ECONOMICS

Teacher's Guide
Grade 11

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FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA
MINISTRY OF EDUCATION

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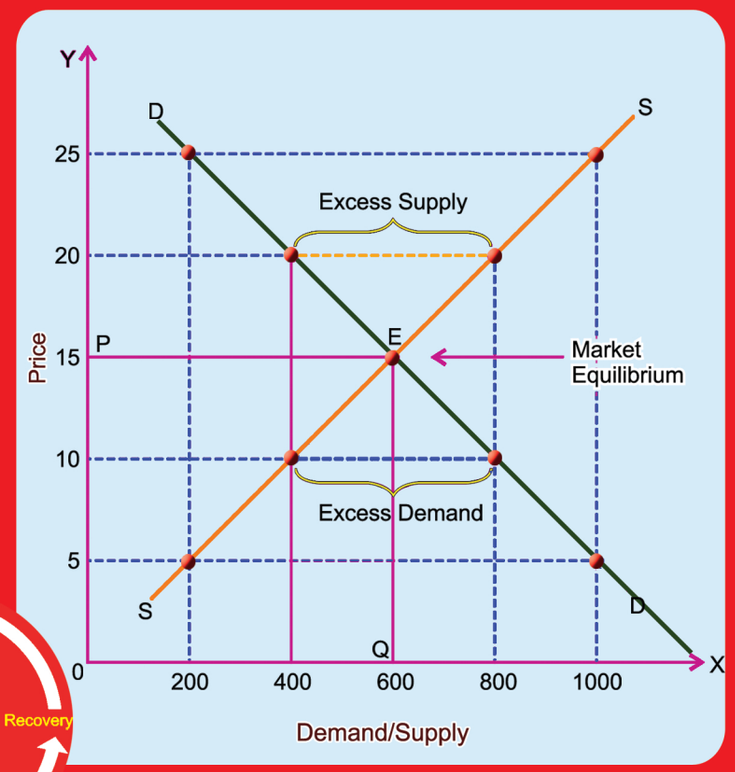

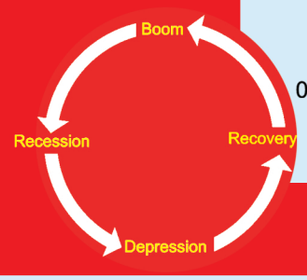

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INTRODUCTION

The teaching learning process can smoothly conducted so that it is possible to convey the proper information only when there is a conducive environment and healthy relationship between the teacher and the student. It is evident that the teacher shall not dream ready-made solutions for the upcoming challenges and as a result, he should always be curious and ready to combat it through alternatives methods.

Since it usually deal with scarcity the teaching of economics has its own peculiar features and setbacks. It also interlinked with the day-to-day activities of the human society and confronted by the insatiable needs of people. At the same time, constraints including time, labor, capital has contested it..

Therefore, it demands a relentless struggle to overcome the ensuing problems and the burdens are incumbent on the teacher who presumably shall commit himself to shoulder the major responsibilities of teaching.

In general to achieve the expected goal the task of coordination and facilitation is entrusted on the teacher. So that the teacher:

Should understand the interest, aptitude and other mental faculties of his students.

Should empower himself and be conscious to manipulate the dynamic situations around his environment. This is feasible only when he keeps himself up to date and enrich himself by current in formations. In general he should always strive to scale up himself and imbibe the experience of his working companions.

Moreover as it is prescribed in many disciplines the teacher has the following qualities. The teacher: has to be an ideal citizen.

Should have faith in the teaching of the subject in particular and the profession in general. should develop an impartial and scientific outlook.

Has to be adherent to the principle of democracy.

Should give love and affections for the pupil.

Should be ideal leader and properly equipped with modern principles laws and procedures.

This qualities can be realized when the teacher is well acquainted with the relevant methods suggested in the teacher's guide. This includes:

Introduction

This is part of the teaching learning process whereby the teacher organize the lesson by using mechanisms like motivation and by linking it to the previous knowledge, by arousing curiosity of the children and stimulating their senses in coordination with the lesson.

Presentation

This is a common method used to address the lesson in tangible way by the support of teaching materials. It enables students be familiarized with current in formations. It also encourages interactions between the student and the teacher. So that it advances participatory method of teaching.

Generalization or summarization

It is a method used to conclude the lesson focusing on central points. The lesson is made concrete by deriving certain formulates principles or laws. Thus students should be motivated to create ideas related to principles laws and formulates.

Application

This is a method that requires for the lesson to be presented in practical ways so that students would be able to develop their skill and apply the knowledge inline with the ideas generalized by them.

Recapitulation or review

This is the ultimate step in the teaching learning process whereby the teacher would be able to ensure the students progress. it is a mechanism that helps to detect or judge the students level of understanding of the points under discussion.

Questioning

It is a method used at any interval in the course of the teaching learning process. Its main aim is to check the previous knowledge of the students and draw their attention. It inspires students' interest to the topic under discussion and encourages them to recall and rationalize their points of argument. Moreover it is essential to elicit in formations from students and used it for further explanation. It paves the way to evaluate the standards of the students and assess their knowledge.

Discussion

This is a method that excites student's participation and increase their curiosity to discover the truth. It stimulates the mental activity of the participants, influences them to develop confidence and express their views without fear. it also enhance the interaction between students.

Group work

This is a method that encourages team teaching, tutorial seminars and mentoring. This mechanism would enable the teacher to manage large class size by dividing it into small and manageable groups. The groups formed should consider the abilities, interest, achievements and speed of the pupils. It discourages individualism and promotes cooperation, homogeneity and healthy competition.

Brainstorming

The teaching of the lesson starts by raising critical issues for discussion. its aim is to judge the knowledge of the students of the previous lessons. It is powerful mechanism used to draw the attention of students and encourage them for more participation.

Problem solving

This is the most practical way of addressing the content of the subject .it increases the curiosity and enquiry of students. Meanwhile they should be encouraged to be tactful and informed about the way of tackling problems. It persuades students to rationalize their knowledge about anything they want to know through justification supported by concrete examples. It enable them give a meaningful and fair decisions.

Overview

This is the area of concentration. The teacher is required to focus on the points while he is discussing the lesson. This is a target area because it constitutes core ideas that are explanatory to the lesson. In other words, it is the short note of the lesson. This assists the teacher to organize the points for discussion.

Open ended questioning

This is one way of comprehending students understanding of the lesson. It gives students freedom to asses and discuss the issue in their perspective. It also moulds their knowledge and expresses their view consistent to the topic under discussion. It is interactive and enhances the dialogue between groups and the teacher.

Check your understanding questions

It is valid when it is used as a content check. It is designed in such a way to give special opportunity to high achieving students in particular and to medium and slow learners in general. But to avoid any drawbacks in the presentation of the lesson it is imperative to organize the class on the basis of students capacity, attitude, achievements and speed .therefore the general profile of the class should be projected in appropriate way so that it can meet the expected outcome. As a result the questions are set to fulfill the following purposes;

1. Give access to high achievers to test and measure the extent of their progress of the lesson by doing the exercises.
2. Create particular circumstances for the teacher to select the questions from the textbook and discuss them with the class during remedial class or tutorial class. In due time the teacher can evaluate the level of the standard of the students in contrast to the outcome of the lesson.
3. These are extra ordinary questions set to review the lessons in the text book respectively and stabilize central points.

Unit 1 CONCEPTS OF ECONOMICS

Periods Allotted: 12 periods

1. Introduction

Our students begin with their journey and exploration of the fascinating world of Economics through the present unit. As the saying goes '*a good start means half the job is done*'. So we as teachers should ensure that the best possible start is given to the study of economics by our students. Our aim here should be to arouse an interest in the subject, develop a curiosity to know about its nature, scope and contents, and create a feeling among the students that the study of economics is not only interesting and useful, rather, to some extent, a necessity for everyone. But natural, or we may say, a human nature it is, to have more interest in something which is concrete than that which is abstract. So we should portray an image of economics in concrete terms, telling the students widely about the multifarious applications of the subject in our daily life and thus laying not much emphasis on its theoretical foundations. The contents of the unit are in much harmony with our aim. They enlighten the students with terms and issues such as scarcity, which is widely present in various spheres of life; resources, which are limited; human wants, which are unlimited; economic problems, which are being faced by all the nations over the world; income and employment phenomena, which are closely associated with the realities of everyone's life; economic growth, which every country would like to experience; material welfare of the society, which every economy would like to maximize; and so on. Not only that, this unit is important, also because it introduces our students to the various kinds of economic systems - capitalism, socialism and a mix of the two, etc., which are being followed by different countries of the world, and a very interesting observation that money (income and expenditure) flows in an economy in a circular manner. Using examples and illustrations from the real life situations in the local/regional/national/international context, we can easily accomplish our task of developing among our students a self-interest and a dedicated desire for the study of economics, which is not merely because it is a part of their curriculum. Let us not forget here that more we are successful in our above said mission, lesser will be our professional burden in future course of teaching economics to our students.

2. Unit Objectives

At the end of this unit, the students will be able to:

- ➲ *Understand the concept and nature of economics and analyse how resources are efficiently used in producing output;*
- ➲ *Distinguish and evaluate different Economic systems;*
- ➲ *Appreciate the role of decision-making and interpret the circular flow model.*

3. Main Contents

1.1 MEANING AND SCOPE OF ECONOMICS

Periods Allotted: 2 Periods

1. Competencies

At the end of this subunit, the students will be able to:

- *learn about the various definitions of economics and make a comparison of them*
- *explain the concept of economics from modern point of view*
- *describe the nature of economics as a subject*
- *differentiate between concepts and scope of microeconomics and macroeconomics, and*
- *identify the importance and usefulness of economics in modern times.*

2. Contents

- ♦ **Definition and nature of economics**
- ♦ **Branches of economics**
  - Microeconomics
  - Macroeconomics

Key Terms and Concepts

Economics, microeconomics, macroeconomics, welfare economics, etc.

Deduction method, inductive method, equilibrium, economic model, positive economics, normative economics.

3. Overview

In many instances we hear people defining economics as a life style with less consumption and stringy character. But it is beyond the fact. This conception roots from lack of knowledge and lack of exposure to the discipline. Economics, as a discipline, is a body of knowledge that studies about scarcity of resources and the choices made to use the scarce resources in satisfying human needs and wants.

Start-up Activity

In the contemporary context, it is suggested that we introduce this introductory unit with references to the recent world-wide economic depression which has practically affected every nation, every society, and thus every individual. Doing so may be helpful, because our students will realise the need to study economics for a practical use and application of the subject in understanding and solving of our economic problems.

Definition and Nature of Economics

In many instances we hear people defining economics as a life style with less consumption and stringy character. But it is beyond the fact. This conception roots from lack of knowledge and lack of exposure to the discipline. Economics, as a discipline is a body of knowledge that studies about scarcity of resources and the choices made to use the scarce resources in satisfying human needs and wants.

Note:

We may have some students working below a minimum requirement level. As their guide in the broad process of teaching-learning, we need to be a bit extra careful towards them. It is suggested that some special and specific need based support programmes may be developed for such students. A closer interaction with them and an in depth analysis of their personal problems, home and social environment, and individual traits and aptitudes could help us a lot in developing such programmes so that they also could attain the minimum learning competencies.

4. Teaching-Learning Process

4.1 Suggested Teaching Aids

Relevant References and charts

4.2 Suggested Teaching Methods

- Brainstorming
- discussion and debating

4.3 Pre Lesson Preparation

- Identify the necessary materials and organize them.
- Designing the most appropriate teaching methods that you think are relevant.
- Decide the most appropriate meanness of assessment

4.4 Lesson Presentation

a) Introduction of the lesson

This sub-unit may be introduced with a reference to the famous and one of the greatest books of all economists, namely, *The Wealth of Nations* by Adam Smith (published in 1776). Though many other writers expressed important economic ideas before Adam Smith, but economics as a distinct subject started with AdamSmith's aboves aid book. We may also point out the fact that in the beginning the name of the subject was *Political Economy* and make references to shift of focus from wealth to welfare, scarcity, income, employment, etc., in the definitions of economics given by important economists during the last about 200 years. Once the students have grasped the concept and meaning of economics, we should tell them about its nature and scope, particularly highlighting the Great Depression of 1930, which essentially was the cause for the birth of Macroeconomics. Here a reference must be given to the book *The General Theory of Employment, Interest, and Money*, written by J.M. Keynes– the classic founder of macroeconomics.

b) Body of the lesson

Adam Smith, who was the first writer to define economics, defined it as "The study of the nature and causes of wealth of the nations."

D. Ricardo shifted the emphasis from production of wealth to the distribution of wealth. According to him, "To determine the laws which regulate the distribution of wealth, is the principle problem in Political Economy."

J.B. Say defines economy as, "The science which treats of wealth."

F.A. Walker writes, "Political Economy or Economics is the name of total part of knowledge which relates to wealth."

J.S. Mill defined economics as, "The practical science of production and distribution of wealth."

"Economics is fundamentally a study of scarcity and the problems which scarcity gives rise."

4.5 Evaluation and Follow-Up

a) Evaluation

Give students assignment concerning about the topic. Like state all the stages to construct economic theories interms of deductive and inductive methods.

Encourage them to take part in the discussion.

b) Follow-up

Make a tour around the class and check whether the students are actively involved in each activities and in the meantime ask them the meaning and scope of economics.

1.2 METHOD OF STUDYING ECONOMIC PRINCIPLES

Periods Allotted: 2 Periods

1. Competencies

At the end of this sub unit, the students will be able to:

- ➲ *Examine the methods of studying economics*

Key Terms and Concepts

Economy, economic problem, scarcity, choice, opportunity cost, efficiency, free resources, economic resources, land, labour, capital, entrepreneur, economic growth.

3. Overview

Like other sciences do, economics adopts the following two methods to treat the problems that arise.

a) Deductive method: this method draws facts about phenomena from general to particular. The steps involved in this method are:
   - Identifying the problem
   - Making of assumptions for the causes of the problems
   - Deriving a hypothesis through logical experiences
   - Testing or verification of hypothesis
   - Comparing predictions with fact

b) Inductive method – a method that draws facts about phenomena from particular to general.

4. Teaching-Learning Process

4.1 Suggested Teaching Aids

- Relevant References and charts

4.2 Suggested Teaching Methods

- Brainstorming
- Questioning
- Pair and Group Discussion

4.3 Pre Lesson Preparation

- Get ready in advance with the suggested teaching aids and other references materials.
- Prepare notes, activities and exercises.

We may help the students in compilation of the definitions of economics giving references to the following sources:

1. Oxford Dictionary of Economics, John Black, Oxford New York, 2002.
2. The MIT Dictionary of Modern Economics, David W. Pearce, MIT Press, Cambridge, 1992.
3. The New Palgrave: A Dictionary of Economics, Macmillan, London, 1987.
4. Encyclopedia of Britannica at www.britannica.com
5. www.econlib.org/library/CEE.html.
6. The Wealth of Nations, Adam Smith, available at www.bibliomania. com/NonFiction/Smith/Wealth/index.html
7. The General Theory of Employment, Interest and Money, J.M. Keynes, Harcourt, New York, 1935.

4.4 Lesson Presentation

a) Introduction of the lesson

As this sub-unit deals with the methods of studying economics, we should emphasise on the nature of economics as a science and tell the students that like other sciences, economics has also formulated certain economic laws and theories, adopting a certain methodology. This naturally creates a curiosity to know about the methodology of economics. Telling briefly about the various methods used in constructing economic laws, theories and models, and the difference between positive economics and

normative economics, we close this section by highlighting the nature and basic features of economic laws.

b) Body of the lesson

Most of the economic theories have been constructed through deductive method. The principal steps involved in the deductive method are the following:

a. Identifying the Problem
b. Defining Technical Terms and Making of Assumptions
c. Deriving Theories through Logical Deduction
d. Testing or Verification of Hypotheses
e. Comparing Predictions with Facts

The inductive method derives economic theories on the basis of observations and experiments. In this method detailed data are collected with regard to a certain economic phenomenon.

4.5 Evaluation and Follow-Up

a) Evaluation

Ask the following questions

- State all the methods of studying economics.

b) Follow-up

Makes them discuss in group about the advantages of economics.

1.3 RESOURCE ALLOCATION

Periods Allotted: 4 periods

1. Competencies

At the end of this sub unit, the students will be able to:

- *Define concepts like scarcity, opportunity cost, choice and efficiency*
- *Construct production possibility curve*
- *Distinguish the difference among economic resources, free resources, and shortage of resources.*

2. Sub Contents

- **Scarcity and choice**
- **Opportunity cost**
- **Product possibility a frontier and efficiency**
- **Economic resource, free resource shortage of resources**

3. Overview

One of the most important concern in economics is determining the allocation of resources to satisfy human wants and needs. This allocation is done through production units or institutions. These institutions collectively are called an economy.

In any society the allocation of resources is primarily determined by the following three basic principles, which are:

- What goods and services should be produced and in what quantity?
- How and where does these productions should be produced or organized? And
- How should the output be distributed?

4. Teaching-Learning Process

4.1 Suggested Teaching Aids

- References and
- Articles on resources

4.2 Suggested Teaching Methods

- Brainstorming
- Explanation
- Questioning
- Individual and group practical work

4.3 Pre lesson Preparation

- Get ready in advance with the suggested teaching aids and other references materials.
- Prepare notes, activities and exercises.

4.4 Lesson Presentation

a) Introduction to the lesson

In this section our focus is upon *economic problem*. We may thus initiate the topic by encouraging an open discussion in the class room on the question, what is economic problem? Students may come out with their own expressions, including references to their individual or personal economic problems. In that case we can change their attention by pointing out certain economic problems faced by our own country, say lack of availability of necessary goods and services to everyone in Ethiopia. This highlights the importance of the fact that resources are scarce in relation to human wants, the basic cause of economic problem. We can carry forward the topic with details concerning central problems of an economy and their representation through the tool of production possibility curve.

b) Body of the lesson

We may define an economy as, "*a system which provides people with the means to work, and earn a living*."

"*Economic problem is concerned with the uses of scarce resources among alternative human wants and in using these resources towards the end of satisfying wants as fully as possible*."

Scarcity means *limitation of supply of a commodity in relation to its need.*

The opportunity cost of any good is the amount of next best alternative good that is given up to produce this good.

Economising of resources means *making best use of available resources.*

4.5 Evaluation and Follow-Up

a) Evaluation

Summarize the lesson by organizing the students in group and asking them to discuss the issues.

- What are the main problems of economics?
- Discuss on the possible remedies to solve economic problems.

b) Follow-up

Instruct them to come with answers for the given questions in the evaluation.

- Grade and record their achievements

1.4 ECONOMIC SYSTEMS

Periods Allotted: 2

1. Competencies

At the end of this sub unit, the students will be able to:

- *Express what economic system is*
- *Compare and contrast the three economic systems.*

2. Sub Contents

- **Pure capitalism economic system**
- **Command economic system**
- **Mixed economic system**

Key Terms and Concepts

Economic system, capitalistic economy, command economy, mixed economy.

Basic questions in Economics: What to produce? How to produce? For whom to produce?

3. Overview

In order to properly answer the above questions of the principle, different economic systems have been practiced. These are:

a. Capitalist system: It is an economic system that believes in dealing with the economic problems through the ownership and decisions of individual market mechanism.
b. Command economy: An economic system that attempts to solve the economic problems through state ownership and centralized planning.
c. Mixed economy: It is an economic system that practices the combination of the above two systems.

4. Teaching-Learning Process

4.1 Suggested Teaching Aids

- References and
- Articles on resources

4.2 Suggested Teaching Methods

- Brainstorming
- Questioning

- Pair and group Discussion
- Presentation
- Guest Lecture
- Field Visit

4.3 Pre Lesson Preparation

- Get ready in advance with the suggested teaching aids and other reference materials such as books on economic issues.
- Design the most appropriate teaching methods that you think are relevant to the lesson.
- Prepare notes, activities and exercises.

4.4 Lesson Presentation

a) Introduction to the lesson

Giving references to the types of economic systems adopted by different countries of the world and also to the related experiences at home, i.e., the economic systems exercised by different governments in Ethiopia, we introduce this topic and discuss with students the main features of capitalistic economy, command economy, and mixed economy along with their comparative advantages and disadvantages. We should also point out the fact that all economies of world today are mixed economies with some elements of both capitalistic and command economy.

b) Body of the lesson

The different economic systems classified on the basis of ownership of resources are:

i. Capitalistic Economy
ii. Command Economy
iii. Mixed Economy

Prof. Loucks defines capitalism as

***Definition*:** "*A system of economic organisation featured by the private ownership and the use for private profit of man-made and nature-made capital*".

Main features of Capitalistic Economy or Capitalism

i. The Right to Private Property
ii. Freedom of Enterprise
iii. Freedom of Choice by the Consumers

iv. Profit Motive

v. Competition

vi. Price Mechanism

vii. Role of Government

viii. Self-Interest

ix. Inequalities of Income

Command economy, also known as socialistic economy is an economy where economic institutions engaged in production and distribution are owned and controlled by the State and are put to use under a centralised plan.

Main features of Command Economy

i) Collective Ownership
ii) Clear Social and Economic Objectives
iii) Central Economic Planning
iv) Role of Government
v) Maximum Social Welfare
vi) Relative Equality of Incomes

A mixed economy is "*an economy containing the characteristics of both capitalism and socialism, that is, a combination of private and public ownership of the means of production, with some measures of control by the government*."

Main features of Mixed Economy

i) Existence of Public and Private Sectors
ii) Economic Welfare
iii) Economic Planning
iv) Price Mechanism
v) Economic Equality

4.5 Evaluation and Follow-Up

a) Evaluation

Stabilize the main contents of the lesson by asking questions like

- What are the main features of mixed economy?
- Identify the merits of command economy?

b) Follow-up

Give the students assignment on the distinction between command and market economy.

1.5 DECISION MAKING UNITS AND CIRCULAR FLOW OF ECONOMIC UNITS

Periods Allotted: 2 periods

1. Competencies

At the end of this sub unit, the students will be able to:

- *Explain the characteristics of the three decision making units*
- *Construct the circular flows of economic activities and interpret it.*
- *Define the term entrepreneurship*
- *Explain the qualities of entrepreneurs*
- *Discuss the roles of entrepreneurs in economic development*

2. Sub Contents

- **Household**
- **Business firms**
- **Government**
- **Two-circular flow of economic units**
- **Three circular flow economic units entrepreneurship**

Key Terms and Concepts

Household sector, business firms, closed economy, real flows, money flows, financial flows.

3. Overview

The students must be able to realize the three important economic activities that includes production exchange and consumption. These made transaction possible between different sectors of the economy that resulted in the movement of income and expenditure in circular way. This is known as circular flow of income on circular diagram. There are different sectors that plays a role of decision making in the economy. These are household sectors which are the main owners of factors of production, consisting of land, labour capital and entrepreneur.

The second groups are the firms that hire services of factors of production from households to produce commodities that they sell to households to other firms to the government on to other countries.

One of the other decision making units is government that gets income largely from taxes imposed in households and on the business sector in the firm of direct and indirect taxes.

Different sectors of an economy have transactions with foreign countries and maintain commercial relationship through import export trade.

In addition there are mechanisms that help to identify the flow of a currency through market among decision making units which is known as circular flows of income and expenditure.

4. Teaching-Learning Process

4.1 Suggested Teaching Aids

- References and
- Articles on Decision making
- Models of circular flows

4.2 Suggested Teaching Methods

- Brainstorming
- Explanation
- Questioning
- Individual and group practical work

4.3 Pre Lesson Preparations

- Get ready in advance with the suggested teaching aids and other references materials.
- Prepare notes, activities and exercises.

