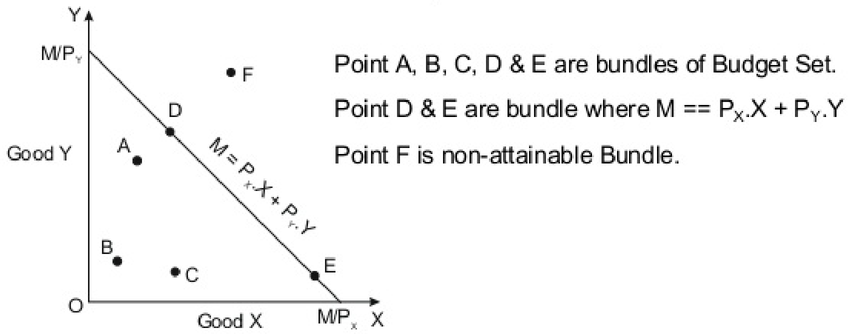
II. Budget Line: A Budget Line is the locus of different combinations of two goods that costs equal to his given income at given prices. Budget Line sets limit to consumer's maximum behaviour. Consumer can't afford any bundle outside the Budget Line. All points on the budget line are Budget set but all sets not lie on the Budget Line. Any point on or inside the budget line is called Budget Set.

The equation of Budget line is M = Px .X + Py .Y

The equation can also be writ en as linear equation y = a – b.X – here a = intercept of Budget Line b = slope of budget line

Negative sign of slope denote negative relation between X and Y

Slope of Budget line is constant =Px / Py

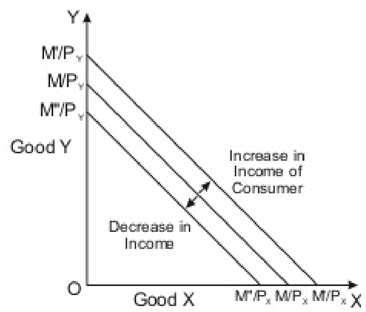


M = M / Py when consumer spends his entire income on good Y.

X = M / Py when consumer spends his entire income on good Y.

Slope of Budget Line = –Px / Py

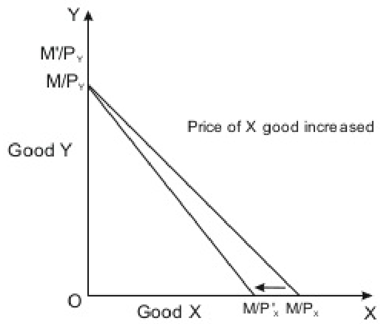
Change in Budget Line: Budget line of a consumer is depend upon his income and price of two goods. If any of these values change the Budget Line also change. Let us explain it with diagram.



(1) When income of consumer (M) change. Budget line shift as both intercepts have value of M.

- Increase in value of M = Numerator value increase which increase the value of intercept on both axis. Budget line shift rightward. In simple words consumer can buy more of both goods with increase in income.
- ¬⅄Decrease in income of consumer (M) = Decrease in the value of Numerator –Decrease in the value of Numerator – decrease in quantity of both goods = Budget line shifts leftward.

(2) Change in the price of one good.



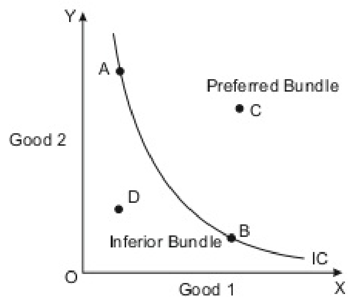
- Increase in Price of X good (Px) – Value of denominator on X axis increase, which decrease the value of intercept and budget line rotate leftward on X axis.

Questions:

1. What is Budget set of a consumer?

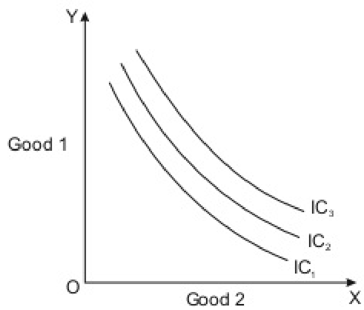
2. Define Budget line. Why it slope downward?

3. A consumer's Income is Rs. 100. Price of good X is Rs. 10 and good Y is Rs. 20. Write its 5 bundles of Budget Set, Budget Line and Unat ainable Bundles each. Indifference Curve : An Indifference curve joins all points representing various bundles of two goods among which the consumer in indifferent, all bundles on Indifference curve give the consumer same satisfaction.