4.4 Lesson Presentation

a) Introduction to the lesson

Production gives rise to income, income gives rise to expenditure, and expenditure gives rise to income again. This process is circular in nature because it moves in a circle coming back to the starting point. With this introduction we may tell the students that national income is a flow concept and then demonstrate diagrammatically how this flow can be represented through different models of circular flow.

b) Body of the lesson

You can present the lesson by giving the following explanation.

Anybody can judge the viability of each economy by closely examining the activities of the different sectors in the economy which sometimes referred to as decision making units of the economy or economic agents.

The decision making units of an economy are:

Household sectors, businesses sectors or firms government and the rest of the world. Each economic units evaluates the development of each sector along with the economic activities that includes production, exchange and consumption. In order to carry out these economic activities people need to involve in making transactions between different sectors of the economy.

As a result of these transactions income and expenditure move in a circular form in an economy which is known as circular flow of income or circular diagram.

On the same way, very often, the person who is in charge of organizing the resources and undertakes the risks involved in the production is the Entrepreneur.

The traits of an entrepreneur includes far-sightedness, courage, quality of leadership, quality of organizing the labour, experience, knowledge of business, moral quality, knowledge of psychology and decision making ability.

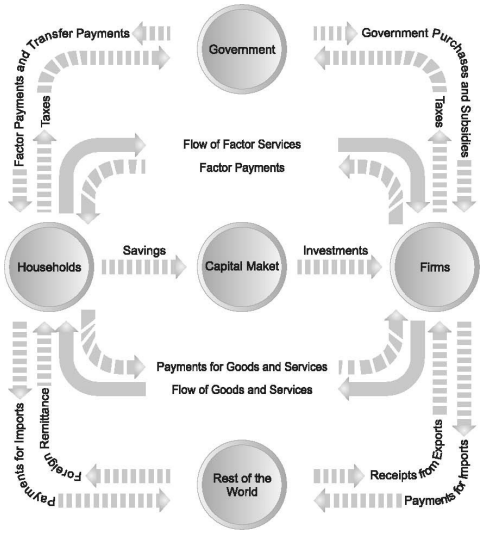
4.5 Evaluation and Follow-Up

a) Evaluation

Aspire the students to discuss on the role of entrepreneur in economic development.

b) Follow up

Give them assignment on the role of entrepreneurship in their locality and ask them to insist and discuss on their objectives.



ANSWERS TO ACTIVITES

Activity 1.1

1. Economics is both sciences and an art. It is considered as a science because, economics involves a systematic collection, classification, analysis, interpretation of data and making predictions for the future. Economists try to address their subject with a scientist's objectivity. They approach the study of the Economy in which the same way as a physics scientist approaches the study of matter and a biologist approaches the study of life: They devise theories, collect data and then analyze these data in an attempt to verify or refute their theories.
   Economics is an art because it presents different techniques and remedies to economic problems.
2. Economists use different assumptions to answer different questions. The art in scientific thinking – whether in physics, biology, or economics is deciding which assumptions to make? Economics make assumptions to simplify the problem without substantially affecting the answer.
   To study the effect of income increase on the consumption of a person; for example economists may assume the price of the good under consideration and other factors influencing consumption level unchanged. This helps to understand to role of income on consumption.

Activity 1.2

1. This question is open ended and to be attempted by students by collecting data from a firm which produces two goods.
2. Different factors contribute for PPC to shift outward, some of those factors are discussed under unit 4. Just for an example, technology shifts PPC upwards.

3 No, Economic models Omit many details, it does not include every feature of the economy, models simplify reality in order to improve our understanding of it. Thus, it can't exactly explain reality.

Activity 1.3

1. This is to be answered by students based on their PPC. The answer varies from student to student, since their PPCs varies.

Activity 1.4

1 It is mixed economy because it incorporates the features of both the capitalistic and socialist economy. At the same time it incorporates the features of both and allows private and public sectors to co-exist. Hence, it has the advantage:

- To maintain the balance of the economic development between regions.
- It provides large employment opportunities and seeks economic welfare through its price policy.
- It allows adequate freedom to deferent economic units.
- It supports rapid and planned economic development.

2. Basic or central questions of economics are:
   a. What to produce? What level (amount) to produce?
   b. How to produce? Choice of methods of production of goods and services.
   c. For whom to produce?
3. Labour intensive technique of production involves using more labor than technology. This method may be selected when supply of labor is high while that of technology insignificant. Capital intensive production method is the one which employs more capital than labor in the production process. For example, the production of high technology goods is capital intensive.

Activity 1.5

1. The decision making units of an economy are:

   Household sector, business sector, government sector and the rest of the world.

2. Households sell the services of the factors of production (land, labour, captel and enter primary.

   - Firms have services of factors of production from households to produce commodities.
   - General government buys goods and services from the producers and buys factor services from the households.
   - The rest of the world:- A country exports goods and services to other countries and similarly imports goods and services from other countries.

Activity 1.6

1. In the two – sector economy it is the household and the business sector that involved in the activity assuming that:- There are only two sectors in the economy.
   - Household sectors are owners of factors of production and they supply factor services to the firms.
   - Forms produce goods and services and sell their own tire output to households.
   - Households receive income for their factor services and spend the on tire amount on consumption.

- There is no savings in the economy.
- There is no government sector.
- It is a closed economy and therefore there are no exports on import.

2. A circular flow is a pictorial representation of the continuous flow of payments and receipts for goods and services and factor services between different sectors of the economy.

ANSWERS TO REVIEW EXERCISE FOR UNIT 1

Part I

1. Some modern economists have tried to give new definitions of economics:

   - Land J.M.Keynes defined economics as "The study of administration of a scarce means and the determinants of employment and income.
   - Professor Henry Smith defined economics as "The study of how in a civilized society one obtains the share of what other people have produced and of how the total product of society changes and is determined.

   The common definition of economics is the study of problems regarding choices that must be made due to scarcity of resources.

2. Since facts in Economics are systematically collected classified, analysed and interpreted to make predictions this makes economics a science. On the other hand economics tends to present principles and methods to solve problems and sets guidelines for its solution that makes economics and art.

   Therefore economics is both an art and a science.

3. Microeconomics is the study of individual economic units of an economy such as individual households individual firms or industries.

   Macroeconomics is the study for economy as a whole and its focus is the study of broad economy – wide aggregates.

   Demand and supply are the main tools of analysis in microeconomics. Aggregate demand and aggregate supply are the main tools of analysis in macroeconomics.

4. Economics is a useful subject because:
   - It helps us to understand certain problems and questions.
   - If explains problems and questions that affect society and the state as a whole.
   - If examines the actions and behaviors of different people so that it enables us understand about people.

5. There are two kinds of methods usually adopted to study relationships between economic variables. Deductive and inductive methods.

6. The main features of economic laws are:- Economic laws are:

   a. A lot like statements of tendencies.

   b. Conditional

   c. Scientific in nature.

   d. Not completely exact and definite.

   e. Not permanent and general.

7. Positive economics is concerned with explaining what is. It is concerned with facts which are, in principle either true as false.

   Normative economics deals with analysis of the benefit of economic policies to society.

8. Economic resources can be divided into four categories:-

   Land – includes all natural wealth that exists on or under the surface.

   Labour – all mental and physical labour which is helpful in the production of goods and services.

   Capital – all man-made goods that are used for the further production of wealth.

   Entrepreneurs - is a person who organizes the other resources of production and under fillies the risk and uncertainties involved in production.

9. The opportunity cost of any commodity is the amount of the next but alternative commodity that is given up in order to produce the first one.

   In this context the cost of producing a quantity of a commodity is measured interms of the quantity of some other commodity that could have been obtained instead.

10. An entrepreneur must possess the following characteristics.

- Far sightedness
- Courage
- Quality of leadership
- Ability to organize labour
- Decision – making ability
- experience
- knowledge of business
- moral quality
- knowledge of psychology

11. The roles of the entrepreneur in economic development shall include the following

    - Performs the role of an administrator.
    - Performs the role of a coordinator
    - Propertilization of labour force.
    - Distributes appropriate remunerative to each factor of production
    - Play the crucial role of an innovated.

12. The central problems of an economy are the issue of:-

    What of produce: implies that every economy must decide. Which goods and in what quantities are to be produced.

    How to produce: The economy must decide how to produce them. Choosing between alternative methods on techniques of production.

    For whom to produce: It is related to how a material product is to be distributed among the members of a society.

13. A production possibility curve (PPC) shows all possible combinations of production quantities of multiple products.

    The production quantities represent maximum possible output and are based on full and efficient use of currently available resources and of the current production technology.

14. The opportunity cost of a commodity is the amount of other commodities that must be for gone in order to produce the first.

    Assume that the economy is producing at point c.

    It indicts production of 70 units of butter and 2 units of guns.

    Now assume that the economy needs one more unit of guns.

    To make this change, production must move to point D.

    Which shows that the economy increases given production by one unit, it must have to fore go 30 units of butter.

    In other words, 30 units of butter is the opportunity cost of one unit of guns.

15. PPC is a down ward sloping curve because as we produce more of one commodity (guns) the amount of other commodity produced (butter) is decreased.

    As a result, PPC curves slope down because increased production of one commodity is associated with lower production of the other. Finally, the PPC curves becomes concave to the origin, mainly because of increasing opportunity cost.

16. An economic system is defined as the legal and institutional frame work within which economic activities takes place or it is an organization for the purpose of satisfying the peoples' needs by using available means of production.

    There are three types of economic systems, classified on the basis of ownership of resources.

    - Capitalistic economy – command economy – mixed economy.

17. Capitalism is a system of economic organization featured by the private ownership and use for private profit of man-made and nature-made capital.

Main features of capitalistic economy

- The right to private property
- Freedom of enterprise
- Freedom of enterprise
- Freedom of choice by consumers.
- Profit motive
- Competition
- price mechanism
- minor role of government
- self interest
- in equalities of income

Advantages of capitalistic economy

- Flexibility or adaptability
- Decentralization of economic power.
- Increase in per – capital income and standard of living.
- New types of consumer goods
- Growth of entrepreneurship
- Optimum utilization of productive resources.
- High rate of capital formation.
- Reward according to ability.

Disadvantages of capitalistic economy

- In equality of income
- Too much waste
- Unbalanced economic activity
- Emphasis on materialism
- Exploitation of labour
- Trade cycles of economic booms and depressions.

18. Main features of command economy

- Collective ownership
- Clear social and economic objectives
- Central economic planning
- Government strong role
- Maximum social welfare
- Relative equality of incomes

Advantage

Best utilisation of resources

- No place for wasteful use of resources
- No cyclic fluctuations
- Allocation of resources through centralized planning leads to balanced economic development.
- Elimination of private monopolies and in equalities

Disadvantage

- Absence of automatic price determination
- Absence of incentives for hard work and efficiency
- Lack of economic freedoms
- Red-Tapism.

19. Mixed economy is an economy containing the characteristics of both capitalism and socialism; A combination of private and public ownership of the means of production with some measures of control by the government.

Main features of mixed economy

- Co-existence of public and private sectors.
- Economic welfare
- Economic planning
- Price mechanism
- Economic equality

20. Mixed economic system combines the advantage of

- Capitalistic economy
- command economy
- Private sectors
- economic planning
- Price mechanism
- social welfare economic welfare
- Minor role of government
- absence of wasteful completion
- Elimination of private monopolies and inequalities

21. The decision-making units of an economy

Household sector

- Owners of factors of production, land, labour, capital and entrepreneur
- sell the services of these factors.
- spend a large part of their income purchasing goods and services from the producers.
- save part of their income.
- pay taxes to the government.

Business sector (Firms)

- hire services of factors of production from households.
- Produce commodities to households government on to other comfier.
- Consist both private and government enter prises.

Government sector

- Gets its income largely from taxes
- Buys goods and services from the producers
- Buys factor services from the households
- Uses the commodities and factor services to provide free series.

The Rest of the world

- A country exports goods and services to other countries.
- It imports goods and services from other contours.

22. Circular flow is a pictoral representation of the continuous flow of payments and receipts for goods and services and factor services between different sectors of the economy.

Circular flow of income: - is a visual model of an economy that shows how a

currency such as the Birr flows through markets among the decision making units.

Circular flow of expenditure:-

Real flows consist of the flows of:

- Facto services from the owners of factor services to the producers and goods and services from the producers to the buyers.

Money (Financial) flows consists of the flows of:-

- Money incomes from factor services such as sent, ways, infest, etc; and
- The money expenditures incurred forth purchase of goods and services.

23. Two-sector economy without savings.

The diagram represents a continuous flow of factor services (in the form of land, labour, capital and entrepreneur) from households to firms in the economy. Firm produce goods and services with the help of these factors and supply them to the households for consumption. When firms get factor services from households they make morality payments against them to the households. Households spend this income on the purchase of goods and services from the firms for their consumption.

Thus, money flows from firms to households as (payments for factor services) and back from households to firms (as payments for goods and services) is the money flow of income.

Two-sector economy with savings

Savings made by the household are deposited in the capital market on in the farandole system (such as Banks, insurance companies, financial institutions, etc) from capital market, these savings flow, to the firms for investment.

24. In the three – sector model of circular flow, the economy has these three sectors: households, firms and government. The activities of the three sectors influence the flow of income.

As it is illustrated in the diagram firms make payments to households against factor services received from then households in turn make payments to firms for goods and services purchased from then. Household savings are deposited in the capital market and inturn, they are given to the firms for investment.

Government gets its revenue by imposing taxes on households and on firms government pays back. This revenue to the firms and household by purchasing goods and services from then. Also, government gives subsides to the firms and transfer payments to the households.

Part II

25. Following are the main differences between the concepts of micro and macroeconomics:

Microeconomics deals with individual economic units whereas macroeconomics deals with aggregates or averages. For instance, the study of a textile mill comes under microeconomics; but when we study the entire industrial sector, it comes under macroeconomics.

Microeconomics primarily concerns the allocation of resources by an individual economic unit. Macroeconomics, on the other hand, is the study of relations between economic aggregates.

Whatever is taken as variable in microeconomics is presumed as given in macroeconomics and whatever is taken as variable in macroeconomics is taken as given in microeconomics. For instance, full employment is assumed as given in microeconomics but it is taken as a variable in macroeconomics. Thus, total output, employment, national income, price level, exchange rate, etc., are variables in macroeconomics, while they are taken as given in microeconomics. Similarly, allocation of resources is taken as variable in microeconomics, but is assumed as given in macroeconomics.

The central problem in microeconomics is of price-determination while the central problem in macroeconomics is of income and employment determination.

Main tools of microeconomics are demand and supply while the main tools of macroeconomics are aggregate demand and aggregate supply.

26. **Deductive Method:** In deductive method, certain assumptions about behaviour of economic variables are made. Then, from them through logical reasoning, a hypothesis is made. Predictions based on the hypothesis are then tested by observations of the real facts. If predictions are in agreement with facts, an economic theory has been constructed.

Inductive Method: In the inductive method after identifying the problem, data regarding relevant variables are collected and then through processing of data some theories are proposed. In this method also, predictions are then made on the basis of the theory developed and tested against actual facts.

27. Positive economics is concerned with explaining *what it is*, i.e., it constructs and describes theories and laws to explain the observed economic phenomena. On the other hand, normative economics is concerned with *what should be* or *what ought to be*.

In positive economics, we derive theories and laws and make statements following certain rules of logic. These theories, law and statements explain the cause and effect relationship between economic variables. Whereas, normative economics establishes ideals for the economic activities.

In positive economics, what should be the prices, what should be the saving rate, what should be the allocation of resources, and what should be the distribution of income are not discussed. These questions of what should be and what ought to be, fall within the purview of normative economics.

We give below some positive and normative statements in the field of economics, to give an idea of the difference between the two.

Positive Statements

a. Quantity demanded varies inversely with price.

b. Price is determined by demand and supply.

c. Wage rate of labour is determined by its marginal productivity.

d. Aggregate demand and aggregate supply determine the level of national income.

e. Inflation is caused by excess of aggregate demand over aggregate supply.

Normative Statements

a. Distribution of income among the people should be equal.

b. Price of a commodity should be fixed on no-profit and no-loss basis.

c. Wage rate ought to be fixed on the basis of the needs of the workers.

d. We should adopt labour intensive techniques of production.

28. Free resources are free gifts of nature, unlimited in supply, and do not have a price. On the other hand, economic resources are limited in supply, have a price, and may be free gifts of nature or man-made. Air, sunshine, mountain stream are examples of free resources, and land, minerals, table, car, etc., are examples of economic resources.

29. In labour-intensive technology or what is also called a labour-intensive technique, relatively greater quantity of labour than capital is used to produce a given level of output of a product.

Household producers in agriculture engaged in production of food grains, cottage and small scale industries engaged in making wooden furniture, handloom cloth, baskets, ropes, generally use labour-intensive technology.

In capital-intensive technology, relatively more capital than labour is used for producing a given level of output.

Corporate entrepreneurs who produce goods on a large scale generally use capital-intensive technology. In textile mills automatic looms and other highly capital-intensive machines are used. In corporate firms producing steel, fertiliser, engineering goods capital-intensive technology is used for production.

30. Capitalistic economy is an economic organisation in which all the means of production are privately owned. In this system, production takes place mainly for the motive of earning private profit and government intervention is at the minimum level. On the other hand, command economy is an economy where economic institutions engaged in production and distribution are owned and controlled by the state and are put to use under a centralised plan. Rather than earning of profit, maximum social welfare is the aim of a command economy.

31. Real flows refer to flow of goods and services. They consists of flow of factor services from households to firms and flow of goods and services from firms to households. Because they consists of actual goods and services, they are called real flows.

    On the other hand money flows refer to flows of money. They consist of monetary payments from firms to households for their factor services and in turn, the monetary payment from households to firms against their goods and services.

Part III

32. True	33. False	34. False	35. True	36. True
37. True	38. False	39. False	40. True	41. False

Part IV

42. B	43. A	44. C	45. B	46. D

Part V

47. Adam Smith

48. Economics is both a science and an art

49. Air and sunshine

50. Minerals and buildings

51. Capitalism/mixed economy
52. Command economy
53. Mixed economy
54. i. Human wants are unlimited ii. means to satisfy them are limited.
55. i. What to produce?, ii. How to produce?, and
    iii. For whom to produce?
56. i. Labour intensive techniques,
    ii. Capital intensive techniques
57. Through technological advancement and production of new goods.
58. Production possibilityfrontier.
59. Inefficient utilisation of given resources.
60. Economic growth
61. Central planning authority
62. No
63.

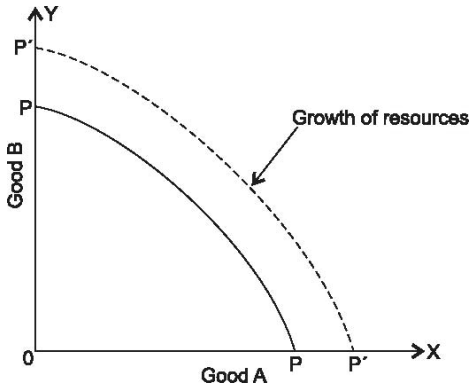


Figure1.2

64. i. Limited availability and
    ii. Alternative uses
65. Rightward shift
66. Aggregate demand and aggregate supply
67. Demand and supply
68. An economy which does not interact with th3e rest of the world.

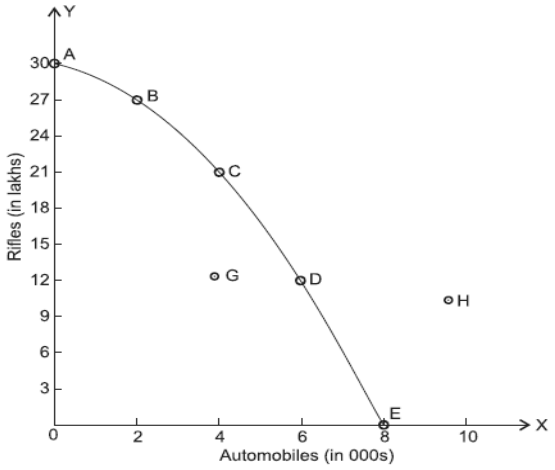
69. Financial flows

70. Quality of leadership, and decision-making ability.

71. Generates new employment opportunities, and provides economic leadership.

Part VI

72.



a. The points A, B, C, D and E lying on the curve indicate full utilisation of resources. They also represent the various possible combinations of automobiles and rifles that can be produced.

b. The point G (lying inside the curve) indicates inefficient utilisation of resources.

c. The point H (lying outside the curve) indicates unattainable combination of goods i.e. automobiles and rifles.

d. Economic growth i.e. growth of resources must take place before the economy can attain the level of production indicated by point H.

73. We know that opportunity cost per unit of a good in terms of another good is the amount of the another good given up to produce one unit of this good. In the given table, when we move from A to B, we give up 2 units (20. 18) of pens to produce one unit (0. 1) of shirts.

Opportunity cost per unit of shirts at B = 20 – 18 = 2 units of pens

Similarly, we calculate the opportunity cost at other points (C, D and E).

Production Possibilities	Shirts(units)	Pens(units)	Opportunity Cost per unit of shirts(in units of pens)
A	0	20	–
B	1	18	20 – 18 = 2
C	2	14	18 – 14 = 4
D	3	8	14 – 8 = 6
E	4	0	8 – 0 = 8

74. We draw the PP curve from the given table and observe that it is concave to the origin. To explain the reason for the concave shape of the curve, we calculate the opportunity cost at different production possibilities, as follows:

Production Possibilities	Good X(units)	Good Y(units)	Opportunity Cost per unit of Good X(in units of Good Y)
A	0	30	–
B	1	28	30 – 28 = 2
C	2	24	28 – 24 = 4
D	3	18	24 – 18 = 6
E	4	10	18 – 10 = 8
F	5	0	10 – 0 = 10

Observe from the above table that the opportunity cost of producing good x is increasing (2. 4. 6. 8. 10) as we produce more and more units of it. This increasing opportunity cost makes the shape of the PP curve concave to the origin.

75. (*for explanation, refer to the solution of Q. 2 of this exercise*)

T-shirts(in millions)	Cell Phones (in thousands)	Opportunity cost per million of T-shirts(in thousand cell phones)
0	90000	–
1	80000	90000 – 80000 = 10000
2	68000	80000 – 68000 = 12000
3	52000	68000 – 52000 = 16000
4	34000	52000 – 34000 = 18000
5	10000	34000 – 10000 = 24000

76.

Production possibilities	Cloth(in million metres)	Sugar(in million kg)	Opportunity cost per million mt. of sugar (in million kg of cloth)
A	0	50	–
B	1	45	0.2
C	2	38	0.14
D	3	30	0.125
E	4	20	0.1
F	5	6	0.07

UNIT 2 DEMAND, SUPPLY AND ELASTICITY

Periods Allotted: 18 periods

1. Introduction

By now our students have come to know about the concept and meaning of 'economics' as a subject and its nature, scope and the different methods of studying economic principles. We have also introduced them to different economic systems such as pure capitalism, command economy and mixed economy. The basic objective of our present unit is to help them in understanding two very powerful tools of economics, namely, *theory of demand* and *theory of supply*. These two concepts will enable them to analyse the various changes in the economic environment around them, particularly, the working of the economic system known as pure capitalism or market economy.

2. Unit Objectives

At the end of this unit, the students will be able to:

- ➲ *Recognize the factors affecting demand and supply, and then appreciate the law governing them.*
- ➲ *Understand equilibrium price quantity*
- ➲ *Understand the essence of different elasticity of demand and supply.*

3. Main Contents

2.1 THEORY OF DEMAND

2.2 THEORY OF SUPPLY

2.3 MARKET EQUILIBRIUM

2.4 ELASTICITY OF DEMAND AND SUPPLY

2.5 ELASTICITY OF SUPPLY

2.1 THEORY OF DEMAND

Periods Allotted: 5 periods

1. Competencies

At the end of this unit, the students will be able to:

- *Define concept of demand*
- *Examine the law of demand*
- *Identify the differences between individual and market demand*
- *Construct and interpret the demand schedule, graph and function*
- *Describe the basic determinants of demand.*

2. Overview

In economics, demand is much more than desire. It is the capacity to buy a given quantity at the price set. An individual's demand to purchase a commodity is determined by the following factors:

- price of the commodity
- income of the individual
- taste of the consumer/individual
- climate
- population, etc.

The theory of demand says that demand increases with a decrease in price.

4. Teaching-Learning Process

4.1 Suggested Teaching Aids

- Illustrations
- Diagrams
- Charts and figures

4.2 Suggested Teaching Methods

- Open ended questioning
- Peer assessment
- Pyramiding

4.3 Pre lesson Preparation

- Identify the necessary materials and organize them.
- Designing the most appropriate teaching methods that you think are relevant.
- Decide the most appropriate meanses of assessment and schedule the various activities by making breakdowns.

4.4 Lesson Presentation

a) Introduction of the lesson

We can start the unit by raising certain questions for an open class room discussion, such as, why does a consumer buy a commodity? Does he/she but the same quantity of the commodity, irrespective of its price? Is it so that consumers with different income levels buy different amounts of a commodity? Do we always buy that what we want? Who supplies the various commodities to us and why? and so on. Depending upon the response and reactions of our students we can carry forward the debate in a lively manner and finally conclude that a study of this unit will be highly useful to us in getting logical and reasonable answers to such and many other allied questions. Adopting an approach of *general to particular* we may introduce them to the concept of 'demand' and 'supply' and point out that in this unit we begin with the study of concepts, laws, and determinants and other aspects of *demand* and *supply*; examine the effects of changes in them or market prices and quantities purchased/sold of various commodities; and finally learn about the quantitative relationships between changes in demand/supply and changes in price of a commodity.

b) Body of the lesson

The economy of a country is mainly judged by the capacity it had to stabilize the market equilibrium by keeping the balance between demand and supply. Thus you are required to concentrate on the following sensitive issues.

- Demand refers to the amount of commodity which an individual buyer is willing to buy at a given price during a given period of time.
- A demand schedules is a tubular statement that states the different quantities of a commodity that would be demand at a different prices.

Demand mainly depends upon

- Price of the commodity
- Income of the consumer
- Price of related goods

4.5 Evaluation and Follow-Up

a) Evaluation

Secure and broaden the scope of knowledge of students by asking them questions like:-

- When does a desire become a demand?
- What are the two types of demand curve?
- Write two of the assumptions of the law of demand?

b) Follow-up

- Collect feed backs and see them carefully.
- Grade all the activities performed by the students.
- Classify the grades to comprehend how much of the students have got the lesson properly or not.

2.2 THEORY OF SUPPLY

Periods Allotted: 3 periods

1. Competencies

At the end of this unit, the students will be able to:

- *Define the concept of supply*
- *Examine the law of supply*
- *Identify the differences between individual and market supply*
- *Construct and interpret the supply schedule, graph and function*
- *Describe the basic determinants of supply.*

2. Overview

Sometimes students may be confused about the concepts of supply and stock and you are required to compare and contrast the distinction between supply and stock. Note that stock is defined as potential supply while supply in the other hand means the quantity which actually brought in the market.

The concept of supply can be realized broadly when it is addressed along with its determinants and these are:-

- price of the commodity
- changes in factor prices
- objective of the firm
- state of technology
- fiscal policy of the government
- price of other goods.

Moreover, explain that supply is dictated by law, thus law of supply expresses the functional relationship between the prices of a commodity and its quantity supplied.

Nevertheless, there are exceptions that could not be subject to the law of supply and this includes:-

- future expectations about changes in prices.
- Agricultural products because they are governed by natural factors.
- perishable commodities.
- Good of auction and artistic goods.

3. Teaching-Learning Process

3.1 Suggested Teaching Aids

- References
- Charts and figures

3.2 Suggested Teaching Methods

- Per discussion
- Group feedback
- Presentation
- Per assessment

3.3 Pre lesson Preparation

- Identify the necessary materials and organize them.
- Designing the most appropriate teaching methods that you think are relevant.
- Decide the most appropriate meanses of assessment and schedule the various activities by making breakdowns.

3.4 Lesson Presentation

a) Introduction of the lesson

In this sub-unit we go ahead with topics such as concept, law, types and determinants of supply; supply schedule, curve and function; etc, indicating wherever appropriate the similarities between the terms and concepts from the present and the previous sub-unit.

b) Body of the lesson

Make sure that you are stabilizing the lesson by giving emphasis to important points like:-

- Supply means the quantity which is actually brought in the market.
- A supply schedule is a tabular statement that states the different quantities of a commodity offered for sale at different pairs.

- Law of supply expresses the functional relationship between the a price of commodity and its quantity supplied.
- Government may intervene in the market through policy of price control.

3.5 Evaluation and Follow-Up

a) Evaluation

To make sure of the understandings of the students ask the following questions.

- How do you define low of supply
- State three of the assumptions of the law of supply.
- State three of the exceptions to the assumptions of the law of supply.

b) Follow-up

- Check students understanding of the lesson by giving them an exercise to be done independently.
- Rate and grade the various activities performed to get an indirect feedback whether the lesson is well understood or not and to identify those students who may need extra support.

2.3 MARKET EQUILIBRIUM

Periods Allotted: 4 periods

1. Competencies

At the end of this subunit, the students will be able to:

- *Define market equilibrium*
- *Compare and contrast mathematical equation and graphical representation of market equilibrium*
- *Show how the changes in demand and supply on equilibrium price and quantity*
- *Identify the concepts of price ceiling and price floor.*

2. Overview

You may start the lesson by defining the term equilibrium:

In the context of price determination, equilibrium refers to a situation in which the quantity demanded of a commodity equals the quantity supplied of the commodity.

Then you can explain marked equilibrium as the balance between opposite forces of demand and supply. Similarly excess demand may occur when the consumers want more than what the products are willing to supply. In contrast when you explore the case of excess supply of a product, it takes place when the consumer want less than what the producers are willing to supply.

Eventually present a specific account on a non viable industry which is attributed to the one whose demand and supply do not intersect each other at any positive quantity. This implies that it is an industry in which costs are too high for any positive output to be produced.

3. Teaching-Learning Process

3.1 Suggested Teaching Aids

- References
- Charts and figures
- Tables and graphs

3.2 Suggested Teaching Methods

- Discussion
- Presentation
- Open ended questioning

3.3 Pre Lesson Preparation

- Get ready in advance with the suggested teaching aids and other reference materials.
- Design the most appropriate teaching method that you think is relevant.
- Prepare notes, activities and exercises.

3.4 Lesson Presentation

a) Introduction to the lesson

Having discussed about consumers' demand for goods and producers' supply of goods in a market in the previous two sub-units, we now focus on how these two forces of demand and supply determine the prices of commodities in a market economy. For this purpose, we introduce this sub-unit through a discussion on the term equilibrium, in general, and explain how demand and supply help in attaining an equilibrium in the market. We also demonstrate how equilibrium price and equilibrium quantity is determined through a graphical and mathematical analysis of market equilibrium and discuss the effects of changes in demand and supply on market equilibrium.

b) Body of the lesson

Facilitate the teaching learning process and insist on the following significant points

- Demand and supply carves respectively tell as how much consumers demand and how much producers supply at different prices
- Equilibrium referees to a situation in which the quantities demanded commodity equals the quantity supplied commodity.

3.5 Evaluation and Follow-Up

a) Evaluation

Measure the students understanding by asking them the following questions

- What does equilibrium mean?
- Define equilibrium price?

b) Follow-up

- Check students understanding of the lesson by giving them an exercise to be done independently. The exercise may contain questions such as:
- What do demand in supply curve respectively imply?
- What does equilibrium price mean?
- Define price elasticity of demand?

2.4 ELASTICITY OF DEMAND AND SUPPLY

Periods Allotted: 6 periods

1. Competencies

At the end of this unit, the students will be able to:

- *Define the concept of elasticity*
- *Identify the explain types of elasticity*
- *Calculate and derive the formula of price elasticity of demand*
- *Assess the determinants of price elasticity of demand*

2. Sub Content

2.4.1 Price elasticity of demand

2.4.2 Income elasticity

2.4.3 Cross-price elasticity

3. Overview

In the previous lessons you discussed about supply and demand and it is believed that students have obtained a contractual knowledge about the distinction between supply and demand.

However, the knowledge about supply and demand can be complete when it is presented in integration with the idea of elasticity.

In Economics elasticity is used to analyze the quantities relationship between price and quantity purchased on sold. Thus elasticity of demand refers to the degree of responsiveness of quality demanded of a good to a change in its price, on change in income on change in prices of related goods.

The students should acquire knowledge about the factors that are determinants of price elasticity of demand.

It includes:-

1. Availability of substitutes
2. Nature of the commodity
3. Proportion of income spent
4. The number of uses of the commodities
5. Time factor
6. Post postponement of consumption
7. Price range
8. Habits of the consumers.

4. Teaching-Learning Process

4.1 Suggested Teaching Aids

- Diagrams
- Tables and figures

4.2 Suggested Teaching Methods

- Group discussion
- Presentation
- Explanation and demonstration

4.3 Pre Lesson Preparation

- Identify the necessary materials and organize them.
- Designing the most appropriate teaching methods that you think are relevant.
- Decide the most appropriate meanses of assessment and schedule the various activities by making breakdowns.

4.4 Lesson Presentation

a) Introduction to the lesson

Through this sub-unit we are going to introduce a very crucial concept of elasticity which is used in economics to analyse the quantitative relationship between price of a commodity and its quantity purchased or sold. Also the concept of elasticity has many applications in areas such as price fixation, taxation, international trade, etc. Raising a question like why the demand for commodities such as fruits, garments, etc., changes even if there is a small change in their price, whereas demand for salt and medicines normally does not change even after a significant change in their prices?, we introduce the issue of consumers' reaction to change in price or the responsiveness of demand to change in price and carry forward our lesson with details concerning the concepts, determinants and measurement of various types of elasticities of demand/supply, in the present sub-unit.

b) Body of the lesson

Focus on the following points

- Demand for a good is determined by its price, incomes of the people, prices of related goods.
- The three kinds of demand elasticities are price, income and cross elasticity.
- Factors that determined the price elasticity of demand are:
    - Behaviour of cost of production.
    - Time element.
    - Nature of the commodity
    - Availability of facilties for expanding output.
    - Nature of inputs.
    - Risk-taking.
    - Expectation of future prices.

4.5 Evaluation and Follow-Up

a) Evaluation

Ask the following questions to ensure their understanding of the lesson:-

- What is price elasticity of demand?
- Write down the methods of measurements of price elasticity of demand?
- What are the types of elasticity of demand?
- Mention two of the determinants of elasticity of supply

b) Follow-up

Make students do exercise found in their text book.

Rate and grade the students' performance in the various activities and exercises to get feedbacks whether the lesson is well understood or not and to identify those students who may need extra support.

2.5 ELASTICITY OF SUPPLY

Periods Allotted: 6 periods

1. Competencies

At the end of this unit, the students will be able to:

- *Explain the concept of elasticity of supply;*
- *Drive the formula and construct the graph of supply.*

2. Overview

To elaborate the topic further, define price plasticity of supply that implies how sellers react to change in price. It means the greater the reaction, the greater will be the elasticity and the lesser the reaction the smaller will be the elasticity. The detail account of supply can be treated after you give a review of the idea of elasticity.

Hence, like elasticity of demand, there are factors that determine elasticity of supply that emphasize on:-

1. Behavior of cost of production
2. Time factor
3. Nature of the commodity
4. Availability of facilities for expanding production
5. Nature of inputs
6. Risk taking
7. Expectations of the future price.

In the meantime, you can point out the types of elasticity of supply, that includes:

a. Perfectly inelastic supply
b. Less than unit elastic supply
c. Unit elastic supply
d. More than unit elastic supply
e. Perfectly elastic supply.

Encourage the students to take part in the discussion and instruct them to do the practical works in the students' text book.

3. Teaching-Learning Process

3.1 Suggested Teaching Aids

- Charts
- Graphs
- Tables and figures

3.2 Suggested Teaching Methods

- Brainstorming
- Group work
- Project
- Group discussion

3.3 Pre-lesson Preparation

- Organize documented activities
- Prepare the appropriate teaching materials that are relevant tothe topic

3.4 Lesson Presentation

a) Introduction

You have already ensured that the students have acquired knowledge about the concept and meaning of economics as a subject. Thus to recapitulate the nature, scope and the different methods of studying economic principles, brainstorm and discuss the relationship between factors that bring change in supply of commodities. In the course of your discussion stress on elasticity of supply. Underline its determinants along with the possible means to measure the price of elasticity of supply.

b) Body of the lesson

Determinants of Supply elasticity

Supply of a commodity is determined by a number of factors. Some of these important factors are as follows:

i. *Price of the Commodity*

ii. *Changes in Factor Prices*

iv. *Objectives of the Firm*

v. *State of Technology*

vi. *Other Factors:* Beside the main factors discussed above, there are many other factors which affect the supply of a commodity such as fiscal policy of the government, the prices which are likely to prevail in the near future, etc.

Determinants of Elasticity of Supply

1. Cost of production.
2. Time factor
3. Nature of the commodity
4. Availability of facilities for expanding production.
5. Nature of inputs.
6. Risk taking
7. Expectations of future prices.

3.5 Evaluation and Follow-Up

a) Evaluation

Stabilize the lesson by presenting this questions

- How do you explain supply?
- Discuss the determent of price elasticity of supply?

b) Follow-up

Arrange a group discussion so that students express and realize the determinant of price elasticity of supply.

ANSWERS TO ACTIVITES

Activity 2.1

1. Law of demand expresses the functional relationship between the price of a commodity and its quantity demanded. Price and demand are observed to inversely related.
   The law of demand states that, other things being equal, at a higher price consumers will purchase less of a commodity, and at a lower price, consumers will purchase more of it.

Assumptions of the law of demand

- There should be no change in process of related goods.
- Tastes and preferences of the consumer should remain constant.
- There should be no change in the income of the consumers.
- The size of the population should remain constant.
- Distribution of income and wealth should be equal.
- There should be perfect completion in the market.

Main exceptions of the law of demand. There are:-

- Giffen goods.
- Prestige goods
- Necessities
- Expectation
- Expectation of people about the future.

2. Demand curve normally slopes down wards to the right. This is because of

   - Law of diminishing marginal utility:- which accordingly if a consumer increases the consumption of a commodity in a given time period, the utility from consumption of each successive unit goes on diminishing. Therefore with the fall in price more units of a commodity will be demanded and with rise in price, less units of a commodity will be demanded.
   - Income effect: when price of a commodity falls a consumer can buy more of the commodity with the same amount indicating an increase in his real income.
   - Substitution effect: when the price of a commodity falls, it becomes relatively cheaper than its substitutes.
   - Change in the number of consumers
   - Different uses of a commodity

     Other things being equal, if the quantity demanded increases or decreases due to fall in the rise of a commodity alone, it is known as movement along a demand curve or change in quantity demanded and the movement is either upward or downward along the same demand curve.
   - If more or less quantity of a commodity is demanded at the same price, due to change in factors other than the price of commodity concerned it is called shift in the demand curve or change in demand in this situation there is either rightward shift or leftward shift in the demand curve itself.

   Exceptions to the law of Demand

   These are situations when the law of demand does not operate and are known as exceptions to the law of demand.

   Main exceptions are as follows

   - Geffen goods:- are those goods whose income effect is negative.
   - Prestige goods – This is a situation when the price of good goes up the prestige value will go up, as a result quantity demanded by a consumer will rise.
   - Expectation of people in future.
   - Necessities.

3. Question 3 A – E, 4 and 5 are open ended questions given to be discussed by the teacher based on the characteristics of his environment and according to the preference of his students.

6. a.

Price (Birr)	Qty. Demanded by Letta (a)	Qty Demanded by Abera (b)	Qty. Demanded by Shemsia (c)	Market Demanded (a + b + c)
10	19	17	19	55
8	21	23	24	68
6	30	33	27	90
4	35	34	30	99
2	36	35	32	103
1	40	38	36	114

Market Demand Schedule

b.

Price (Birr)	Qty. Demanded by Letta (a)	Qty. Demanded by Shemsia (c)	Market Demand (a + b)
10	19	19	38
8	21	24	45
6	30	27	57
4	35	30	65
2	36	32	68
1	40	36	76

New Market Demand Schedule (when Abera drops)

c.

Price (Birr)	Qty. Demanded by Letta (a)	Qty. Demanded by Abera (b)	Qty. Demanded by Shemsia (c)	Qty. Demanded by Marta (d)	Market Demand (a +b +c + d)
10	19	17	19	9.5	64.5
8	21	23	24	12	80
6	30	33	27	13.5	103.5
4	35	34	30	15	114
2	36	35	32	16	119
1	40	38	36	18	132

New Market Demand Schedule (when Marta joins)

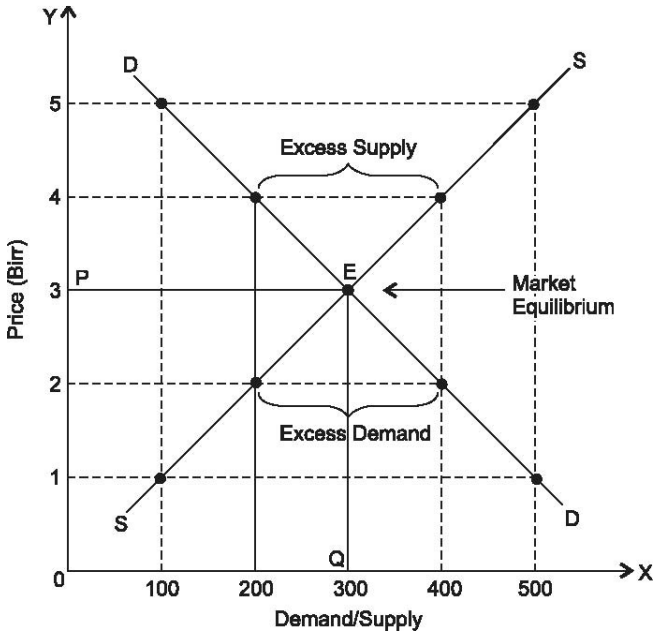
Activity 2.2

1. Supply curve normally slopes up wards to the right. There are several reasons for this direct relationship as given below:
   - Expectations of profit
   - Change in stock.
   - Entry and exit of firms.
2. Movement along a supply curve (or change in quantity supply) other things beings equal, if the quantity supplied increases or decreases due to rise on fall in the prices of the commodity alone, it is known as movement along a supply curve or change in quantity supplied. In this, we move along the same supply curve either upwards or down wards.

   Shift in the supply curve (or change in supply) if more or less quantity of a commodity is supplied at every alternative price due to change in the factors other than the price of the commodity concerned it is known as shift in the supply curve on change in supply in this situation supply curve itself shifts either to right or to the left.
3. Question 3 is open ended questions to treated by you based on the reality of your environment.
4. Computers, colour televisions sets, audio and video CDs, mobile phones etc.

Activity 2.3

1.



Graphical Presentation of Market Equilibrium

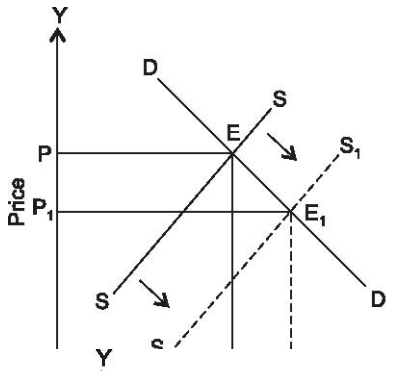
From the Graph: Equilibrium price = Birr 3

Equilibrium quantity = 300 Units

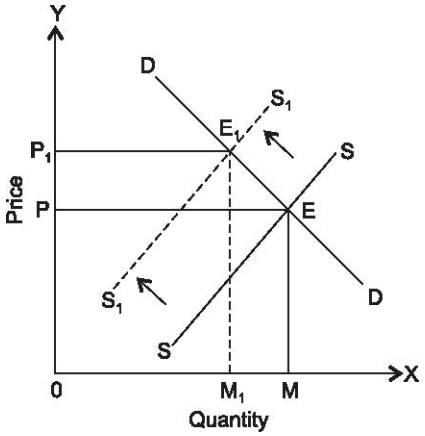
Market Trends: At a price less than Birr 3, there is a trend of excess demand (shortage) in the market; and at price more than Birr 3, there is a trend of excess supply (surplus) in the market.

2.

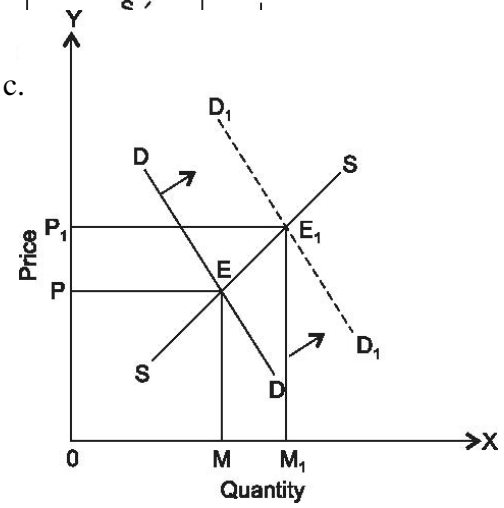
a.



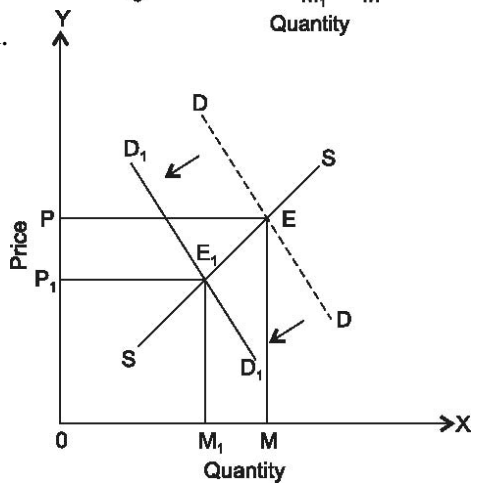
b.



c.

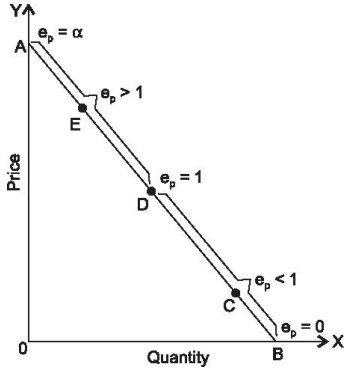


d.



Activity 2.4

1.