- ¬⅄Point A & B lie son the Indifference curve, give same satisfaction to consumer. Consumer indifferent among them.
- Point C is above the Indifference curve represent bundles which are preferred to bundle on the I.C. i.e. A & B
- Point D shows the inferior Bundles, bundles A & B on IC are preferred to bundle D lies below the IC.

Indifference May : The consumer's preferences over all the bundles can be represented by a family of Indifference curve called Indifference map of a consumer.



Monotonic Preferences: A consumer's preferences are monotonic if and only if between any two bundles, the consumer prefers the bundle which has more of at least one of the goods and no less of the other good as compared to the other bundle.

Q1. Two points lie on one Indifference curve representing bundles (5, 4) and (5,5).

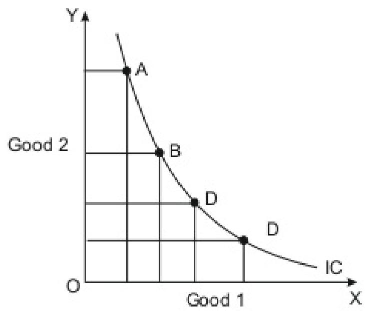
Does consumer have monotonic preferences?

Q2. A consumer has monotonic preferences. Rank these bundles in preferences (6,5) (6,6) (6,7) (7,7)

Characteristics of Indifference Curve:

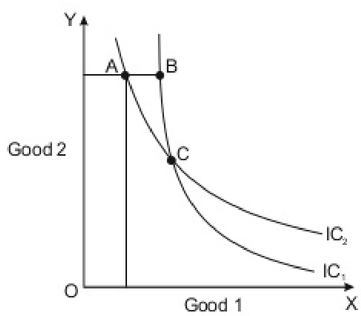
1. Indifference curve always slope downward: To remain on same satisfaction level. When consumer increases consumption of one good he has to give up some units of another good. Thus monotonic preferences implies that if consumer increase consumption of one good and other remain same the preference increase so is the satisfaction. Slope of Indifference curve is negative.

2. Indifference Curve is convex towards the origin: Indifference curve is convex towards the origin due to diminishing Marginal rate of substitution. MRS fal s due to operation of law of diminishing marginal utility. The amount of good-2 the consumer is will ing to give up for an additional unit of good-1 keep decreasing as consumer has more and more of good-1. Increase in good-1 decrease its marginal utility and decrease in good-2 increase its marginal utility. Amount of goods substituted depends upon same level of satisfaction.



3. Higher Indifference curve shows higher levels of satisfaction: Higher Indifference curve represents more of at least one of the goods and no less of other good as compared to bundle on lower Indifference curve. A consumer has monotonic preferences and he always prefer a bundle on higher I.C. to the bundle on lower Indifference curve.

4. Indifference curves cannot touch or intersect each others: Two different Indifference curves represents different levels of satisfaction of the consumer and one Indifference curve shows different bundles of two goods which give same satisfaction level. Therefore, two Indifference curves cannot intersect each other.



Assumptions of Indifference Curve:

(1) The consumer is Rational. He wants to maximise his satisfaction.

(2) The consumer has monotonic preferences.

(3) The consumer can rank his preferences of Bundles of two goods available for consumption.

(4) MRS is diminishing – MRS is decreasing due to law of diminishing marginal utility. Indifference curve is convex to origin.

Questions on I.C.

Q. In which condition two Indifference curves can intersect each other?

Consumer's Equilibrium (Indifference Curve Analysis)

Consumers equilibrium is a situation, when consumer gets maximum satisfaction in his given income at given prices with no intention to change it. Consumer equilibrium lies on the point of highest possible Indifference curve, subject to his budget constraint.