2. a. % change in quantity demanded = $\frac{\text{Change in quantity demanded}}{\text{Original quantity}} \times 100 = \frac{\Delta Q}{Q} \times 100$

$e_p = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$ c. $e_i = \frac{\Delta Q}{\Delta Y} \times \frac{Y}{Q}$ d. $e_c = \frac{\Delta Q_X}{\Delta Y_Y} \times \frac{P_Y}{Q_X}$

3. Price elasticity or demand in a measure of how much the quantity demanded of a good responds to a change in the price of that good. It is computed as the percentage change in quantity demanded divided by percentage change in price.
Students should be encouraged to share their experience of how they respond to price charge.

4. Determinants of price elasticity of demand.
   a. *Availability of substitutes*: price elasticity of demand for a good tends to be high, if the good under consideration has close substitutes.
   b. *Nature of the commodity /Degree of Necessity/*
   Even though the level of disposable income of consumers matters, price elasticity of demand is inelastic for necessities and elastic to luxury goods.
   c. *Proportion of income spent of the good*:
   It can be argued that goods that account for a large proportion of disposable income tend to be elastic. Goods that account for very small proportion of disposable income tends to be inelastic - consumption continues while prices rises.
   d. *Number of uses of the commodity*:
   Goods which various uses for the consumer are inelastic. If the commodity has a single use and if the good has substitutes, then price elasticity of demand for the commodity is elastic.

Note: *Students must be advised to indicate what the various symbols stand for in the above formula.*

Activity 2.5

1. From the given supply schedule:

$P_1 = 5 \quad P_2 = 3$

$\Delta P = 5 - 3 = 2$

$Q_1 = 5500 \quad Q_2 = 3000$

$\Delta Q = 5500 - 3000 = 2500$

$\therefore e_s = \frac{\Delta Q}{\Delta P} \times \frac{P_1}{Q_1}$

$= \frac{2500}{2} \times \frac{5}{5500} = 1.14$ (approximately)

2. Given that $e_s = 3$

Here, $P_1 = 3$ $P_2 = 4$ $\Delta P = 4 - 3 = 1$

$Q_1 = 30$ $Q_2 = ?$

$\Delta Q = 4 - 3 = 1$

Now, $e_s = \frac{\Delta Q}{\Delta P} \times \frac{P_1}{Q_1}$

$\therefore 3 = \frac{Q_2 - Q_1}{1} \times \frac{3}{30} = \frac{(Q_2 - 30)}{1} \times \frac{1}{10} = 3$

$Q_2 - 30 = \mathbf{30}$

$Q_2 = \mathbf{60}$

3. Here, $P_1 = 60$ $P_2 = 58$ $\Delta P = |58 - 60| = 2$

$Q_1 = 300$

$Q_2 = 400$ $\Delta Q = 400 - 300 = 100$

$\therefore e_s = \frac{\Delta Q}{\Delta Q} \times \frac{P_1}{Q_1} = \frac{100}{2} \times \frac{60}{300} = \mathbf{10}$

4. Given that $e_s = 2$ $Q_1 = 20$

$P_1 = 10$ $Q_2 = ?$

$\Delta P = 12$

$\therefore e_s = \frac{\Delta Q}{\Delta P} \times \frac{P_1}{Q_1} = \frac{Q_2 - Q_1}{12} \times \frac{10}{20} = \frac{Q_2 - 20}{12} \times \frac{10}{20} = \mathbf{2}$

$\frac{Q_2 - 20}{24} = \mathbf{2}$

$Q_2 - 20 = 48$

$Q_2 = \mathbf{68}$

ANSWERS TO REVIEW EXERCISE FOR UNIT 2

Part I

1. *Income Demand and Price Demand:* Income demand indicates other things being equal, the relationship between the income of a consumer and the demand for a commodity, whereas price demand indicates the relationship between the price of a commodity and its quantity demanded.

2. *Normal Goods and Inferior Goods:* Normal goods refer to those goods whose income effect is positive, i.e. as income increases, demand also increases and *vice-*

versa, whereas inferior goods are those goods whose income effect is negative, i.e. as income increases, demand decreases and vice-versa.

3. *Direct Demand and Derived Demand:* Direct demand refers to the demand for a commodity for direct satisfaction of wants, whereas derived demand is the demand which has been derived from demand for some other commodity. For example demand for a building is a direct demand and demand for materials for constructing a building is a derived demand.

4. *Complementary Goods and Substitute Goods:* Complementary goods are those goods which jointly satisfy a particular want like pen and ink, whereas substitute goods are those goods which can be used in place of each other like tea and coffee.

5. *Market Demand and Individual Demand:* Market demand refers to the total quantity of the commodity that all the individual households in the market are willing to buy at different prices in a given period of time, whereas individual demand refers to the quantity of the commodity that an individual household is willing to buy at different prices in a given period of time.

6. *Change in Demand and Change in Quantity Demanded:* Change in demand refers to change in the demand of a commodity due to change in any factor other than its price, whereas change in quantity demanded refers to change in demand due to a change in the price of the commodity.

7. *Individual Supply and Market Supply:* Individual supply refers to the quantity of a commodity offered for sale by an individual firm at a given price during a given period of time, whereas market supply refers to the total of various quantities offered for sale by all the individual firms in the market at a given price during a given period of time.

8. *Change in Supply and Change in Quantity Supplied:* Change in supply refers to change in the supply of a commodity due to change in any factor other than its price, whereas change in quantity supplied refers to change in supply due to a change in the price of the commodity.

9. *Excess Demand and Excess Supply:* Excess demand means consumers demand more of a commodity than the producers are able and willing to supply at a given price, whereas excess supply means the supply of a commodity by the producers is more than its demand by the consumers at a given price.

10. *Price Ceiling and Price Floor:* When the government fixes the maximum price for a commodity, it is known as price ceiling, whereas when it fixes the minimum price, this is called price floor.

Part II

11. C 12. D 1. A 14. E 15. B 16. G 17. H 18. F 19. J 20. I

Part III

21. True	22. False	23. True	24. False	25. True
26. True	27. True	28. True	29. False	30. False

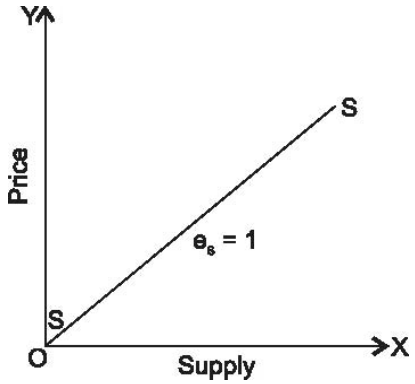
Part IV

31. C	32. B	33. C	34. D	35. D

Part V

36. Tea is a substitute of coffee and *vice-versa*.
37. When the price of the commodity falls, demand for its substitute goods also falls.
38. Increase in demand for tea.
39. Pen and ink, motor car and petrol.
40. Increase in demand for ink.
41. If the change in the price of one commodity leaves the demand for another commodity unaffected, these two commodities (goods) are said to be unrelated goods. An example: price of mobile phones and the demand for shoes.
42. X and Y are substitute goods
43. Inferior good.
44. X and Y are substitute goods.
45. X and Y are complementary goods.
46. X and Y are complementary goods.
47. A favourable change in tastes increases the demand and shifts the demand curve to the right.
48. Horizontal summation of individual demand curves gives the market demand curve.
49. Perfectly elastic demand (ep = 8) with a horizontal demand curve, parallel to the x-axis.
50. Elastic demand (ep> 1)
51. Unitary elastic supply (es = 1)

52.



53. When quantity demanded equals quantity supplied, the market is said to be in a state of equilibrium.

54. Perfectly elastic supply (es = ∞)

55. Price rises or falls with the increase or decrease in demand.

UNIT 3 THE THEORY OF CONSUMER BEHAVIOR

Periods Allotted: 18 periods

1. Introduction

In a capitalist economy, the entire production process is governed by the behavior of the consumers regarding the consumption or demand for various goods and services. Through the previous unit the students have been familiarised with the law of demand which tells that when the price of a good falls, the amount purchased of it increases. A basic question that may arise now in the minds of students is why does a consumer buy a good and how he/she decides about the quantity of it to be purchased at a given price. Also, they must be eager to know the answer to the question why a consumer buys more of a good when its price falls? Note that, all such questions are basically related to consumer's behavior. Thus the present unit focuses upon the behavior of consumers, in general. Specifically, we give an explanation of consumer behavior through a discussion of two theories, namely, the cardinal utility theory and the ordinal utility theory. Before that, we talk about the notion of *utility* (or satisfaction), which is the fundamental explanation of consumer's demand for acommodity. We close this unit with a discussion on consumer's equilibrium and the effect of change in income/change in price of the commodity, on consumer's behavior.

2. Unit Objectives

At the end of this unit, the students will be able to:

- ➲ *Understand the basic principles of cost*
- ➲ *Analyse the different theories of consumer choice and behavior*

3. Main Contents

3.1 THE CONCEPT OF UTILITY

3.2 THE CARDINAL THEORY OF UTILITY

3.3 THE ORDINAL THEORY OF UTILITY: INDIFFERENCE CURVE APPROACHE

3.1 THE CONCEPT OF UTILITY

Periods Allotted: 6 periods

1. Competencies

At the end of the sub-unit, the students will be able to:

- *Explain the basic theories of consumer behavior*
- *Define the concept of utility and total marginal utility*
- *State the law of diminishing marginal utility*
- *Classify the theories of utility*
- *Describe the cardinal utility theory*
- *Examine how the cardinalist maximize their total utility and compute and interpret the algebrical restatement.*

2. Overview

Start-up Activity

You can start the present unit by asking students the questions that have been mentioned in the previous section, i.e., ***Introduction***. Otherwise, we may initiate a discussion on the case problem given in No. 3 of Activity 3.1. In any case, the aim is to sensitize students to the importance of utility that we derive from the consumption of a commodity, you can further divert the irattention to the measurement of utility by asking them how much utility (or satisfaction) they derive by consuming a particular commodity. This leads the path to the discussion on other topics of this unit, including the two theories of consumer behaviour.

The core concept or theme in consumer's behavior is satisfaction of needs or wants. In economics, the satisfaction which a consumer gets by having or consuming a certain quantity of goods and services at a given price is called utility. There are two utility concepts:

a) Total utility – the sum total or amount of satisfaction a consumer gets by consuming the various units of the commodity. This means, the more units of a commodity consumed, the greater will be its total utility.

b) Marginal utility: It is a change in the total utility obtained, resulting by adding one unit of a commodity.

The question is that, can we measure utility? or is utility measureable? Two schools of thought have come to answer the question.

3. Teaching-Learning Process

3.1 Suggested Teaching Aids

- Charts
- Graphs
- Tables and figures
- References

3.2 Suggested Teaching Methods

- Brainstorming
- Group work
- Project
- Group discussion

3.3 Pre Lesson Preparation

- Organize documented activities
- Be informed in advance of the notion of utility
- Prepare the appropriate teaching materials that are relevant to the topic.

3.4 Lesson Presentation

a) Introduction to the lesson

This sub-unit deals with the concept of utility, its measurement and its types (total utility and marginal utility). We have already talked about the notion of utility in the introduction to the main unit. Activities 3.1 numbers 2 and 4, as suggested at the end of this sub-unit will be very helpful in making the students understand the concepts of total utility and marginal utility. During your discussion on these activities, you should highlight that as a consumer goes on increasing the consumption of a commodity, there comes a point of saturation represented by maximum total utility. A further consumption of the commodity leads to a decline in total utility, thereby indicating towards negative marginal utility. Note that, in order to make the students understand the relationship between total utility and marginal utility, you shall give them some practical problems in a tabular form and ask them to draw TU and MU curves.

b) Body of the lesson

The ongoing teaching learning process can be fruitful and attractive when you enable students grasp significant points of the lesson. These include:-

- The satisfaction which a consumer gets by having or consuming goods or services is called utility.
- We measure utility in units called utils. Utils help us to understand the consumer's behavior.
- It is useful to distinguish between the two utility concepts
  - Total utility and
  - Marginal utility

Total utility is the sum of marginal utilities of various units of commodity.

3.5 Evaluation and Follow-Up

a) Evaluation

Stabilize the lesson by posing these questions.

- How do you explain utility?
- How do you distinguish total utility from marginal utility?

b) Follow-up

- Arrange group discussion so that students express and realize the theory of utility.
- Arrange the class into different groups and assign different topics for each group and then they should present the content of each topic for the class.

3.2 CARDINAL THEORY OF UTILITY

Periods Allotted: 4 periods

1. Competencies

At the end of sub-unit, the students will be able to:

- *Describe the cardinal utility theory;*
- *Examine how the cardinalist maximize their total utility and compute and interpret the allegorical restatement.*

2. Overview

The Cardinal Utility Theory

Economists have developed various theories to explain consumer behaviour, particularly consumer's equilibrium, in respect of his purchase of different

commodities. A consumer will be in equilibrium when he spends his given income on the purchase of different goods in such a way so as to maximise his total utility.

In this section we discuss how cardinal utility theory explains the consumer behaviour based on the concepts of total and marginal utility. This theory has been given by traditional economists and it makes the following assumptions.

Assumptions

1. **Rationality.** The consumer is rational. she/he aims at the maximisation of her/his utility subject to the constraint imposed by her/his given income.
2. **Cardinal utility.** The utility of each commodity is measurable. Utility is a cardinal concept.
3. **Constant Marginal utility of Money.** This assumption is necessary if the monetary unit is used as the measure of utility. The essential feature of a standard unit of measurement is that it is constant.
4. **Diminishing Marginal utility.** The utility gained from the successive units of a commodity diminishes. In other words, the marginal utility of a commodity diminishes as the consumer acquires larger quantities of it. This is the axiom of diminishing marginal utility.

3. Teaching-Learning Process

3.1 Suggested Teaching Aids

- Illustrations
- Diagrams
- Charts and figures

3.2 Suggested Teaching Methods

- Open ended questioning
- Peer assessment
- Pyramiding

3.3 Pre-lesson Preparation

Identify and sort out the necessary materials and organize them

- Design the most appropriate teaching methods that you think are relevant.
- Decide the most appropriate means of assessment.

3.4 Lesson Presentation

a) Introduction of the lesson

In the present sub-unit, we introduce our students to the Cardinal Utility Theory, which is based on the assumption that utility is a cardinal concept, i.e., it is measurable (in terms of utils). We also emphasise here about the other assumptions of the theory such as rationality of consumer, constant marginal utility of money, and diminishing marginal utility which means that the utility gained from the consumption of successive units of a commodity goes on decreasing. Pointing out the fact that this theory has been given by the traditional economists, we tell our students about the law of diminishing marginal utility and its basic assumptions. Also, by raising a question on how should a consumer allocate his given money income among the purchase of different commodities, we can arrive at the concept of consumer's equilibrium and give an explanation of the same using the illustration given in the student text. Practical problems involving a mathematical representation of the conditions for consumer equilibrium must form a part of our lesson plan on this sub-unit.

b) Body of the lesson

In section3.2, we discuss how cardinal utility theory explains the consumer behavior based on the concepts of total and marginal utility.

This theory has been given by traditional economists and it makes the following assumptions.

- Rationality
- Cardinal utility
- Constant marginal utility of money
- Diminishing marginal utility

One of the other basic hypothesis of cardinal utility theory is the law of diminishing marginal utility.

The law justified that as the amount of a commodity increases the utility derived by the consumer from the additional units, that is marginal utility goes on decreasing. This means that as the consumer consumes more, her/his to total utility will increase but at decreasing rate.

Specifically a consumer will be in equilibrium when she/he spads her/his given income on the purchase of different commodities in such a way so as to maximize she/he total utility.

The concept of consumers equilibrium is based on the following assumption.

- The consumer if rational

- Cardinal measurement of utility is possible.
- Utility is measured interms of money and marginal utility of money remains constant.
- The law of diminishing marginal utility operates.
- Consumers income is given and remains constant.
- Price of commodities are given and remain constant.

3.5 Evaluation and Follow-Up

a) Evaluation

Stabilize the contents of the lesson by asking the following questions.

- State the main ideas of cardinal theory of utility?
- What are its assumptions?

b) Follow-up

Check the activities of the students and record any of their achievements.

- Give them assignment concerning the topic under discussion.

3.3 ORDINAL THEORY OF UTILITY

Periods Allotted: 8 periods

1. Competencies

At the end of sub-unit, the students will be able to:

- *Define the concept of indifference set, curve and map and the theory of ordinal utility.*
- *State the characteristics of indifference curve*
- *Elaborate the concept of marginal rate of substitution.*

2. Overview

Ordinal theory of utility: says that utility can be measured only when a consumer uses different goods and shows preference. Hence utility can only be ranked rather than measured

Numerically/cardinally. This theory has the following assumptions in relation to the consumer:

a. Rationality
b. Complete ordering
c. consistency
d. transitivity, etc.

3. Teaching-Learning Process

3.1 Suggested Teaching Aids

- Charts
- Graphs
- Tables and figures

3.2 Suggested Teaching Methods

- Brainstorming
- Group discussion
- Presentation
- Peer assessment and visits.

3.3 Pre Lesson Preparation

- Have the list of names of the students and organize in groups based on their capacity
- Prepare the appropriate teaching materials that are relevant to the topic.

3.4 Lesson Presentation

a) Introduction to the lesson

The main idea of this sub- topic is centered on ordinal utility theory that is assumed as alternative to the cardinal utility theory. The main essence of the topic discusses the subjectivity of utility and its limitation to be measured. Therefore, it highlights on the importance of ordinal theory and how it is contextualized with the cardinal theory. Particular emphasise has been given on the inadequacy of cardinal theory to measure utility in absolute terms that gave way for the evolvement of ordinal theory. Underline the points on ordinal theory that it is understood in the context of the assumption that it is rankable and not measurable.

b) Body of the lesson

You can introduce the lesson by discussing why ordinal utility theory is taken as alternative to cardinal utility theory.

Let students notice (aware) that ordinal utility theory deals with consumer behavior under the assumption that utility from different units of a good or between different goods need only be rank able and not measureable.

Explain that the theory is mainly based on the following assumptions:

- Rationality
- complete ordering
- consistency
- transitivity
- non-satiation
- diminishing marginal rate of substitution

At the same time underline that ordinal utility theory makes use of in difference curves to study consumer behavior.

Illustrate and describe about indifference curve that shows various combination of two goods which give equal satisfaction to the consumer.

Make sure the understanding of the students and evaluate them by posing the following questions.

How do you differentiate one good from the other?

How do you determine your preferences on a certain good?

What are the conditions that increase the demand for a given good?

Aside from consumers behavior, consumers equilibrium is the central idea that needs to be discussed. A consumer shall be in equilibrium where she/he can maximize he/his utility, subject to her/his budget constraint.

3.5 Evaluation and Follow-Up

a) Evaluation

Organize and develop the students' capacity by letting them attempt the following questions.

- When does a consumer be in equilibrium?
- How do you define the law of diminishing marginal utility?
- State the assumptions of the law of diminishing marginal rate of substitution?

b) Follow-up

- Arrange group discussion so that students express and realize the theory of utility.
- Arrange the class into different groups and assign different topics for each group and then they should present the content of each topic for the class.

ANSWERS TO ACTIVITES

Activity 3.1

1. Yes, Because different people have different tastes and preferences. The utility they may have by consuming the same good varies due to taste differences.
2. Total utility declines, because consuming any additional unit of the commodity beyond that level becomes negative.
3. The rationale behind Hiowt's decisions is by comparing utilities she may enjoy by consuming different commodities/services.
4. There is possibility of consuming a certain unit of a commodity to yield zero or negative total utility. This is a case when mu of consuming a commodity is a big negative value.

Activity 3.2

1. Total income I = Birr 10, P_A = Birr 1, P_B = Birr 2

Quantity (Units)	MU_A/P_A	MU_B/P_B
1	10	12
2	8	10
3	7	9
4	6	8
5	5	6
6	4	3
7	3	2

Total utility maximises at the level of consumer equilibrium, where $\frac{MU_A}{P_A} = \frac{MU_B}{P_B}$

In the above table, it happens at 2 units of A and 4 units of B

here $\frac{MU_A}{P_A} = \frac{MU_B}{P_B} = 8$

also, expenditure on A + expenditure on B = 2×1+4×2

= 2 + 8 = Birr 10

Therefore, 2 units of A and 4 units of B is the desired level of consumption.

2. There are two major explanations of this law:

   The first explanation is that as more and more quantity of a commodity is consumed, the intensity of desire decreases, and therefore, the utility derived from the additional unit decreases. For example, if we are hungry and we eat mangoes, we would get a large utility from the first mango because intensity of our hunger is very high. When we eat the second mango, we derive a lower satisfaction

because intensity of our hunger is reduced. As we go on eating more mangoes, the intensity of our hunger goes on decreasing and, therefore, the utility we derive from successive units goes on decreasing.

The second explanation is that if there are many uses of a commodity, the more urgent requirement will be fulfilled first, followed by the next important use, and so on. For example, if limited electricity is available, it may be used for lighting only; if more electricity becomes available, it may be used for cooking. Marginal utility diminishes because electricity is being used for less important uses as additional quantity of electricity is made available.

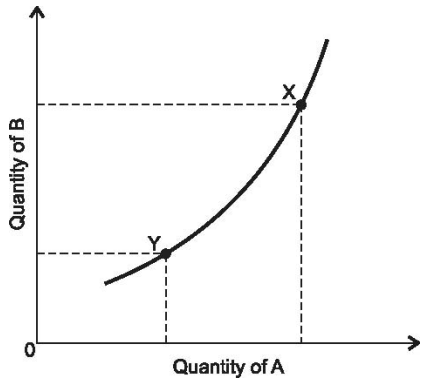
3. There is a definite relationship between the law of demand and the law of diminishing marginal utility. Actually the law of demand is based upon the law of diminishing marginal utility. This makes use of the typical behaviour of a rational consumer, who is interested in maximising his utility. As a consumer buys more, the marginal utility of the goods to him falls. He is therefore inclined to pay less for the additional units of the goods. In other words, if the consumer is to be induced to buy more, the quoted price of the goods must fall in the market. The consumer purchases the goods only so as the marginal utility of the goods is greater than the price he pays. When the two become equal, he stops purchasing additional units of the goods. If he is to be induced to purchase more, then a reduction in the price of the commodity will have to be there. If, on the other hand, the price of a good is increased, the consumer will reduce his demand. Thus the law of demand is based upon the law of diminishing marginal utility.

4. Apparently it seems that this law does not apply to money. In the case of other commodities, the utility goes on diminishing and a point is reached where we do not want more of that commodity. But is there any point where we do not want to get money? Certainly we would welcome every addition to the stock of money that we already have. But why do we want more and more money? This is because a man has got unlimited wants. Money is a means to satisfy these wants. Since all wants can never be satisfied, so the desire to have more money will continue. Hence this law does not apply to money.

   But, on a second thought, it appears that this law also applies to money. The rich man will not place the same value upon Birr 10 as a poor man does. This is because a rich man has a large amount of wealth, and Birr 10 may mean almost nothing to him, while a poor man may have almost nothing with him, and so to him Birr 10 would mean much. Hence as the man becomes richer, the utility of money to him goes on falling.

Activity 3.3

1. As points X and Y lie on the same indifference curve, they would give the individual equal level of satisfaction. But, in the movement from X to Y, the consumer has less amount of good A and good B at point Y than at X. Hence, it is impossible that the consumer accepts less of A and less of B and still be indifferent. Thus an indifference curve does not slope upwards.



2. a. $MRS_{X,Y}$ (first state) $= \frac{\Delta Y}{\Delta X} = \frac{10 - 7}{3 - 1} = \frac{3}{2} = 1.5$

$MRS_{X,Y}$ (second state) $= \frac{\Delta Y}{\Delta X} = \frac{7 - 5}{5 - 3} = \frac{2}{2} = 1$

$MRS_{X,Y}$ (third state) $= \frac{\Delta Y}{\Delta X} = \frac{5 - 4}{7 - 5} = \frac{1}{2} = 0.5$

   b. Yes

3. The main properties of a budget line are:
   1. It is a negatively sloped line.
   2. The slope of the budget line is equal to the price-ratio of two commodities.
   3. It is a straight line as we assume given prices of the two commodities while drawing it.

ANSWERS TO REVIEW EXERCISE FOR UNIT 3

Part I

1. The relation between total utility and marginal utility can be discussed with the following example.

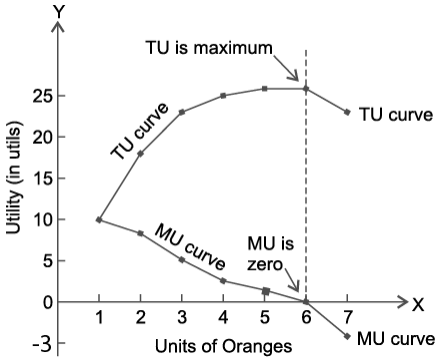
   If a consumer consumers only orange, the first unit is the marginal unit, so the marginal utility as well as total utility isolates. If she/he consumers 2 orange, the second orange is the additional unit and utility from it is marginal utlity which is 8 utils. The total utility from 2 oranges is now 18 units (10 from first orange of 8 from second orange). In this way we may say total utility is the sum of marginal

utilities of various units of a commodity. Total utility = sum of all marginal utilities.

2. According to the law of diminishing marginal utility, for any individual consumer the value that she/he attaches to successive units of a particular commodity will diminish steadily as her/his total consumption of that commodity increases the consumption of all other goods being held constant.

   Assumptions of the law of diminishing marginal utility

   - Various units of the good are homogeneous.
   - There is no time gap between consumption of the different units.
   - Consumer is national (that is, has complete knowledge and maximizes utility).
   - Tastes, preferences and fashions remain unchanged.



3. The assumptions of the cardinal utility theory are:-
   - Rationality:- the consumer is rational
   - Cardinal utility:- the utility of each commodity is measurable.
   - Constant marginal utility of money.
   - Diminishing marginal utility

4. The fundamental condition of consumer's equilibrium ps the law of equilibrium marginal utility. The law of equilibrium marginal utility status that a consumer gets maximum satisfaction when the ratio of marginal utilities of all commodities and their prices is equal.

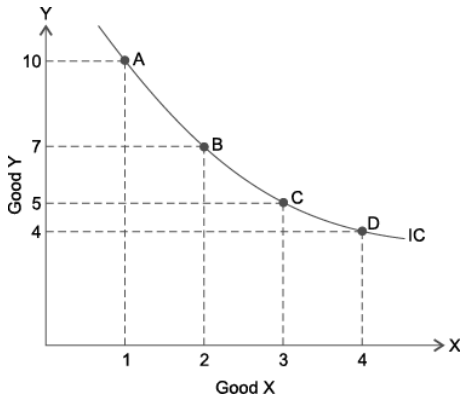
   In other words, the consumer should incur expenditure on different commodities in such a manner that the marginal utility of the less Birr spent on each one of them is equal.

5. Assumptions of ordinal utility theory are:-

- Rationality
- Consistency
- Non-station
- complete ordering
- transitivity
- diminishing marginal rate of substitution

6. An indifference curve shows various combinations of two goods which give equal satisfaction to the consumer.

- Indifference curve is down ward sloping.
- Indifference curve convex to the origin
- Two indifference curves never intersect each other.



It is the locus of points, each point representing a different combination of two goods which yield the same level of satisfaction to the consumer so that he is indifferent between these combinations.

7. The marginal rate of substitution of x for y $(MRS)_{xy}$ is defined as the number of units of good y that must be given up in exchange for an extra unit of good x so that the consumer maintains the same level of satisfaction.

Observe that as a consumer consumes more and more of good x, $MRS_{x,y}$ goes on diminishing. This is known as the principle of diminishing marginal rate of substitution which means that the marginal rate of substitution of x for y diminishes as more and more of good x is substituted for good y.

8. Budget line is defined as a graph that shows various combinations of two commodities which can be purchased with a given budget at given prices of the two commodities.

In case income of the consumer changes, with prices of the two goods remaining

the same there will be a parallel shift in the budget line. Whereas with a change in price of good say x (income and price of y remaining constant), the budget line shifts only at its end touching the relevant – axis (x – axis here)

The budget line a, B, shifts out ward to A_1 B_2 when price of x declines.

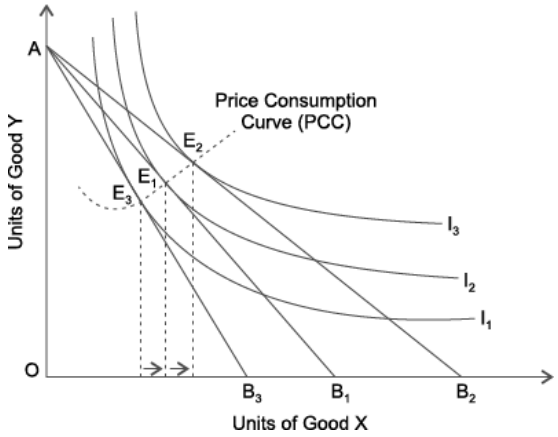
9. A consumer shall be in equilibrium where she/he can maximize her/his utility subject to her/his budget constraint. In other words, where the indifference curve and the budget line are tangent to each other (that is, their slopes are equal) the consumer will attain equilibrium.

10. The equilibrium combination of the goods x and y gives her/him maximum satisfaction because that relates to the highest indifference curve the consumer can reach within his available budget.

11. When income of the consumer rises, the budget line moves outwards by the proration of increase in the purchasing power. While when income declines the budget line moves in wards in accordance with the decrease in the purchasing power.

    Consequently, the new budget line is the straight line A_1 B_1. There would, on the other hand, be a down ward shift like A_2 B_2 when income of the consumer declines. Thus, we get a family of budget lines depending on different levels of income of the consumer, given the prices of the goods. We also know that for every budget line, there is an indifference curve which is tangent to it.

12. When the price of a commodity falls the consumer can buy more of it. So the budget line shifts to the right on that axis which represents that commodity.



Part II

13.

Total Utility	Marginal Utility
1. Total utility is the sum total of satisfaction which a consumer receives by consuming the various units of the commodity.	1. Marginal utility is the level of satisfaction obtained from the consumption of each additional unit of the commodity.
2. Total utility is the sum total of all marginal utilities. $TU_M = MU_1 + MU_2 + \ldots + MU_n$	2. Marginal utility is the addition made to the total utility by addition of one more unit. $MU_n^{th} = TU_n - Tu_{n-1}$

14. The curve that shows different combinations of the two goods yielding the same level of utility to the consumer is known as an *indifference curve*, whereas an *indifference set* represents the same information but in the tabular form.

15. The concept of *cardinal utility* is based on the assumption that utility can be measured and expressed in cardinal numbers such as 1, 2, 3, ..., whereas the concept of *ordinal utility* assumes that utility is not measurable rather it can be ranked in the form of ordinal numbers such as 1st, 2nd, 3rd, …

16. A curve which shows how the consumption varies as income of the consumer changes (price remaining constant) is called *income-consumption curve*, whereas *price-consumption curve* shows the changes in the consumption of a consumer when price of a commodity changes (income remaining constant).

Part III

17. True	18. False	19. False	20. False	21. True
22. True	23. False	24. True	25. True	26. False

Part IV

27. E	28. C	29.F	30. B	31. D	32. A

Part V

33. Utils

34. Addition made to the total utility by addition of one more unit of a commodity.

$MU_{nth} = TU_n - TU_{n-1}$

35. Sum total of all marginal utilities.

    $TU_n = MU_1 + MU_2 + ... + MU_{nth}$

36. Downward sloping straight line from left to right.

37. Zero.

38. When total utility is decreasing.

39. As the amount consumed of a commodity increases, the utility derived by the consumer from the additional units, goes on decreasing.

40. When total utility is increasing.

41. i. A consumer is rational. ii. Utility of a commodity is measurable.

42. i. Sloping downward from left to right.

    ii. Convex to the origin.

43. i. Consumer is rational.

    ii. Various units of the good are homogenous.

44. 24 – 25 = – 1

45. It represents the state of maximum satisfaction to the consumer from a given money income.

46. It shows various combinations of two commodities which can be purchased with a given budget at given prices of the commodities.

47. Because if a consumer wants to purchase more of a commodity, he has to sacrifices more amount of the other.

48. The prices of the two commodities.

49. Consumer should incur his expenditure on different commodities in such a manner that the marginal utility of the last Birr spent on each of them is equal.

50. MRS = price ratio of two goods at the highest possible indifference curve.

51. Rationality of the consumer.

52. Unlike cardinal utility analysis, the indifference curve analysis says that utility is not measurable.

Part VI

53.

Units of Commodity	TU (utils)	MU (utils)
0	0	-
1	20	20 – 0 – 20
2	35	35 – 20 = 15
3	45	45 – 34 = 10
4	53	53 – 45 = 8
5	60	60 – 53 = 7

54.

Units of Commodity	MU (utils)	TU (utils)
0	-	0
1	8	8
2	10	18
3	7	25
4	5	30
5	3	33
6	0	33

55.

Unit Purchased	MU	TU
1	8	8
2	6	8 + 6 = 14
3	4	14 + 4 = 18
4	2	18 + 2 = 20
5	0	20 + 0 = 20
6	-2	20 – 2 = 18

56.

Combination	Good A (units)	Good B (units)	MRSA,B
A	1	12	–
B	2	8	4
C	3	5	3
D	4	3	2
E	5	2	1

57. E $P_X \times Q_x = P_y \times Q_y$

$\therefore 2000 = 50 \times Q_x + 40 \times Q_y$

or $50Q_x + 40Q_y = 2000$

UNIT 4 THEORY OF PRODUCTION AND COST

Periods Allotted: 20 periods

1. Introduction

Our students have learnt about consumer behaviour in the previous unit and now in this unit we discuss with them about the behaviour of producer (or firms). We begin with a clarity about the meaning of the term 'production' as used in economics-*transformation of inputs (resources) into outputs (goods or services)*, emphasising particularly on the relationship between physical inputs and physical output of a firm, known as *production function*. However, for a better and deeper understanding of producer behaviour, we need to discuss with our students two theories, namely, theory of production and theory of cost. Theory of production involves a relation between inputs and outputs, whereas theory of costs revolves around the relation between output and cost of production. Thus our focus in the present unit shall be on various terms, concepts and rules concerning input, output and cost.

2. Unit Objectives

At the end of this unit, the students will be able to:

- ➲ *Comprehend and evaluate how firms combine economic resources so as maximize output*
- ➲ *Realize stages and economic regions of production.*
- ➲ *Explain the meanings and behaviours of various types of costs and integrate the relationship with production costs*
- ➲ *Recognize the short run and long run production cost.*

3. Main Contents

4.1 THEORY OF PRODUCTION

4.2 THEORY OF COST

4.3 THE RELATION BETWEEN PRODUCTION AND COST

4.1 THEORY OF PRODUCTION

Periods Allotted:9 periods

1. Competencies

At the end of this sub-unit, the students will be able to:

- *Define production, input and output*
- *Distinguish the differences between short-run and long-run production period.*

2. Sub Contents

- Production function
- Production function with two variables
- Effects of technological change on production function

3. Overview

Start-up Activity

Youcanbeginthelessonwithareferencetotheconceptandlawofsupply,aslearntbythestudents ,in the unit 2. Recalling that the supply price of a given level of output depends upon the cost of production, you can motivate the students for a deeper knowledge about the various aspects and theories of the two elements of cost of production, namely cost and production. Building on the lesson gradually with an active involvement of the students through examples, illustrations, questions and discussions, you can easily achieve the target of introducing them to terms and concepts, such as production, production function, cost of production, types of cost of production, time element in relation to production, and the relationship between production and cost.

Production is the process of transformation of resources into finished good or commodities.

The inputs used in production are classified into two main groups – fixed and variable inputs.

A fixed input is the one whose quantity cannot be varied when output varies. On the contrary, an input whose quantity varies with the change in output is called a variable input. The variability of an input depends on the length of time period. Economists classify this length of time period into short run and long run.

Short run – refers to the period of time over which the amount of some inputs – called fixed inputs cannot be changed.

Long run: refers to the period of time during which all factors of production (inputs) can be varied.

Suggested Activities

1. Make a visit to a sample of about 5-6 production centres in your locality and collect information about their products, inputs and other factors of production. Prepare a detailed report on your field/survey-based project.

4. Teaching-Learning Process

4.1 Suggested Teaching Aids

- Pictures of factories
- Charts and tables
- Structure of an organization
- Pictures of raw materials

4.2 Suggested Teaching Methods

- Visits
- Group discussion
- Presentation and seminar

4.3 Pre Lesson Preparation

- Collectlist of raw materials used as inputs for production.
- Refer to the appropriate references that are valid to address the lesson.
- Produce pictures of factories

4.4 Lesson Presentation

a) Introduction to the lesson

Being an introductory section of the unit, in the present sub-unit attract the attention of students to the process of production which revolves around factors, such as technology, raw materials includingpowersupply,labour,machines,factorybuildings,toolsandequipments,etc.Forthe saidpurpose, working on Activity 1 of this sub-unit will be very useful. However, in the classroom you can reinforce the concept of production through a formal discussion on its meaning and factors affecting it.

b) Body of the lesson

Address the following indispensable points

- Production is the transformation of resources or inputs into commodities or outputs.

The factors that affect production are

- Level of technology
- Inputs
- Time period of production

4.5 Evaluation and Follow-Up

a) Evaluation

- What are the factors that affects production?
- What are the classifications of time period?

b) Follow-up

- Arrange a group discussion so that students express and realize the theory of utility.
- Arrange the class into different groups and assign different topics for each group and then they should present the content of each topic for the class.

4.2 THEORY OF COST

Periods Allotted:9periods

1. Competencies

At the end of this sub unit, the students will be able to:

- *Define cost*
- *Differentiate private and social cost*
- *Distinguish the difference between explicit and implicit cost*
- *Differentiate short and long run cost of production period.*

2. Sub Contents

- Short-run cost of production
- Long-run cost of production

3. Overview

Theory of cost: The cost of production is the expenditure done by the firm on various factor inputs (including both the fixed and variable inputs). These costs are classified in different ways.

Private cost and social costs: private costs are costs of production incurred by an individual firm while social cost refers to the sum total of costs incurred by individual firms and costs incurred by those who have to suffer because of the production of that commodity (external costs)

Explicit and implicit costs: This classification of cost is based on the actual payments made by a firm. Hence, explicit costs are costs made by a firm for purchasing or hiring resources, from the factory owners. On the opposite, implicit costs are imputed costs of the factors production owned by the producer himself. In short, explicit costs are costs made to others while implicit costs are owned, not made to others but the payments that become due to his/her own factors of production. Hence, economic cost is the sum total of both explicit and implicit costs.

Variable and Fixed costs: variable costs are costs incurred by varying inputs that result in varying outputs. They are expenditures made on raw materials, labour, and power supply. etc. Fixed costs are costs incurred by inputs that remain constant and have no relationship with the changing quantity of outputs. They are expenditures made on office outlays and salaries paid to office workers, etc. The sum total of fixed and variable costs is called total cost.

Suggested Activities

1. If the price of labour is Birr 20 and price of capital is Birr 100 for a cost-minimising firm, calculate its MP_L given that $MP_k = 50$.
2. In the long-run, a firm continues to produce even if it covers its prime costs (variable costs only) discuss in a group.

4. Teaching-Learning Process

4.1 Suggested Teaching Aids

- Charts and graphs
- Tables and figures
- Structure of organization

4.2 Suggested Teaching Methods

- Brainstorming
- Group discussion
- Project
- Visits

4.3 Pre Lesson Preparation

- Refer to the appropriate references that are valid to address the lesson.
- Produce pictures of factories.

4.4 Lesson Presentation

a) Introduction to the lesson

The expenditure done by a firm on various inputs required in the process of production is known as cost of production. In this section, you just introduce the students to various concepts of cost, as used in economics. Specifically (as required by the syllabus), we discuss about private and social cost, explicit and implicit cost, and short run and long run cost of production. Note that, the students must be encouraged to identify the points of distinction between the various related concepts.

b) Body of the lesson

Consider the following important points.

- Private cost refers to cost of production incurred by an individual firm in producing a commodity.
- Social cost refers to the cost that the society has to bear an account of production of a commodity.
- Social cost = private cost + external cost
- External cost is the cost that is not born by the firm, but is incurred by other member of the society.
- Actual payments made by a firm for purchasing or hiring resources (or factor-services) from the factory owner or other firm are called explicit costs.
- Implicit costs refer to the imputed costs of the factors of production owned by the producer himself.
- They are called implicit costs because producers do not make payment to others.

4.5 Evaluation and Follow-Up

a) Evaluation

You may ask questions, which as the following to check students understanding of the lesson:

- Differentiate private cost from social cost.
- Distinguish the difference between explicit and implicit cost
- Explain total cost in the short run.

b) Follow-up

- Arrange group discussions so that students express and realize the theory of utility.
- Arrange the class into different groups and assign different topics for each group and then they should present the content of each topic for the class.

4.3 THE RELATION BETWEEN PRODUCTION AND COST

Periods Allotted: 2 Periods

1. Competencies

At the end of this sub-unit, the students will be able to:

- *Distinguish the difference among fixed, variables and total costs;*
- *Define marginal cost;*
- *Explain long-run cost of production;*
- *Display the relationship between marginal product and cost;*
- *Show the relationship between production and cost.*

2. Overview

The relation between production and cost can be justified when marginal product increases, marginal cost also increases and vice – versa.

At the same time the cost of using variable input is determined by multiplying the units of variable input (labour) by its price.

3. Teaching-Learning Process

3.1 Suggested Teaching Aids

- Charts and graphs
- Tables and figures
- Sample structure of an organization

3.2 Suggested Teaching Methods

- Brainstorming
- Group discussion
- Project
- Visits

3.3 Pre Lesson Preparation

- Refer to the appropriate references that are valid to address the lesson.
- Produce graphs and tables on production and cost.

3.4 Lesson Presentation

a) Introduction of the lesson

This section of our unit aims at an introduction and explanation of the concepts of total, average and marginal cost in the short-run. We should build our lesson by adopting an approach towards explaining the concepts and their behaviour in the short-run in a tabular as well as graphical manner (drawing the relevant cost curves). The section also involves a discussion on the relationship between production and cost. Students must be encouraged to work on a large number of practical problems involving the concepts of TFC, TVC, AFC, AVC, ATC, MC, This last section also completes the unit by discussing the relationship between production and cost in the long-run, when all factors of production are treated as variable. Here, we particularly examine the interaction between long-run marginal cost and long-run average cost. We also identify the reasons for the U-shape of long run average cost curve and discuss about the least cost rule.

b) Body of the lesson

Give emphasis to the following essential points. The basic rule that governs this relationship is that when marginal product is increasing, marginal cost is decreasing and vice-versa. The cost of using variable input is determined by multiplying the units of variable input (labor) by its price.

3.5 Evaluation and Follow-Up

a) Evaluation

Assess the students capacity by asking the following questions.

- What are the factors that affect production?
- What does production function mean?
- How do you differentiate production function of one variable input with that of production function with two variable input?
- Discuss the three types of returns?

b) Follow-up

- Arrange group discussion so that students express and realize the theory of utility.
- Arrange the class into different groups and assign different topics for each group and then they should present the content of each topic for the class.

ANSWERS TO ACTIVITES

Activity 4.1

This is the students' visit to be treated or handled by the teacher depending on the situation, for example the students can be made visit agricultural production process and report based on their observation.

Activity 4.2

1. The production function shifts upward if a new technology is introduced in the production process.

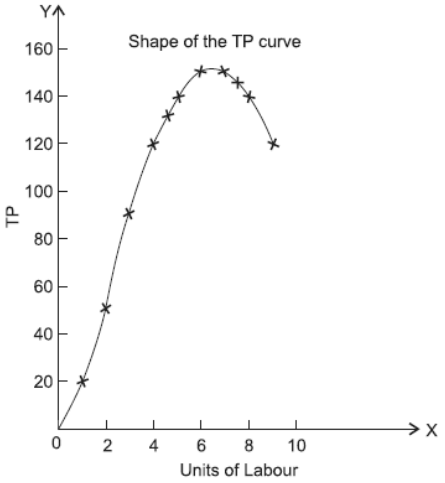
2.

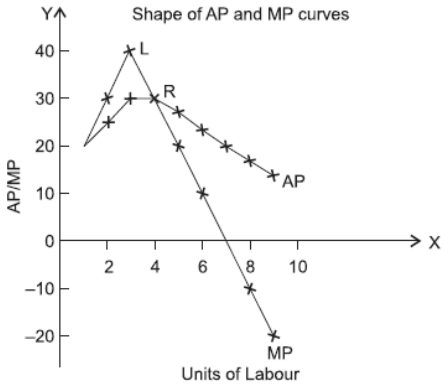
Unit of Labour	Total Product	Marginal Product	Average Product
1	50	50	50
2	90	40	45
3	120	30	40
4	140	20	35
5	150	10	30
6	150	0	25
7	140	-10	20
8	120	-20	15

3.

Unit of Capital	Total Product	Average Product	Marginal Product
1	20	20	20
2	36	18	16
3	48	16	12
4	56	14	8
5	60	12	4

4.





5.

Units of Variable Input	Total Product (TP) (units)	Average Product (AP) (units)	Marginal Product (MP) (units)
0	-	-	100
1	100	100	120
2	220	110	140 } Stage 1
3	360	120	160
4	520	130	130
5	650	130	
6	750	125	100
7	840	120	90 } Stage 2
8	880	110	40
9	880	97.7	0
10	830	83	-50
11	770	77	-60 } Stage 3

6.

Combination	Units of Capital (K)	Units of Labour (L)	$MRTS_{KL}$
A	1	15	-
B	2	10	5
C	3	6	4
D	4	3	3
E	5	1	2

Yes, MRTS diminishes (from 5 to 2) as more and more of capital is substituted for labour.

Activity 4.3

1. i. A bakery unit run by the owner in a rented building. *Explicit Costs:* Cost of raw materials, wages to hired labour, expenses on fuel and electricity, rent for the building, interest on borrowed money, etc. *Implicit Costs:* Salary of the owner for his own services and interest on owner's own capital.

   ii. A tailoring shop run by an individual in his own building. *Explicit Costs:* Cost of raw materials like thread, buttons, etc., payment for repair and maintenance of sewing machine, and payment of electricity bill. *Implicit Costs:* Salary of the tailor for his own services and rent of his own building.

2. In some cases, social costs can be higher than private costs and in other cases, they may be lower than private costs.

   Examples where social costs are higher than private costs

   i. For a factory-owner private costs mean the expenses on raw materials, power, wages, transport, publicity, capital-equipment, etc. Social costs include washing bills for clothes, medical bills and pollution due to smoke that emits from the chimneys of a factory.

   ii. In the case of car driving, private costs include expenses on petrol, depreciation of tyres and other spare parts, etc. Social costs include road maintenance, road accidents, etc.