Conditions of consumers' equilibrium:

1. MRSxy = Px / Py

2. MRS is diminishing

Explanation

1. MRSxy = Px / Py

- IfMRSxy > Px / Py, then the consumer is wiling to Pay more give up more units of good Y) for one additional unit of good X than the price prevailing in the market (units of good Y required to give up in the market) As a result, the consumer buys more of X good. MRS fal s and the process goes on till consumer reach equilibrium toMRSxy = Px / Py
- IfMRSxy < Px / Pythen the consumer is wiling to pay less for one additional unit of good X than the price prevailing in the market. As a result, the consumer buy less of X good and more of good Y, MRS increase and the process goes on till consumer reach equilibrium i.e. Px / Py

II. MRS is diminishing: To establish the consumer's equilibrium. Indifference curve must be convex to the origin. Unless MRS is diminishing, consumer equilibrium can't be reached. Most of us have notices during evaluation of economics answer sheets in internal as well as board examination that students use condition of equilibrium wrongly. They interchange the conditions. To minimise the error commit ed by student we can use comparative analysis.

Utility Analysis		**Indifference Curve**
One Commodity	**Two Commodity**	**Two Commodity**
Conditions 1. MUx = Px	1. MUx/Py =MUy/Py 2. MU is diminishing	1. MRSxy = Px / Py 2. MRS is diminishing
Explanation If MUx > Px than consumer getting more marginal utility in terms of money than the price.	IfMUx/Py > MUy/Pythan then the consumer is getting more marginal utility per rupee spent on good X than good Y.	IfMRSxy = Px / Py consumer is willing to pay consumer is willing to pay more for good X than its market price. Consumer is ready to give up

Consumers will buy more of good X. It will decrease the MU X due to law of diminishing marginal utility. This process will go on till consumer reach equilibrium point i.e.MUx = Px	Consumer will prefer good X over good Y. He will buy more of good X and less of good Y. It will increase the MU of good Y and decrease the MU of good X. This process will go on till consumer reach equilibrium i.e.	more units of good Y for an additional unit of good X than what is required to market consumer prefer good X over good Y. He will buy more of good X. This will decrease MRS. This process will go on till he reaches the equilibrium i.e. MRS > Px / Py
• Points to be remembered 1. Utility approach so conditions includes 'U' in it her bothconditions have MU. 2. In one commodity case only one good X is given inconditionMUx = Px In two commodity case two good X and Y are included incondition MUx/Py =MUy/Py		1. In Indifference curveanalysis conditions donot include utility. 2. Consumer is indifferentin substitution of twobundles hence marginalrate of substitution isincluded in conditionsMRSxy = Px / Py 3. Two goods so good Xand Y are included inconditions.

Q12. Suppose a consumer's preferences are Monotonic, what can you say about her preferences ranking over the bundles (10, 10) (10, 9) and (9, 9)?

Ans. A consumer with monotonic preferences rank he preferences as fol ows :

1st Rank – 10, 10 Having more of both goods.

2nd Rank – 10, 9 Having more of 1st good and no less of 2nd good

3rd Rank – 9, 9

Q13. Suppose our friend is indifferent to the bundles (5, 6) and (6, 6). Are the preferences of your friend monotonic?

Ans. No, his preferences are not monotonic because he is not preferring the second bundle having more of one good and not less of other good.

Q14. Suppose there are two consumers in the market for a good and their demand function are as fol ows:

d1(P) = 20-p for any price less than or equal to 15, and d1(P) = 0 at any price greater than 15.

d2(P) = 30-2p for any price less than or equal to 15 and d2(P) = 0 at any price greater than 15.

Find out the market demand function.

Ans. Market demand function

d1(P) = 20-p Eq. 1

d2(P) = 30-2p Eq. 2

Adding Eq. 1 & Eq. 2

dm(P) = 50-3p for any price less than or equal to 15 and dm(P) = 0 at any price greater than 15.

Q22.

Elasticity of Demand (Ed) = $\frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in Price}}$

$$\text{Ed} = \frac{\Delta Q}{\Delta P} x \frac{P}{Q}$$

$$\text{Ed} = \frac{-5}{1} x \frac{4}{25} = \frac{20}{25} = 0.8$$

Q23. Consider the demand curve D(P) = 10-3p. What is the elasticity at price 5/6 ?