   Examples where social costs are lower than private costs

   In the cases of engineering colleges, medical colleges, training institutes, dams and canals, social costs are smaller (i.e. social benefits are greater) than the private costs (i.e. expenses incurred on them).

Activity 4.4

1. The firm is operating in stage I.

   Explanation: MC equals AVC at a point where AVC is minimum and at this point AP is maximum. In the entire range before this, MC is less than AVC, and it is known as stage I. According to given MC = Birr 40 and AVC = Birr 50, i.e., MC < AVC. Hence the firm is operating in stage I.

2. $C = 128 - 6Q + 2Q_2$

A. TFC when Q = 0 is

$\therefore$ TFC = 128

B. TVC = TC – TFC

$= 128 - 6Q + 2Q^2 - 128$

$= 2Q^2 - 6Q$

$= 2(4)^2 - 6 \times 4$

TVC = 32 – 24 = 8

C. $AVC = \frac{TVC}{Q} = \frac{8}{4} = 2$

or $AVC = \frac{TVC}{Q} = \frac{2Q^2 - 6Q}{Q}$

$= 2Q - 6$

$AVC = 2 \times 4 - 6 = 2$

D. $ATC = \frac{TC}{Q}$

$= \frac{128 - 6Q + 2Q^2}{Q}$

$= \frac{128 - 6\times4 + 2\times4^2}{4}$

$= \frac{128 - 24 + 32}{4}$

ATC = **34**

E. Solution:

Given: $C = 128 - 6Q + 2Q^2$

- Required: MC of producing the fourth product.

MC = is change of the total cost due change of unit of product.

MC 4^{th} unit = $(128 - 6 \times 4 + 2 \times 4^2) - (128 - 6 \times 3 + 2 \times 3^2)$

$= (128 - 24 + 32) - (128 - 18 + 18)$

$= 136 - 128 =$ **8**

3. $TVC = 1000 \times 25 + 15000 + 2000 = \text{Birr } 42{,}000$

$$AVC = \frac{TVC}{Q}$$

$$AVC = \frac{42000}{700} = \textbf{Birr 60}$$

$$TC = 100 \times 25 + 15{,}000 + 5{,}000 + 2{,}000 + 2{,}000$$

$$TC = 49{,}000$$

$$AC = \frac{TC}{Q}$$

$$AC = \frac{49{,}000}{700} = \textbf{70Birr}$$

$$AVC = \frac{42000}{700} = \text{Birr } 70$$

4.

Output (units)	TC (Birr)	TFC (Biir)	TVC (Birr)	AFC (Bir)	AVC (Birr)	MC (Birr)
0	30	30	-	-	-	-
1	90	30	60	30	60	60
2	110	30	80	15	40	20
3	120	30	90	10	30	10
4	140	30	110	7.5	27.5	20
5	180	30	150	6	30	40

5.

Output (units)	TC (Birr)	TFC (Birr)	TVC (Birr)	AFC (Birr)	AVC (Birr)	MC (Birr)
0	60	60	-	-	-	-
1	80	60	20	60	20	20
2	100	60	40	30	20	20
3	111	50	51	20	17	11
4	116	60	56	15	14	5
5	130	60	70	12	14	14
6	150	60	90	10	15	20

6. No, when output is zero, total cost is not equal to total variable cost. It is rather equal to total fixed cost.

7. No, when output changes, the change in total cost is not greater than the change in total variable cost. Rather, the change in total cost is equal to the change in total variable cost (because TFC is constant and TC = TFC + TVC).

Activity 4.5

1. $MP_k = 50$ $P_k = 100$ $P_L = 20$ $MP_L = ?$

According to Least-Cost rule:

$$\frac{MP_L}{P_L} = \frac{MP_K}{P_K}$$

$$\Rightarrow \frac{MP_L}{20} = \frac{50}{100}$$

$$\therefore MP_L = \frac{50 \times 20}{100} = 10$$

2. In the long-run, a firm can continue its production only if it covers both its prime costs (variable costs) and supplementary costs (fixed costs).

ANSWERS TO REVIEW EXERCISE FOR UNIT 4

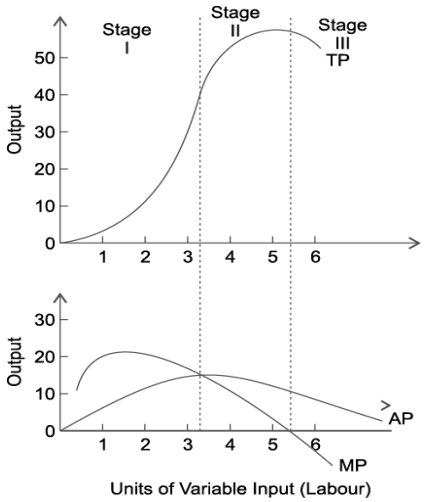
Part I

1. The production function is a technological relationship which expresses the relation between output of a good and the different combinations of inputs used in its production.
It indicates the maximum amount of output that can be produced with the help of each possible combination of inputs.
The two types of production based on time period of production are:-
Short – run:- it refers to the period of time over which the amount of some inputs, called the fixed inputs cannot be changed.
This implies that an increase in output in the short run can be brought about by increasing those inputs that can be varied, known as variable inputs.
Long run:- It is defined as the time period during which all factors of production can be varied. A firm can install a new plant or raise a new factory building.

2. The relationship between MP and AP
   - When MP > AP, this means that AP is rising
   - When MP = AP, this means that AP is constant.
   - When MP < AP, this means that AP is falling

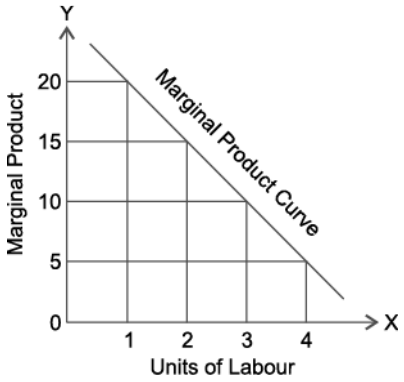
   Diagrammatically, the relationship between the MP curve and AP curve as follows.

   - So long as MP curve lies above the AP curve, the AP curve is positively sloping curve.
   - When MP curve intersects AP curve. AP is at maximum.
   - When MP curve lies below the AP curve, the AP curve slopes down ward, i.e., AP declines.



3. The relationship between TP and MP
   - When TP increases at an increasing rate, marginal product increases
   - While TP increases at a diminishing rate, MP declines.
   - When total product reaches its maximum, marginal product becomes zero.
   - When TP begins to decline, MP becomes negative.

4. The law of diminishing marginal returns states that as more and more of one factor input is employed, all other input quantities held constant, a point will eventually be reached where additional quantities of the varying input will yield diminishing marginal contributions to total product.



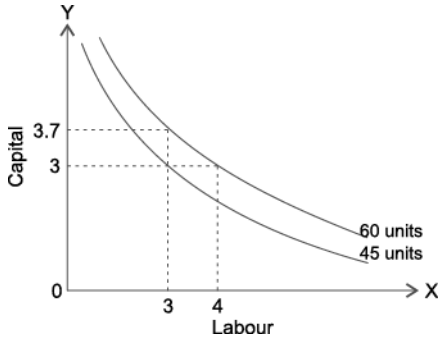
Observe from the diagram that when more and more units of labour are employed with a given quantity of fixed factor, TP increases of a diminishing rate or MP goes on falling. That is why shape of MP curve is down ward sloping.

5. L
6. We may use figure 4.1 to explain these stages.
7. In stage 1 the firm is under utilizing its fixed capacity, so in this stage marginal product of variable input rises (i.e, each additional unit of the variable factor contributes more to output than the earlier units). It is therefore profitable.

   In stage III, the firm over utilizes its fixed capacity, it is therefore unadvisable to use any additional unit. Even it cost of variable input is zero, it is still unprofitable to move into stage III. It can, thus, be concluded that stage II is the only relevant range for a rational firm.
8. The two – variable – input case may be taken either as a short – raven or a long – run analysis of production process, if the firm uses only two inputs and both of them are variable, then this is a case of long – run analysis. While it more than two inputs are used but only two of them are variable 1 and the others fixed then this would be taken as a short – run analysis.

   A tabular representation of the various combinations of two variable inputs which give the same level of output is called is quant schedule or equal product schedule.

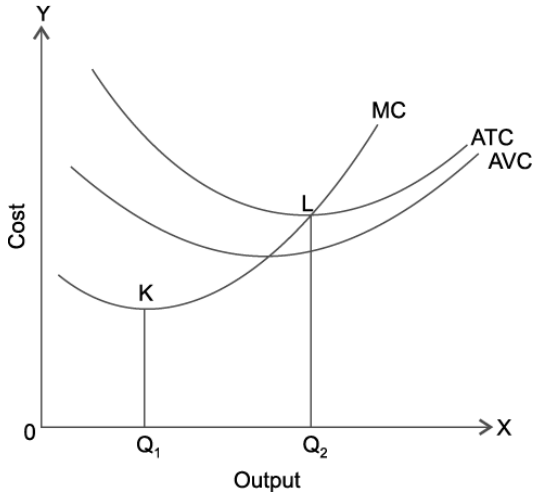
9. Properties of isoquant
   - An isoquant is down ward – sloping to the right.
   - Higher isoquant intersect or touch each other.



   -

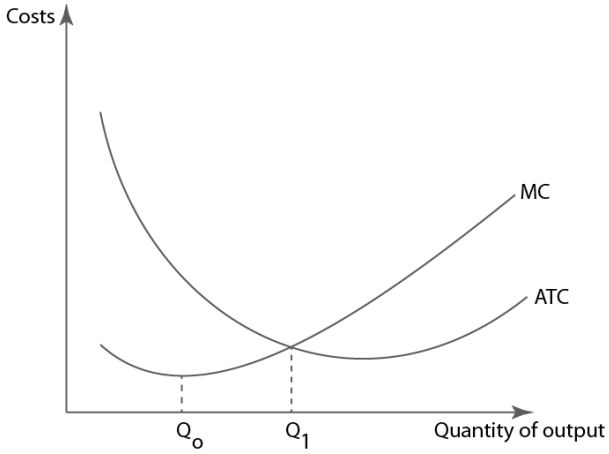
10. In order to separate in efficient ranges of output from the inefficient ranges, we need to draw lines between the negatively sloped and the positively sloped portions of the isoquants. Such lines are known as ridge lines. A ridge line is the locus of points of isoquants where marginal product of input is zero.
    Therefore, the economic region of production is the region bounded by the ridge lines.
    Marginal rate of technical substitution of labour for capital may be defined as the number of units of capital which can be replaced by one unit of labour the level of output remaining unchanged.
11. The behavior of output consequent to change in the quantities of all factor inputs in the same proportion (i.e, keeping, the factor proportions unaltered) is known as returns to scale alternatively when all the factors required for production of a commodity are increased in a given proportion, the scale of production increases and the change caused in return (output) is called return to scale.
12. Increasing returns to scale:- if occurs when output increases by a greater proportion than the proportion of increase in all the inputs.
    Diminishing (decreasing) returns to scale:- if occurs when output increase by a lessen proportion than the proportion of increases in inputs.
    We assume here that the firm is employing only two factors, namely, labour and capital. Labour is measured in man-hours, capital in machine – hours and the output in meters. 2 units of labour and 1 unit of machine produce 200 meters of cloth in the beginning.
13. Technological change refers to a change in the underlying techniques of production, as occurs when a new process of production is invented on an old process is improved. In such situations he same output is produced with fewer inputs on more output is produced with the same inputs which is a result of technological change or progress.

14. Marginal cost is the addition to total cost as one more unit of output is produced. Marginal cost has nothing to do with fixed cost. It is associated with the variable cost and thereby with total cost.



15. Marginal cost is the addition to total cost as one more unit of output is produced. Marginal cost has nothing to do with fixed cost. It is associated with the variable cost and thereby with total cost.

16. 16. Average cost tells us the cost of a typical unit of output if total cost is divided every overly over all the units produced. Marginal cost tells us the increase in total cost that arises from producing an additional unit of output. Graphically.



Whenever marginal cost is less than average total cost, average total cost is falling. Whenever marginal cost is greater than average total cost, average total cost is rising.

17. The relationship between total cost, average cost and marginal cost.

Cost schedule

Quantity of good produced (in units)	Total cost (in Birr)	Average Cost (in Birr)	Marginal Cost (in Birr)
0	200	-	-
1	300	300	100
2	380	190	80
3	440	147	60
4	480	120	40
5	520	104	40
6	580	96	60
7	660	95	80
8	760	95	100
9	880	98	120
10	1020	102	140

From the cost schedule:

Whenever marginal cost is less average total cost, average total cost is falling.

Whenever marginal cost is greater than average total cost, average total cost is rising.

Marginal cost falls for a while before starting to rise.

18. Average total cost curve is u – shaped.

Average total cost is the sum of average fixed term and average variable cost.

Average fixed cost always declines as output rises because the fixed cost is getting spread over a larger number of units. Average variable cost typically rises as output increases because of diminishing marginal product. Average total cost reflects the shape of both average total cost reflects the shape of both average fixed cost and average variable cost.

At very low levels of output, average total cost is high because the fixed cost is spread over a few units. Average total cost then declines as output increases,

Thus, average total cost curve has u shape in the short run (where all inputs are not variable)

19. The long – run average cost curve (LAC) is u shaped because of returns to scale. As we increase the scale of operation in the initial stages we get increasing returns to scales (IRS) as a result of economics of scale. Increasing returns to scale means that the increase in output is more than proportionate to the increase in factor – inputs.

    Hence the LAC falls as output is increased in the output range,. But then beyond a certain point we get decreasing returns to scale (DRS) as a result of diseconomies of scales, hence now LAC rises with the increase in output.

20. While MP is increasing MC is decreasing and while MP is decreasing MC is increasing (cost and production short run)

    - TVC and TP of labour are inversely related.
    - AVC and AP of labour are inversely related.
    - MC and MP of labour are inversely related.

Part II

21.

Returns to a Variable Factor	Returns to Scale
1. Operates in the short run or it is related to short-run production function.	1. Operates in the long-run or it is related to long-run production function.
2. Only the quantities of a variable factor are varied.	2. All factor-inputs are varied in the same proportion.
3. There is change in the factor proportion. Suppose on 1 unit of land 1 labour is employed, then the land labour ratio is 1:1. Now if we add one more unit of labour on the 1 unit of land, then land-labour ratio would become 1:2.	3. There is no change in factor-ratio. For instance if a firm is employing 1 unit of labour and 2 units of capital, then the labour-capital ratio is 1:2. Now if the firm increases its scale of operation and employed 2 units of labour and 4 units of capital, the labour-capital ratio still remains the same as 1:2.
4. No change in the scale of production. Because here all the factor-inputs are not changed.	4. There is change in the scale of production because here all the factor-inputs are varied in the same proportion.

22.

Increasing Returns to a Variable Factor	Increasing Returns to Scale
1. Marginal Product increases with the increase in variable factor.	1. Increase in output is more than proportionate to the increase in all factor-inputs.
2. Operates in the short-run.	2. Operates in the long-run.
3. Main reasons are indivisibility of factors and operating below optimum combination.	3. Main reasons are internal and external economies of large scale production.
4. Change in factor-ratio but no change in scale of production.	4. No change in factor-ratio but change in scale of production.

23.

Diminishing Returns to a Variable Factor	Diminishing Returns to Scale
1. Marginal product diminishes with the increase in variable factor.	1. Increase in output is less than proportionate to the increase in factor inputs.
2. Operates in the short-run.	2. Operates in the long-run.
3. Main reasons are imperfect substitutes and operating	
beyond optimum combination.	3. Main reasons are internal and external diseconomies
of large scale production.	
4. Change in factor-ratio but no change in scale of production.	4. No change in factor-ratio but change in scale of production.

24.

Fixed Costs	Variable Costs
1. Fixed costs do not vary with quantity of output.	1. Variable costs vary with the quantity of output.
2. They are related with the fixed factors.	2. They are related with the variable factors.
3. They do not become zero. They remain same even when production is stopped.	3. They can become zero when production is stopped.
4. A firm can continue production even at the loss of fixed costs.	4. Production is carried on only when the variable costs are met.

25. Following are the main points of distinction between private cost and social cost:

1. Private cost refers to cost of production incurred by an individual firm in producing a commodity, whereas social cost is the cost that the society has to bear on account of production of the commodity.
2. Social cost is a wider concept than the private cost.
3. Example: in case of car driving, private cost includes expenses on petrol, depreciation of tyres and other spare parts, etc.; whereas social cost includes road maintenance, traffic arrangements and pollution control.

Part III

26. False 27. True 28. True 29. False 30. True

31. False 32. False 33. True 34. True 35. False

Part IV

36. B 37. A 38. D 39. A 40. B 41. C

Part V

42. i. Short-run ii. Long-run

43. Raw material and fuel

44. Land and heavy capital machinery.

45. Zero.

46. MP becomes negative.

47. MP would rise.
48. No.
49. i. increases at an increasing rate
    ii. increases at a diminishing rate
    iii. reaches the maximum
    iv. starts to decline.
50. Second stage.
51. It declines but remains positive.
52. No
53. Yes
54. Constant returns to a variable factor.
55. When all factor inputs are changed proportionately.
56. Law of Diminishing Marginal Returns.
57. Short-run.
58. Three.
59. A downward sloping curve.
60. a. Wages and interest.
    b. Rent on owner's own factory building and interest on his own capital.
    c. Rent and salaries of permanent workers.
    d. Expenses on raw material ad fuel.
61. Horizontal line parallel to X-axis.
62. MC curve remains below the AC curve.
63. No.
64. Total fixed cost.
65. Because TFC remains constant.
66. Because TVC is zero.
67. TC = TFC + TVC.
68. TVC.

Part VI

69. a. The average product when 6 units of labour are

employed = $\frac{TP}{N} = \frac{108}{6} = 18kg.$

b. The marginal product of 5^{th} unit of labour

employed = $TP_5 – TP_4 = 95 – 75 = 20kg.$

70.

Units of Labour	Total Product (kg.)	Marginal Product (kg.)	Average Product (kg.)
0	–	–	–
1	5	5	5
2	12	7	6
3	21	9	7
4	28	7	7

71.

Output (units)	AVC (Birr)	TVC (Birr)	MC (Birr)
1	20	20	–
2	15	30	30 – 20 = 10
3	25	75	75 – 30 = 45
4	40	160	160 – 75 = 85

72.

Output (units)	TC (Birr)	(a) AFC (Birr)	TFC (Birr)	TVC = TC – TFC (Birr)	b. AVC = TVC/N (Birr)	MC (b) (Birr)
0	75	–	75	0	–	–
1	95	75 ÷ 1 = 75	75	20	20	95 – 75 = 20
2	110	75 ÷ 2 = 37.5	75	35	17.5	110 – 95 = 15

73.

Output (units)	TC (Birr)	TVC = TC – TFC (Birr)	MC (Birr)
0	12	-	-
1	18	6	18 – 12 = 6
2	21	9	21 – 18 = 3

(here TFC = 12)

74.

Output (units)	TC (Birr)	AFC (Birr)	AFC (Birr)	TFC = (AFC × N) (Birr)	AVC = TVC/N (Birr)	MC (Birr)
0	6	-	6	0	-	-
1	20	6	6	14	14	14(20 – 6)
2	26	3	6	20	10	6(26 – 20)
3	39	2	6	33	11	13(39 – 26)

75.

Output (units)	TFC (Birr)	MC (Birr)	TVC (Birr)	TC (Birr)	AVC (Birr)	ATC (Birr)
0	120	–	0	120 + 0 = 120	0	–
1	120	40	40	120 + 40 = 160	40 ÷ 1 = 40	160 ÷ 1 = 160
2	120	30	40 + 30 = 70	120 + 70 = 190	70 ÷ 2 = 35	190 ÷ 2 = 95
3	120	26	70 + 26 = 96	120 + 96 = 216	96 ÷ 3 = 32	216 ÷ 3 = 72

76.

Output (units)	MC (Birr)	TC (Birr)	AC (Birr)
1	10	10	10 ÷ 1 = 10
2	8	10 + 8 = 18	18 ÷ 2 = 9
3	6	18 + 6 = 24	24 ÷ 3 = 8

77.

Quantity (units)	TC (Birr)	TFC (Birr)	TVC (Birr)	AFC (Birr)	AVC (Birr)	AC (Birr)	MC (Birr)
0	40	40	0	–	0	–	–
1	70	40	30	40	30	70	30
2	95	40	55	20	27.5	47.5	25
3	130	40	90	13.3	30	43.3	35
4	170	40	130	10	32.5	42.5	40
5	220	40	180	8	36	44	50

78. Given: $TC = 30{,}000 + 15Q^2 + 5Q$

a. variable costs, $VC = 15Q^2 + 5Q$

b. Fixed costs is cost of production when level of output is zero. Thus, putting 0 in Q_s yields equation for fixed costs.

$FC = 30{,}000$

c. $AVC = \frac{TVC}{Q} = \frac{15Q^2 + 5Q}{Q} = \mathbf{15Q + 5}$

d. $AFC = \frac{TFC}{Q} = \frac{\mathbf{30{,}000}}{\mathbf{Q}}$

e. $AC = TC/Q$

$$\frac{30{,}000 + 15Q^2 + 5Q}{Q}$$

$AC = 30{,}000 + 15Q + 5$

f. Marginal costs

$MC = \frac{\Delta TC}{\Delta Q}$

$MC = \frac{\Delta FC + \Delta VC}{\Delta Q}$

MC using calculus can be found by

$MC = \frac{dVC}{dQ} = \mathbf{30Q + 5}$

UNIT 5 MARKET STRUCTURES AND THE DECISION OF A FIRM

Periods Allotted: 13 periods

1. Introduction

Economists believe that, in general, business firms always attempt to maximize their profits. Profits are defined as *the difference between the receipts that a firm obtains from selling its output (revenue) and the cost of producing that output*. In the present unit, we introduce our students to the concepts of *total, average* and *marginal revenue*, which are similar to the concepts of *total*, *average* and *marginalcost*, introduced in the previous unit.

The behaviour of total, average and marginal revenue changes as output changes, just as in the case of total, average and marginal costs. However, unlike the theory of costs, we cannot develop a single theory that applies to all firms. The way that a firm's total, average and marginal revenues change with changes in output level depends upon which types of market situation the firm operates in. We have two main types of market situation in this regard–*perfectly competitive markets* and *imperfectly competitive markets*.

Drawing the attention of our students to the meaning of the term *market*, as used in economics, we discuss with them the four main types of markets, their characteristic features, and the process of *profit maximization* that operates for each market type.

2. Unit Objectives

At the end of this unit, the students will be able to:

- ➲ *Realize and explain the different market structures and analyze how firms maximize their profit in different markets; and*
- ➲ *State how perfectly competitive, pure monopoly, oligopoly and monopolistically competitive markets maximize their profit.*

3. Main Contents

5.1 PERFECTLY COMPETITIVE MARKET
5.2 PURE MONOPOLY
5.3 MONOPOLISTICALLY COMPETITIVE MARKET
5.4 OLIGOPOLY MARKET

5.1 PERFECTLY COMPETITIVE MARKET

Periods Allotted: 6 periods

1. Competencies

At the end of this subunit, the students will be able to:

- *Define market;*
- *Identify the different types of market;*
- *State the characteristics of perfectly competitive market;*
- *Compute and interpret the revenue of perfectly competitive market;*
- *Differentiate total, average and marginal revenue;*
- *Examine how profit is maximized under total approach;*
- *Solve for profit maximization in the long run and interpret the level of profit;*
- *Derive the supply curve of perfectly competitive firm.*

2. Sub Contents

5.1.1 Profit maximization in the long run

5.1.2 Deriving the supply curve of a perfectly competitive firm

3. Overview

Start-Up Activity

We launch this unit for our students by raising certain questions related to the various factors (numbers of buyers and sellers, nature of product, freedom of entry or exit of the firms, etc.) that determine market forms and structures. Exemplary questions in this context are suggested below:

1. How many sellers are available to us when we want to buy potatoes?
2. How many sources do we have when we want to access electric power?
3. How many brands are available when we want to buy a car?
4. How many brands are available when we want to buy washing soap?
5. Is the price of petrol same at every outlet in your city?
6. Is the price of onions same at every shop in your area?

Based on the students' responses, we highlight the fact that market situations are of different types and thus motivate the students to study them in detail as they pursue the present unit.

Perfectly competitive market: It is one of the market structures characterized by:

a. the presence of thousands of buyers and sellers
b. the presence of homogeneous products
c. the presence of free entry into the market and exit of firms out of the market.
d. the presences of perfect knowledge about the market
e. the presence of perfect mobility
f. the absence of transport cost,

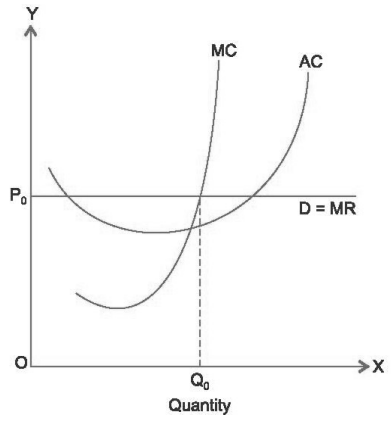
Moreover, the goal of a competitive profit is profit maximization Economic theory assumes that a firm is said to be in equilibrium at the level of output at which it earns maximum profit. There are two approaches to find out the level of output at which a competitive firm maximizes its profit.

a. Total revenue and total cost approach
b. Marginal revenue and marginal cost approach

In economics, a firm under perfect competition will be in equilibrium (state of profit maximization) in the long – run when it earns normal profit. This normal profit implies that a firm has covered all the economic costs of production.

Suggested Activities

1. Identify what the following figure shows-a perfectly competitive firm breaking even in the short run or making profit in the short run?



2. A perfectly competitive firm is operating at a particular level of output with the following: output price = marginal cost = average cost = Birr 10

   What do you think– is the firm is maximizing its profit or it is facing a situation where it should shut down?

3. A perfectly competitive firm produces 100 units of a good, and the market price per unit of that good is Birr 18. If the firm is known to earn a normal profit of Birr 6 per unit, how much is the firm's total cost of production at this level?

4. Using the information given below for a perfectly competitive firm, can you calculate its total profit at the profit-maximizing output level?

   $TC = Q^3 - 7Q^2 + Q + 12$

   $TR = 5Q$

   $MC = Q^2 - 5Q - 9$

5. In your economics work group, discuss the following statement, assuming perfect competition: "*the industry is the price maker, and the firm is the price taker*".

4. Teaching-Learning Process

4.1 Suggested Teaching Aids

- Charts
- Tables
- Graphs
- Diagrams showing the structure of an organization

4.2 Suggested Teaching Methods

- Designing
- Problem solving
- Presentation
- Group discussion and brainstorming

4.3 Pre Lesson Preparation

Get ready for the class in advance by preparing the following teaching aids:

- A diagram of the structure of an organization, indicating the relationship between buyers and sellers
- A photograph of a market place.
- Graphs that present basic information of an organization

4.4 Lesson Presentation

a) Introduction to the Lesson

We begin the lesson by introducing our students to the concept of *perfectly competitive market* by presenting practical examples in which a large number of firms are producing/selling a homogeneous product at more or less the same price. We discuss the characteristic features of this market formwith the students and draw their attention to the difference between *perfect competition* and *purecompetition*.Then we have them analyze the behaviour of TR, AR and MR under perfect competition.

We guide the students to an understanding of the process of *profit maximization*, pointing out the two approaches to it:*total approach* and *marginal approach*. We present this process in detail, discussing its operation in both the short run and the long run, using examples and graphical illustrations.

We also explain how the *supply curve* of a firm is derived by joining different equilibrium points as shown in Figure 5.7 of the student text.

b) Body of the Lesson

Emphasize the following points:

- Perfect competition is a market structure in which there are a large number of producers (firms) producing a homogeneous product so that no individual firm can influence the price of a commodity.
- The assumptions (features) of a perfectively competitive market are:
  - Very large number of buyers and sellers.
  - Homogeneous product.
  - Free entry and exit of firms.
  - Perfect knowledge.
  - Perfect mobility of goods and factors of production.
  - Absence of transport cost.
  - The revenue of a firm is the receipts that it obtains from selling its products.

4.5 Evaluation and Follow-Up

a) Evaluation

Discuss the assumptions of a*perfectly competitive market*.

b) Follow-up

Give this assignment to the students: write a report about the *perfectly competitive market* condition. Have students present their reports to the class.

5.2 PURE MONOPOLY

Periods Allotted: 4 periods

1. Competencies

At the end of this subunit, the students will be able to:

- *Indicate the characteristics of pure monopoly;*
- *Analyze the reasons for the existence of pure monopoly;*
- *Evaluate profit minimization under pure monopoly;*
- *Calculate profit maximization under pure monopoly using total approach and marginal approach.*

2. Sub Contents

5.2.1 Profit maximization under pure monopoly

3. Overview

Monopoly is a market structure in which there exists only a single seller of product and the product has no substitutes. It is characterized by:

a. The dominance of a single seller
b. The absence of close substitutes to the product
c. No free entrance to the market
d. The sole producer is a price maker
e. The possibility of price discrimination.

Under monopoly, a firm's equilibrium is achieved when

a. MR = MC and
b. MC is rising

4. The Teaching-Learning Process

4.1 Suggested Teaching Aids

- Charts
- Tables
- Graphs
- Diagrams showing the structure of an organization

4.2 Suggested Teaching Methods

- Designing
- Problem solving
- Presentation
- Group discussion and brainstorming.

4.3 Pre Lesson Preparation

- Get ready to demonstrate the structure of one trans-national corporation and to explain how it monitors the world market.

4.4 Lesson Presentation

a) Introduction to the Lesson

The supply of electric power in Ethiopia is perhaps a very suitable example for drawing the attention of students to *monopoly* as a market structure, which is the focus theme of this subunit. While discussing the typical features of a monopoly (single producer, no close substitute, barriers to entry, independent price policy, etc.), we should emphasize that, under monopoly, the *firm is the price maker and not price taker*, in contrast to the condition of perfect competition, where the firm is the price taker and not the price maker.

Gradually we continue our introduction with a detailed discussion of profit maximization under monopoly, using tabular as well as graphical representations of TR, AR and MR.

In your conclusion, do not forget to point out the necessary conditions for profit maximization for a monopoly (MR = MC, and MC is rising).

Be sure to give the students several practical problems so that they can practice.

b) Body of the Lesson

Emphasize and seriously discuss the following points.

- Pure monopoly is a market structure in which there exists only a single seller of a product who is the sole producer of the product which has no close substitution.

Features of monopoly:

- Patent rights for the products or production processes give legal monopoly rights to firms.
- Government policies, such as granting licenses or imposing foreign trade restrictions (like quotas, etc.), result in limiting the number of sellers.

- Ownership and control of some strategic raw materials.
- Exclusive knowledge of technology by the firm.
- It may be that the size of market can accommodate only a single firm. The technology might be such that only a large output can reap the economies of scale.

4.6 Evaluation and Follow-Up

a) Evaluation

Raise the following issues and present them to the class for further discussion.

- Discuss the reasons for the existence of monopoly conditions.
- Discuss the factors that determine profit maximization for monopolies.

b) Follow-up

- Grade and record each activity that is given to the students.
- Encourage the students to come up with a report of their visit to the firm located in their surroundings.

5.3 MONOPOLISTICALLY COMPETITIVE MARKET

Periods Allotted: 2 Periods

1. Competencies

At the end of this subunit, the students will be able to:

- *Identify the characteristics of monopolistically competitive firms;*
- *Compute profit maximization in a monopolistically competitive market.*

2. Sub Content

- Profit maximization under a monopolistically competitive market

3. Overview

It is a market situation with some elements of competition and of monopoly. The characteristics of monopolists markets are:

1. Many sellers but with little interdependence among them
2. Product differentiation
3. Free entry and exit of firms

4. The competition among each other by using sales promotion (advertisement, etc)
5. Non – price competition
6. Independent price policy

4. The Teaching-Learning Process

4.1 Suggested Teaching Aids

- Charts
- Tables
- Graphs
- Diagrams and Structure of an organization

4.2 Suggested Teaching Methods

- Brainstorming
- Pair discussion
- Reflection

4.3 Pre lesson Preparation

Get the following teaching materials ready in advance.

- Graphs and figures
- Tables and diagrams showing the economic stance of a country.

4.4 Lesson Presentation

a) Introduction to the Lesson

The two market forms covered in subunits 5.1 and 5.2 are generally not found in real life. In the present subunit, we deal with an actual market form which has some features of perfect competition and some of monopoly. This market condition is known as *monopolistic competition* or *imperfect competition*. Here we have many sellers of a differentiated product with many close but not perfect substitutes. Giving examples of products such as food items, textiles, toothpaste, soap, electronic goods, etc., we can introduce monopolistically competitive market to our students and then discuss its characteristic features and the process of profit maximization. At the end of the lesson, be sure to emphasize that the requirements for profit maximization for this market condition are (MR = LMC, LMC is rising and AR = LAC). Also, encourage your students to make a comparative study of this market form with the others.

b) Body of the Lesson

Refer to the following significant points

- Monopolistic competition refers to a situation where there are many sellers of a differentiated product. There is competition which is keen, though not perfect, between many firms making very similar products, which are close but not perfect substitutes for each other. Since the products are differentiated, each seller can independently set his own price-output policies.
- Characteristics of a monopolistically competitive market include:
  - A large number of (many) sellers
  - Product differentiation
  - Free entry and exit of firms
  - Selling cost
  - Non-price competition
  - Independent price policy

4.5 Evaluation and Follow-Up

a) Evaluation

Present the following questions to the class for discussion:

- What does *monopolistic competition* mean?
- What are the characteristics of a monopolistically competitive market?

b) Follow-up

- Give the students an assignment related to the topic.
- Record and grade each of the achievements of the students.

5.4 OLIGOPOLY MARKET

Periods Allotted: 1 Period

1. Competencies

At the end of this subunit, the students will be able to:

- *Explain about oligopoly market;*
- *Identify the characteristics of an oligopoly market.*

2. Overview

The topic can be treated in comparison with the concept of Monopoly. Thus make sure weather the students are able to identify the distinction between monopoly and oligopoly.

Oligopoly is a market situation where a few large firms compete against each other and there is an element of inter dependence in the decision – making of these firms.

Hence, oligopoly market has the following specific characteristics.

1. The number of sellers are small.
2. The firm is not independent in taking decisions.
3. The firms may produce homogeneous or differentiated products
4. The firms compete with each other through various sales – promotion measures.
5. Its existence necessitates the existence of barriers to the entry of new firms to the industry.
6. The demand curve faced by an oligopolist firm is indeterminate. Mark and explain the following examples with illustrations. There are methods of market coordination among the oligopolies.

The methods of market coordination among the oligopolies can be classified as follows:

a. Cartels – a method where explicit agreements among independent firms on prices, outputs and market sharing's are made.
b. Price leadership:- a method of market coordination where one firm sets price and others follow it.
c. Conscious parallelism:- a method where the market coordination is practical based on mutual understanding.

3. Teaching-Learning Process

3.1 Suggested Teaching Aids

- Pictures or photographs of a cartel
- Structure of a cartel.

3.2 Suggested Teaching Methods

- Brainstorming
- Pair discussion
- Reflection

3.3 Pre Lesson Preparation

- Find articles on cartels and syndicates.
- Organize the class on the bases of the issues presented.

3.4 Lesson Presentation

a) Introduction to the Lesson

Oligopoly is an important form of imperfect competition. Here we have only a few firms selling a product, and therefore there is intense competition among them. Just how few the sellers in an oligopoly should be is not exactly defined, but generally if the number of sellers of a product is between 2 and 10, the situation is considered to be an oligopoly market. In most modern economies, oligopoly is the popular market structure for the production of goods like automobiles, electronic items, vegetable oils, soft drinks, etc. Through the present subunit, we tell our students about the features of oligopoly, using real life examples, and also we discuss the various popular ways in which different firms in an oligopoly market coordinate with each other to establish a condition of mutually agreed-upon price and output.

b) Body of the Lesson

Oligopoly is a market situation in which a few large firms compete against each other and there is an element of interdependence in the decision-making of these firms. Each firm in the oligopoly recognises this interdependence. Any decision one firm makes (be it about on price, product or promotion) will affect the trade of the competitors and so results in countermoves.

Characteristics of an oligopoly market:

- Small Number of Sellers
- Interdependence
- Nature of the Product
- Importance of Selling Costs
- Barriers to Entry
- Indeterminate Demand Curve

4.7 Evaluation and Follow-Up

a) Evaluation

Organize the students in group and have them discuss the characteristics of an oligopoly market.

b) Follow-up

Observe closely the results of their discussion, and if they are having difficulty with the subject, offer guidance.

ANSWERS TO ACTIVITES

Activity 5.1

1. Making profit in the short-run.
2. The firm is maximising its profit.
3. Given that:

Q = 100, P = 18 and NP = 6

We know that, P = AC + NP

$\Rightarrow$18 = AC + 6

$\therefore$ AC = 18 – 6 = 12

TC = AC × Q

= 12 × 100

= Birr 1200

4. TR = 5Q

$\Rightarrow$P = 5 (QTR = P × Q)

At profit maximising level,

MR = MC

or P = MC

$\Rightarrow 5 = 3Q^2 - 14Q + 1$

TR = 5Q

Price = 5

Profit maximization implies

MR = MC, $TC = Q^3 - 7Q^2 + Q + 12$

$$\Rightarrow MC = \frac{dTC}{dQ} = 3Q^2 - 14Q + 1$$

MC = MR

$\Rightarrow 3Q^2 - 14Q + 1 = 5$

$3Q^2 - 14Q + 1 - 5 = 0$

$3Q^2 + 4Q - 4 = 0$

$$Q_{12} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$ By quadratic formula

$$Q_{12} = \frac{14 \pm \sqrt{14^2 - 4(3)(-4)}}{2 \times 3}$$

$$= \frac{14 \pm \sqrt{244}}{6}$$

$$Q_1 = \frac{14 + \sqrt{244}}{6} = 4.8$$

$$Q_2 = \frac{14 - \sqrt{244}}{6} < 0 \text{ (irrelevant)}$$

Q ∴ 4.83

5. Under perfect competition, price of a commodity is determined by the equilibrium between demand and supply of the whole industry. It is not determined by a single firm but by collective body of producers and consumers. An industry represents collective body of producers and consumers of a product. Here demand and supply represent total demand and total supply of industry. No individual firm can influence the price because each seller sells an insignificant proportion of total output. Rather it has to accept the price as determined by aggregate demand and aggregate supply of industry. It is because of this reason that *firm is said to be price taker and industry, the price maker*. This price is also called equilibrium price, because it brings equilibrium between forces of demand and supply of the industry. At equilibrium price, quantity demanded is equal to quantity supplied.

Activity 5.2

1. He/she should decrease price in order to increase output, so that MC rises and MR falls to finally achieve the condition of MC = MR.
2. Birr 240.
3. Market form for good A is perfect competition and that for good B is monopoly
4. Monopoly is not a permanent phenomenon. The firm which is a monopoly now, may not remain a monopoly in future if:
   - Close substitutes emerge;
   - Demand pattern of the consumer undergoes a change;
   - New firms are able to enter the industry; or,
   - Government intervenes to control the monopoly.

Activity 5.3

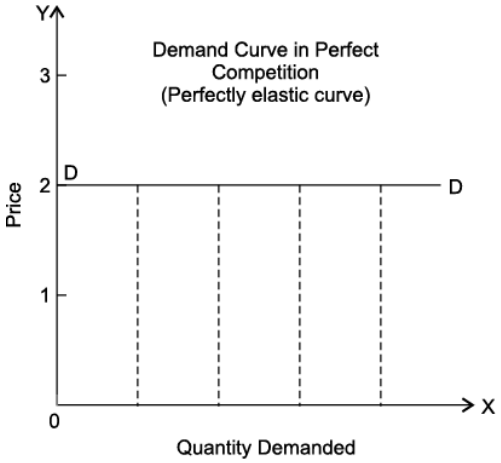
1.

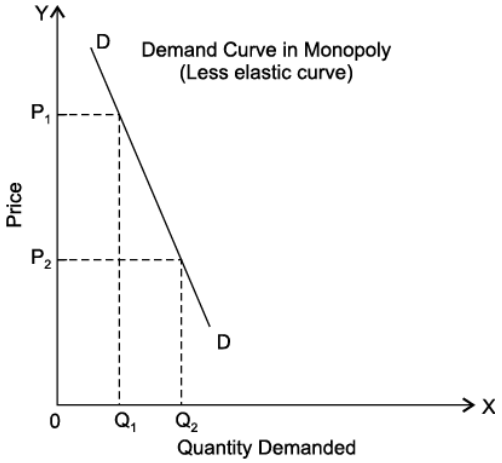
i. In monopoly there is a single firm, whereas there are many firms in monopolistically competitive market.

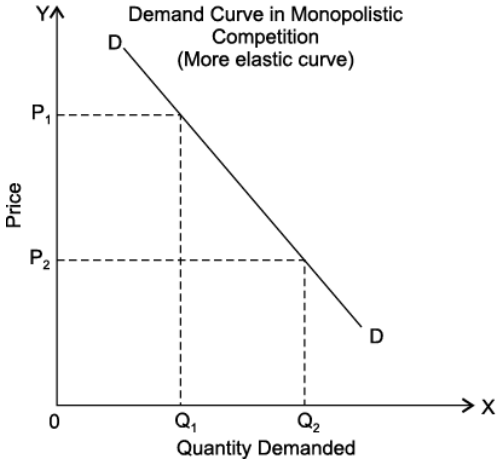
i. No close substitutes of the commodity are available in monopoly, but many close substitutes are available in monopolistically competitive market.

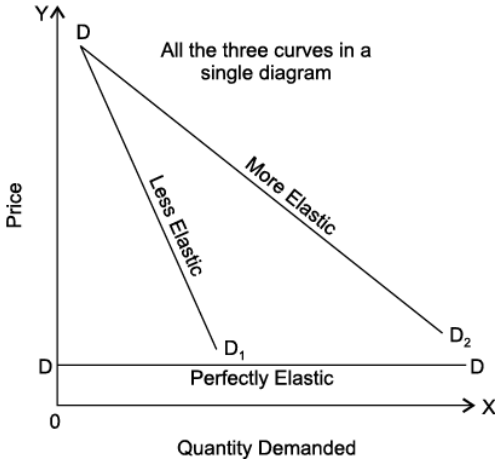
iii. There is complete restriction on the entry of new firms in monopoly, but new firms are free to enter in monopolistically competitive market.

2.

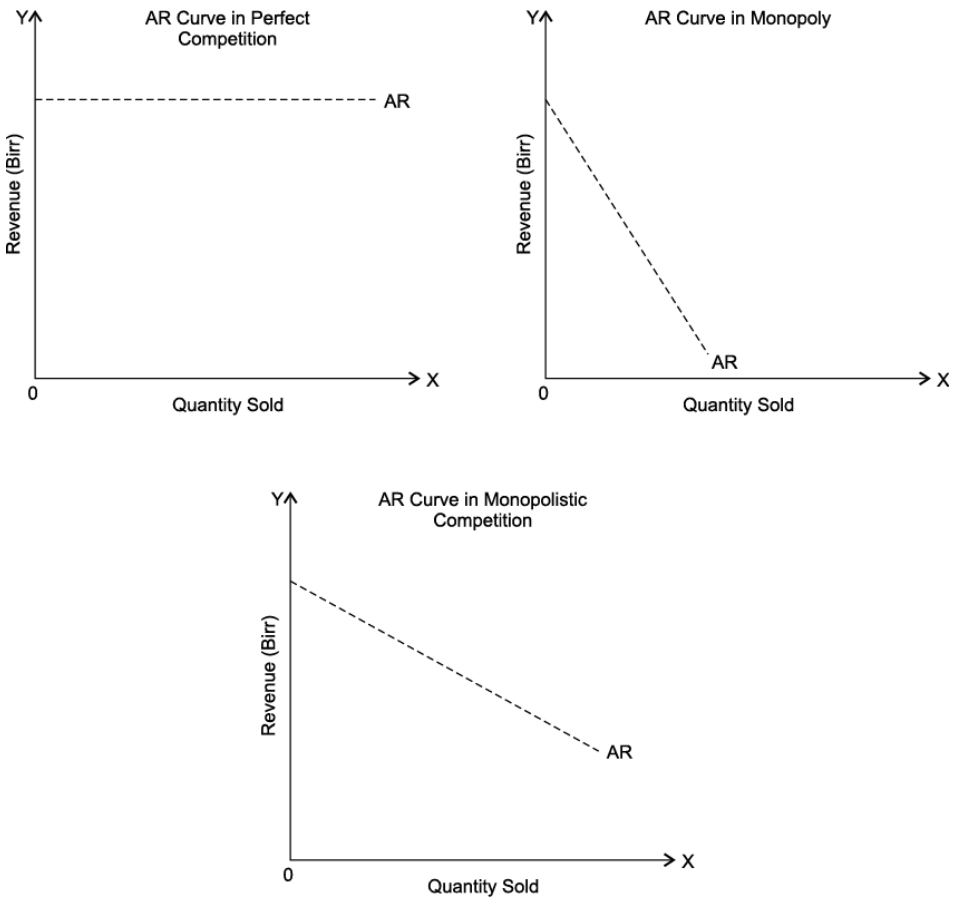








3.



4.