Ans. Consider a linear demand curve q = a – bp at any point on the demand curve, the change in demand per unit change in the price $\Delta q/\Delta p = -b$

$$\text{Ed} = \frac{\Delta Q}{\Delta P} x \frac{P}{Q} \qquad (1)$$

Substituting the value of $\frac{\Delta q}{\Delta p}$ in equation (1) we obtain

$$\text{Ed} = -b\,x \frac{q}{p} = -b\,x \frac{q}{a - bp}$$

$$= -\frac{bp}{a - bp} \qquad (2)$$

From equation – (2) Here $P = \frac{5}{3} = \frac{10}{-6} = \frac{5}{3}$

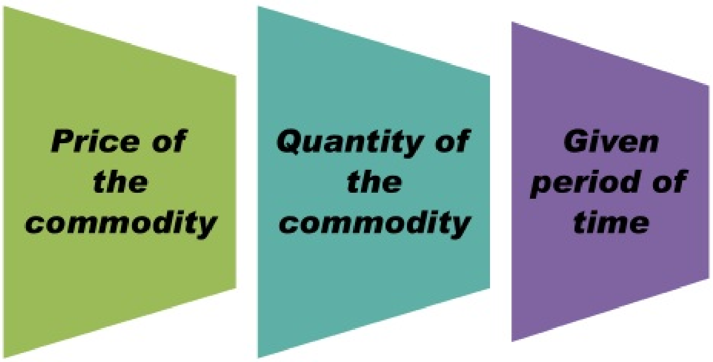
At P = 0 Ed = 0

At $P = \frac{9}{2b}$ Ed = 1 Elasticity of demand at price $\frac{5}{3}$ I sunit Ed = 1

At $P > \frac{9}{2b}$ Ed > 1

III. Demand Analysis

Components of Demand:



Factors Affecting Demand:

- ***Price of the commodity***
- ***Price of related goods***
- ***Income of the buyer***
- ***Tastes and preferences of the buyer and Fashion***

A detailed discussion with ample examples is to be undertaken in the class. Students may also be given a project to collect information on price and quantity demanded in the market of say cars, televisions etc.

Price Elasticity of Demand

This is an important topic and students must be given ample practice in calculating elasticity and related values.

A. Percentage Method: Price elasticity of demand is a measure of the responsiveness of the demand for a good to a change in its price. In general, demand for good changes due to many other factors also but we will study only price-elasticity of demand in Class- XII.

Definition: Price elasticity of demand for a good is defined as the percentage change in quantity demanded for the good divided by the percentage change in its price

$$\text{Elasticity of Demand (Ed)} = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in Price}}$$

$$\text{Percentage change in Quantity} = \frac{Q_1 - Q}{Q} \times 100 = \frac{\Delta Q}{Q} \times 100$$

Here quantity changes from Q to Q_1.

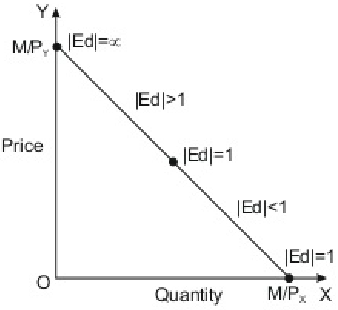
$$\text{Percentage change in Quantity} = \frac{P_1 - P}{P} \times 100 = \frac{\Delta P}{P} \times 100$$

Price changes from P_0 to P_1.

$$\text{Elasticity of Demand Ed} = \frac{\frac{\Delta Q}{Q} \times 100}{\frac{\Delta P}{P} \times 100} = \frac{\Delta Q/Q}{\Delta P/P} = \frac{\Delta Q}{Q} \times \frac{P}{\Delta P} = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

- Price elasticity of demand is always a negative number as demand for a good is negatively related to the price of good. We always refer to the absolute value of the elasticity. Elasticity does not depend on the units in which the price of the good and quantity of the good are measured.

B. Geometric Method or Point Method: Elasticity of demand is different at different points on a linear demand curve. The elasticity of demand at any point on a straight line demand curve is given by the ratio of the lower segment and the upper segment of the demand curve at that point.



$$\text{Elasticity of Demand Ed} = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in Price}}$$

Elasticity is 0 at the point where demand curve meets the horizontal axis (x-axis), Ed = 0

- ¬⅄Elasticity is α at the point where the demand curve meets the vertical axis (y- axis), Ed = α
- At midpoint of the demand curve, the elasticity is 1, Ed = 1 the elasticity is greater than 1 ED > 1
- At any point to the right of the midpoint (below midpoint). The elasticity is less than 1 Ed < 1.

Some Special Case

(i) Elasticity of demand is unitary (Ed = 1) at every point on demand curve which has the shape of a rectangular hyperbola.

(ii) Elasticity of demand is zero (Ed = 0) at every point along the vertical demand curve.

(iii) Elasticity of demand is infinity (Ed = α) at every point along the horizontal demand curve.

C. Expenditure Method: The change in the expenditure on the good as a result of an increase in its price depends on how responsive (Elastic) the demand for the good is to the price change.

- The expenditure on the good would change in opposite direction as the price change when the price elasticity of a good Ed > 1.
- The expenditure on the good would change in the same direction as the price change when the good is price inelastic Ed < 1.

The expenditure on the good would remain unchanged when the good is unelastic Ed = 1.

Relation between change in Price and Expenditure on a good

Price	Expenditure	Elasticity of Demand
Increase Decrease	Remain same (unchanged)	Ed = 1
Increase Decrease	Decrease Increase	Ed > 1
Increase Decrease	Increase Decrease	Ed < 1

- **Factors Determining Price Elasticity of Demand**

1. Nature of good: Necessary (Essential) goods for life do not change much in response to changes in their prices, demand for them is price inelastic. On the other hand, demand for luxury goods is very

responsive to price changes, demand for a luxury good is likely to be price elastic.

2. Availability of close substitutes of the good: The demand for a good is likely to be elastic if close substitutes are easily available. On the other hand, if close substitutes are not available easily, the demand for the good is likely to be inelastic.
3. Time period for adjustment : The longer the time period for a consumer to respond to price changes, the more will be its elasticity and vice versa.

CHECK YOUR PROGRESS

MCQ:

(i) Slope of Budget line is

(a) $\Delta X/\Delta Y$

(b) Px / Py

(c) Py / Px

(d) MRS

(ii) Indifference curve is convex to origin due to

(a) decreasing MRS

(b) Increasing MRT

(c) decreasing MRT

(d) Increasing MRS

(iii) A consumer is at equilibrium point where

(a) Price is minimum

(b) Income is minimum

(c) Satisfaction is maximum

(d) Consumption is maximum

(iv) Law of demand states:

(a) Law of price control

(b) Inverse relation between price and quantity demanded

(c) Positive relation between Income and demand

(d) Inverse relation between price of complementary good and demand

(v) Elasticity of demand high point on vertical demand curve is

(a) Ed = 0

(b) Ed < 1

(c) Ed = 1

(d) Ed > 1

(vi) Demand for inferior good ________, when income of the consumer decrease.

(a) Increases

(b) Decreases

(c) remains same

(d) is zero

(vi) Which of these is not a budget set, when Income = 100, Px = 10 &Py = 20

(a) x = 6, y = 1

(b) x = 2, y = 5

(c) x = 5, y = 2

(d) x = 4, y = 3

Answer Key : (i) b, (i) a, (i i) c, (iv) b, (v) a, (vi) a, (vi) b

Very Short Answer (VSA)

(i) What is Indifference Curve?

(ii) Define law of Demand.

(iii) What is ‘monotonic preferences’?

(iv) Write the meaning of Indifference map.

(v) State law of Diminishing marginal utility.

(vi) What is inelastic demand?

(vi) Ticket fare of metro is increased two fold. Comment on ef ect ridership of DTC buses.

(vi i) Write budget line equation.

High Order Thinking Skills (HOTS)

1. A consumer consumes two goods X and Y. MU of both goods are same. Price of X good increased. What a rational consumer will do in this situation?

2. A consumers MRS of two goods is 4. Price of X good is Rs. 15 and Y good is Rs. 5. Is consumer in Equilibrium? What will be a rational consumer do in this situation?

3. Price of a commodity is Rs. 10, Marginal Utility of Money is 2 utils. How much quantity of that commodity a rational consumer will buy?

4. Explain consumers equilibrium with utility approach.

Frequently Asked Questions (FAQ’s)

1. What is Utility? Explain law of diminishing marginal utility.

2. What is consumer’s equilibrium? Explain it with utility approach in case of one commodity.

3. Explain the consumer’s equilibrium condition in two commodity are with utility approach

4. Write characteristics of Budget Line. Why budget line is a straight line?

5. What is Indifference curve? Write its characteristics.

6. Why consumer is always at equilibrium where MRS = Px/ Py ?

7. What is the ef ect on demand when –

(a) Increase in Income of consumer

(b) Decrease in the price of complementary good.

(c) Decrease in the price of related goods.

8. differentiate between change in demand and change in quantity demanded.

Document Outline