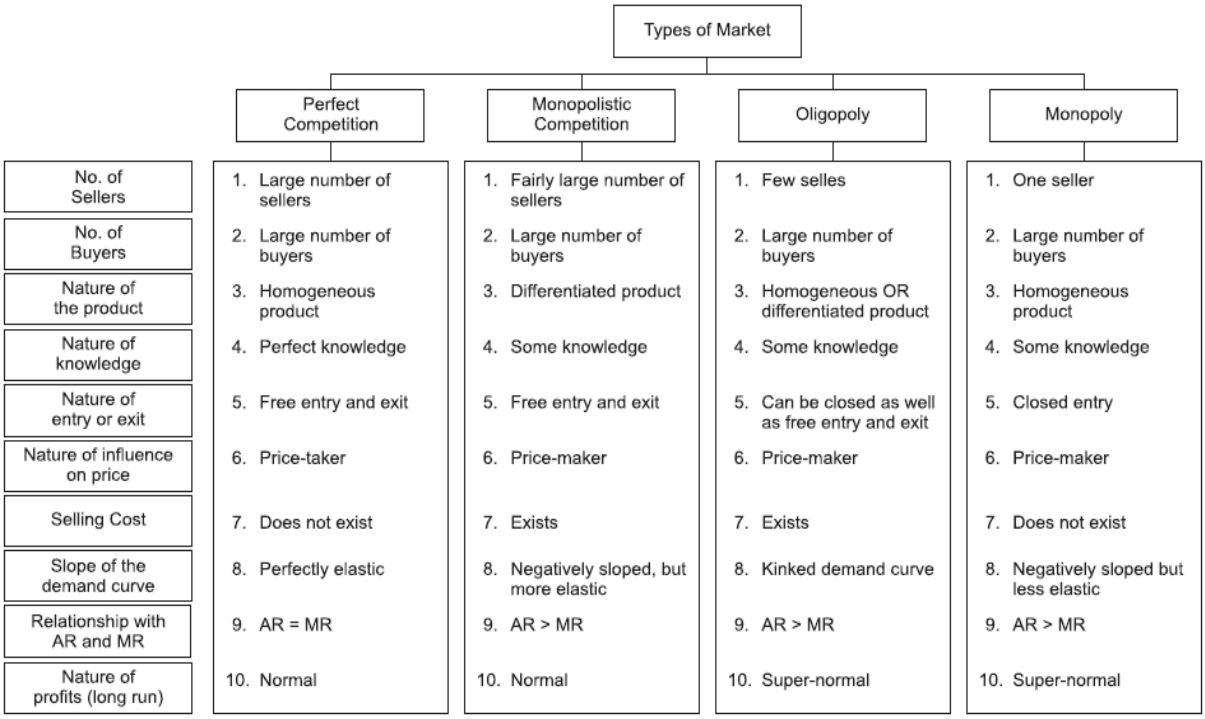
Perfect competition: P = MC

Monopoly : P > MC

Monopolistic competition: P > MC

Activity 5.4

1. Comparison Between Different Forms of Market: An Overview



2. Duopoly.
3. - Brewery market: there are few suppliers of beer in Ethiopia who set price with coordination.
   - Soft drinks market: there are only two firms supplying soft drinks in Ethiopia, MOHA and East Africa Coca cola Co.
   - Sugar market: there are few Government owned sugar factories in Ethiopia.

ANSWERS TO REVIEW EXERCISE FOR UNIT 5

Part I

1. Market is a structure in which the buyers and sellers of a commodity remain in close contact.
   Basic factors for determination of market structure:
   - Number of buyers and sellers. – freedom of entry or exist of the firms.
   - Nature of the product or commodity degree of price influence.
   - Nature of the product or commodity degree of price influence.
   - Knowledge about market.
   - Mobility of goods and factors of production.
   - Degree of competition among firms in the market.

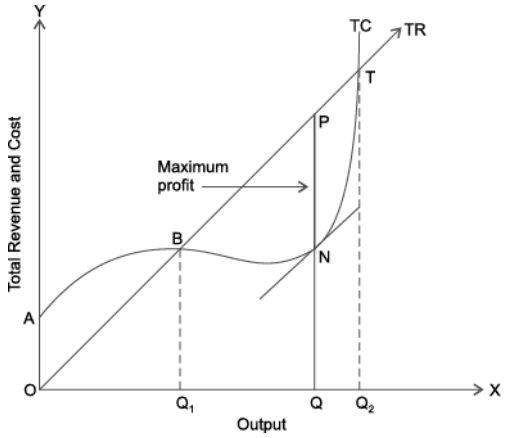
2. Perfectly competitive market or perfect completion is a market structure in which there are a large number of producers (firms) producing a homogeneous product so that no individual firm can influence the price of the commodity.
   - The number of buyers and sellers is so large that none of them can influence the prevailing price in the market.
   - Products sold in the market are homogeneous, i.e; they are identical in all aspects including in quality, colour, size, weight design etc.
   - Buyers and sellers are free to enter or leave the market at any time they like.
   - The buyers and sellers have perfect knowledge about the prices and costs prevailing in the different parts of the market.
   - There is perfect mobility of goods and factors of production without any hindrance or obstruction.
   - In perfect completion, it is assumed that there is no transport cost for consumers who may buy from any firm.
3. Perfect completion is a market situation in which there are a very large number of producers (firms) producing a homogeneous product so that no individual firm can influence the price.

   A firm is a price-takes. In this type of market the price is determined by the industry (aggregate of all the firms producing the same product) through the forces of demand and supply.
4. In perfect completion, a firm can sell any amount of output at given market price. It means that a firms additional revenue (MR) from the sale of every additional unit of the commodity is just equal to the market price (AR). Hence, average revenue and marginal revenue become equal and constant in the given situation. Consequently, the AR and MR curves are the same and would be horizontal or parallel to the x – axis. This is also called the price line.
5. TR curve under perfect completion passes through the origin because at zero output, total revenue is also zero. Moreover, TR under perfect completion is a straight line. This is because the market price remains constant.

   In perfectly competitive market structure, Average revenue (AR) and marginal revenue (MR) are both equal to market price.
6. There are two approaches to find out the level of output at which a competitive firm maximizes its profit. They are
   - Total approach (TR and TC approach)
   - Marginal approach (MR and MC approach)

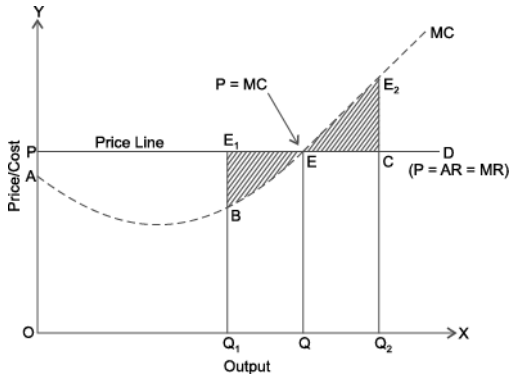
Total profit of a firm is the excess of total revenue (TR) over total cost (TC), that is, Total profit = TR – TC.

a. Total Revenue and total cost approach: a firm is in equilibrium at that level of its output where difference between TR and TC is maximum.
Mathematically, profit is maximum when TR – TC is maximum Also, TR > TC → profit.



b. Marginal revenue and marginal cost approach: A firm's profit maximizing condition is MR = MC. But for a competitive firm, this condition is expressed as:

P = MC (because in perfect completion price = AR = MR Therefore, it competitive firm maximize its profit when MR = MC and MC is rising. Fig 5.4



7. In perfect completion, the firm has a horizontal (parallel x – axis) price line, and the area under price line shows total revenue. Marginal cost is denoted by MC curve and the firm's profit is maximized because its price and marginal cost are equal.
8. A firm under perfect completion will be in equilibrium (state of profit maximization) in the long run when it earns only normal profits.
The long run profit maximization condition for a perfectly competitive firm is:
   - P (AR) = LAC (i.e, normal profits)

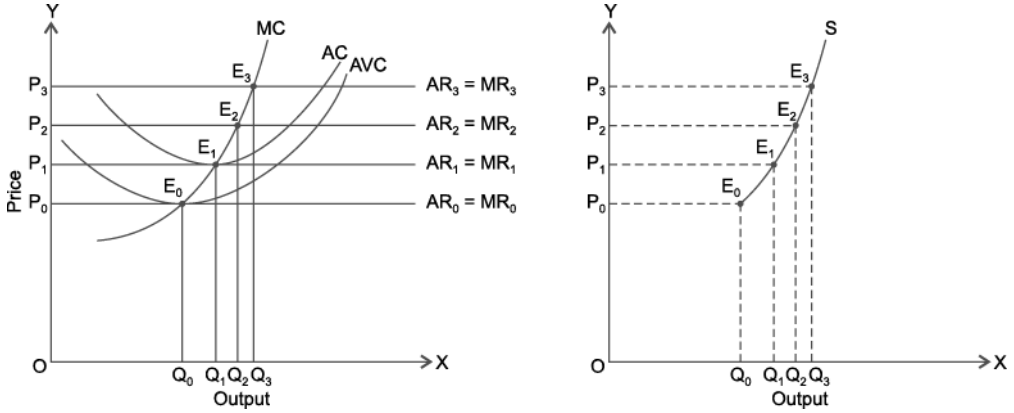
- MC = MR (profit – maximization rule), and also that LMC curve culs the MR curve from below.

Since under perfect completion, AR = MR, we can write the equilibrium condition by equating 1 and 2 as

MC = MR = AR = LAC or P = LMC = LAC

The minimum point on the LAC curve is the optimum point of production and the output produced at that point is the optimum output.

9. Referring to fig 5.7. we observe that, at p and process, equilibrium is at E and E respectively, and the quantity supplied is OQ and OQ respectively. Whole producing OQ and OQ quantities of output, the firm is earning super – normal profits. Since AR > AC. By joining E.E.E and E. we get the firms supply curve.
10. That part of the MC curve which lies above the minimum point of AVC curve is the supply curve of the perfectly competitive firm in the short run.



11. The long run equilibrium of the firm is illustrated in Fig 5.5 below. The equilibrium is at E where the LMC curve intersects MR curve from below. At E, both the conditions of long run equilibrium l.e; P = LAC and MC = MR are satisfied.
12. Monopoly is a market structure in which there exists only a single seller of a product who is the sole producer of the product which has no close substitutes.
The following are assumed to be the features of a monopoly.
    - Single producer
    - No close substitutes
    - Barriers to the entry
    - independent price policy
    - price discrimination is possible

13. The answer to the question should be considered along with the assumptions of a firm's equilibrium determination. According; the monopolist does not charge discriminating prices
    - The monopolists is rational in the sense that she/he aims at maximizing profits.
    - The individual buyer is a price – taker.
    - There are no restrictions on the monopolist with regard to his price.

    In addition to these assumptions, the equilibrium of a monopoly firm is determined by the forces of demand and supply.

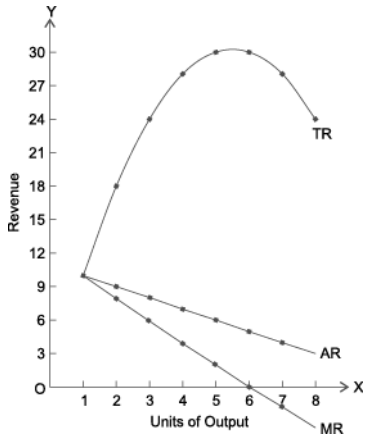
    The monopolist can control both the prices and supply of the product. If it is so, he is supposed to be the determinant to decided the price independently.

14. Monopolistic completion refers to a situation where there are many sells of a differentiated product.
    The major characteristics of monopolistically competitive market are the following. There exists:
    Many sellers, product differentiation, free entry and exist of firms. Selling cost, non – price completion, independent price policy.
15. Reasons for the existence of pure monopoly.

    The following are the main causes that lead to a monopoly situation.

    - Patent rights for the products or production processes give legal monopoly rights to forms.
    - Government policies such as granting licenses or imposing foreign trade restrictions (like quotas, etc.) result in limiting the number of sellers.
    - Ownership and control of some strategic raw materials. Exclusive knowledge of technology by the firm.
    - It may be that the size of market can accommodate only a single firm.

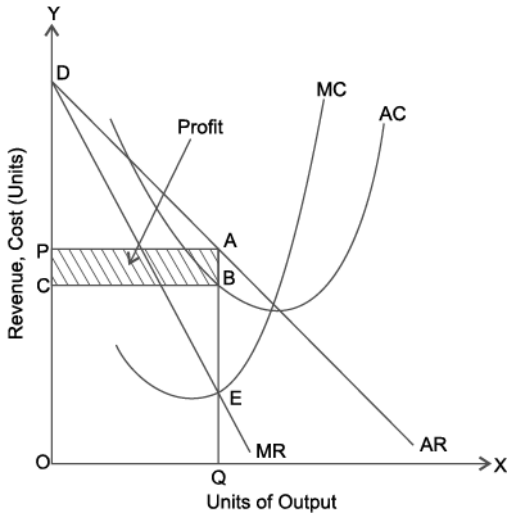
16. While a firm under perfect completion faces a perfectly elastic demand curve, a monopolist faces a negatively sloping demand curve or average revenue curve.



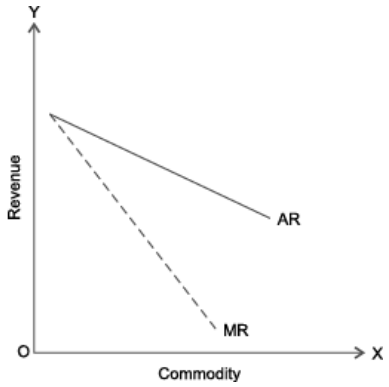
- Both AR and MR are falling: and MR falls at a greater rate than Ar. In other words, AR and MR curves are down ward.
- Sloping curves, and MR curve always remains below the AR curve.
- MR can be negative, but AR is always positive. In other words, MR curve can go below the x – axis, but AR curve always remains above the x – axis.

17. The profit of a monopoly firm is maximum at the level of output at which MR = MC and MC is rising.

Hence profit of a monopoly firm is maximum at the level of output where MR = MC (and MC is rising). Thus to maximize profit, a monopoly firm should produce and sell up to the point at which revenue from the last unit is equal to the cost of last unit.



18. The profit of a monopolistic competitive firm is maximum at the level of output at which MR = MC is rising.



19. A firm under monopolistic competition can follow an independent price policy. It can influence the price of the commodity to some extent. This means that a firm under monopolistic completion is a price – maker for its product.
20. Oligopoly is a market situation where a few large firms compete against each other and there is an element of inter dependence in the decision – making of these firms. Oligopoly market has the following characteristics.
    - The number of sellers is small and each seller is catering to a significant part of the market demand.
    - Interdependence – It considers the actions and reactions of its competitors.
    - It produce homogeneous products on differentiated products.
    - The firms compete with each other through various sales – promotion measures like price – cutting, discounts … etc.
    - Barriers to entry – If necessitates the existence of barriers to the entry of new firms.
    - Indeterminate demand curve.

Part II

21. Distinction between perfect competition and monopoly.

Perfect Competition	Monopoly
1. A very large number of sellers of product.	1. A single seller (firm) of product.
2. Products are homogeneous.	2. Product has no close substitute.
3. Free entry and exit of the firms.	3. Very difficult entry of a new firm.
4. Firm is the price taker not the price maker. It has no market power.	4.Firmispricemakernotpricetaker.Ithasmarketpower.
5. Priceisuniforminthemarket.Price=MC.	5. Due to price discrimination price is not uniform. Price > MC.
6.ARandMRcurveisastraightlineparalleltoX-axis.AR = MR.	6. AR and MR curves are downward sloping from left to right. MR is less than AR.
7. In the long run, a firm earns only normal profit.	7. In the long run, the firm manages to earn abnormal profit.
8. A firm has its supply curve on the basis of the given price.	8. There is no supply curve as such since the firm itself decides its output and price.

22. Distinction between perfect competition and monopolistic competition.

Perfect Competition	Monopolistic Competition
1. A very large number of sellers. No seller can influence the price and supply.	1. Number of sellers is fairly large but each seller has some control over price and supply.
2. Products are homogeneous.	2. Products are differentiated.
3. No selling costs for promoting sales.	3. Significant selling costs through various forms of advertisements.
4. Firmisonlypricetaker,i.e.,firmcannotinfluenceprice.	4. Firm has limited control over price through product differentiation.
5. Demand (or AR) curve of a firm is straight line parallel to x-axis.	5. Demand (orAR) curve of a firm is a downward sloping curve from left to right.
6. Buyers and sellers are presumed to have perfect knowledge of market conditions.	6. Lack of perfect knowledge since product differentiation influences taste and preferences.
7. There is perfect competition among sellers.	7. Both competitive and monopoly elements are present.

23. Distinction between monopoly and monopolistic competition

Monopoly	Monopolistic Competition
1. There is single firm (or producer).	1. There are many firms.
2. Product has no close substitute.	2. Product has many close substitutes.
1. Product is homogeneous.	2. Product is differentiated.
4. Entry of new firm is very difficult.	4. Entry of new firm in the market is not possible.
5. Price discrimination is possible.	5. Price discrimination by a firm is not possible.
6. Selling costs are almost nil.	6. Heavy selling costs are incurred.
7. Demand curve (AR curve) is downward sloping but less elastic than that in monopolistic competition.	7. Demand curve is downward sloping but more eastic (quite flat) than the one in monopoly.
8. Profits may be above normal.	8. Profits are normal.

Part III

24. E 25. B 26. D 27. F 28. A 29. C

Part IV

30. True 31.True 32. True 33.True 34.True 35. True 36. False 37. True

Part V

38. C 39. D 40. B 41. A 42. D

Part VI

43. Only one.

44. Monopolistic competition.

45. Monopolistic competition.

46. Horizontal and parallel to x-axis.

47. Downward sloping.

48. In perfect competition AR = MR; in monopoly MR < AR.

49. The number of firms increases.

50. Product differentiation.

51. MR = LMC; P(AR) = LAC.

52. MC = minimum LAC.

53. P = LMC = minimum LAC.

54. At the minimum point of LAC curve where LMC curve intersects with it.

55. MR = MC and MC is rising.

56. P > MC.

57. a. $TR = P \times Q$. b. $AR = \frac{TR}{Q}$. c. $MR = \frac{\Delta TR}{\Delta Q}$.

58. TR starts to decline.

59. Birr 8.

60. Zero

61. **Solution:**

Given information

$MC = 6Q^2 - 4Q - 12$

$MR = -2Q$

The firm operates in a perfectly competitive market

a. Maximum profit is obtained when, MC = MR

$MC = MR = 6Q^2 - 4Q - 12 = -2Q$

$6Q^2 - 6Q - 12 = 0$

$Q^2 - Q - 2 = 0$

$(Q - 2)(Q + 1) = 0$

Q = 2 or Q = -1

Thus, the profit maximizing level of output is 2 units.

b. If Q = 5

Then, $MC = 6 \times 5^2 - 4 \times 5 - 12$

$= 6 \times 25 - 20 - 12$

$= 150 - 32$

$= \mathbf{118}$

$MR = -2 \times 5 = -10$

The firm faces much higher marginal cost than marginal revenue and thus, incurs loss.

UNIT 6 THE FUNDAMENTAL CONCERNS OF MACROECONOMICS

Periods Allotted: 13 Periods

1. Introduction

Recall from Unit 1 that *economics* as a subject has many branches, and that its scope includes a vast range of topics and issues. However, the core of modern economics is formed by its two major branches, namely, *microeconomics* and *macroeconomics*. In the first five units we have mainly studied the themes and topics covered under *microeconomics*, which primarily deals with the behaviour of individual economic units. In contrast, *macroeconomics deals with aggregates or averages covering the entire economy. For instance, total employment, national income, national output, total investments, total consumption, total savings, aggregate supply, aggregate demand and general price level, wage level and cost structure come under the scope of macroeconomics.* In other words, macroeconomics is *aggregative economics which examines the interrelations among various aggregates, their determination and causes of fluctuations in them.*

The central problem of macroeconomics being the problem of determination of income and employment, it is known as *the theory of income and employment* or simply as *income analysis*. Aggregate demand and aggregate supply are the main tools of analysis in macroeconomics.

We begin by introducing the fundamental nature (scope), objectives and central problems of macroeconomics in the present unit, and we continue with a study of tools and methods of macroeconomic analysis.

2. Unit Objectives

At the end of this unit, the students will be able to:

- *Recognize the objectives and problems of macroeconomics;*
- *Elaborate the concepts of business cycle;*
- *Understand the relationship among unemployment, inflation and budget deficit;*
- *Appreciate the source of government revenue.*

3. Main Contents

6.1 CONCERNS OF MACROECONOMICS

Periods Allotted: 2 Periods

1. Competencies

At the end of this subunit, the students will be able to:

- *Define the concepts of macroeconomics.*

2. Overview

Start-up Activity

To guide the students in recalling their previous knowledge from Unit 1, we can begin this unit with an open classroom discussion on the main themes and areas covered in the overall field of *macroeconomics*. That activity creates the necessary environment for a formal identification of the fundamental concerns (scope) of macroeconomics. We further continue our study as per the requirements of the syllabus by discussing the main objectives of macroeconomic policy and also related topics such as *business cycle*, *inflation*, *unemployment*, etc.

Unlike microeconomics, macroeconomics is a branch of economics concerned in aggregate aspects such as national income, employment, inflation, money and banking. It is more concerned in economic growth, full employment, price stability, equity in distribution of wealth and healthy balance of payments.

Inorder to accomplish these concerns, three types of macroeconomic policies are adopted. These policies are – fiscal policy, monetary policy and income policy.

3. Teaching-Learning Process

3.1 Suggested Teaching Aids

- Graphs
- Charts and figures
- Tables and statistical data

3.2 Suggested Teaching Methods

- Open-ended questioning
- Brainstorming
- Discussion
- Pyramiding
- Analyzing data

3.3 Pre Lesson Preparation

To prepare for the lesson, perform the following tasks and establish a conducive environment.

- Read relevant reference material.
- Collect data and basic statistical information.
- Prepare graphs and charts that illustrate the data and basic statistical information so you can present it to the students.

3.4 Lesson Presentation

a) Introduction to the Lesson

This unit begins the second half of our students' exciting Grade-11 journey through the world of *economics*. All of the previous units dealt with themes and topics of microeconomics, and now in the present and future units we deal with macroeconomics.

Let us recall that the students were briefly introduced to macroeconomics in Unit 1, where we defined this main branch of economics and compared it with the other major branch, namely, microeconomics. Now, in this unit our aim is to guide the students through these tasks regarding macroeconomics:

- identify and analyze the areas which are broadly covered under the scope of macroeconomics
- gain an introductory knowledge of the general objectives of macroeconomic policy
- understand aspects (causes, types, phases, characteristic features, impacts, etc.) of four problems (business cycle, unemployment, inflation and budget deficit), which usually are the concerns of macroeconomics

b) Body of the Lesson

The scope of aggregative economic analysis or the fundamental concerns of macroeconomics encompass the following factors:

- National income

- Employment
- Money and banking
- General price level
- Business cycles
- Economic growth
- Macro distribution
- International trade

3.5 Evaluation and Follow-Up

a) Evaluation

To determine whether or not your students have understood the basic points of the lesson, ask the following questions.

- What are the general objectives of macroeconomics?
- What is the scope of macroeconomics?

b) Follow-up

- Grade and record each activity that has been given to the students.
- Direct the students to prepare a report about their visit to the local firm.

6.2 PROBLEMS OF MACROECONOMICS

Periods Allotted: 11 Periods

1. Competencies

At the end of this sub unit, the students will be able to:

- *Identify and analyze problems of macroeconomics;*
- *Display the business cycle and in the overall economic activity;*
- *Explain meaning of unemployment;*
- *Identify and exemplify types of unemployment;*
- *Distinguish the differences among types of unemployment;*
- *Measure unemployment level;*
- *Examine the impact of unemployment on the economic growth.*

2. Sub Contents

- Business cycle
- Unemployment
- Inflation
- Budget deficit

3. Overview

The most frequently recurring problems in macroeconomics are fluctuations in a business cycle, increasing unemployment rate, inflation and budget deficit.

- Fluctuation of business cycle – this is the different cyclical phases that often recur in market economy – they are recession, depression, recovery and boom.
- Unemployment – a situation in which people who are able to work fail to secure work or other activity.
- Inflation: It is a situation when general price levels rise weakening the capacity to purchase goods and services.
- Budget deficit: A situation when governments expenditures exceed its income.

4. Teaching-Learning Process

4.1 Suggested Teaching Aids

- Structure of an organization
- Charts and figures
- Tables and statistical data

4.2 Suggested Teaching Methods

- Brainstorming
- Discussion
- Analyzing data and project

4.3 Pre Lesson Preparation

Get the following teaching materials ready in advance.

- Charts, tables and figures that provide basic information about an organization
- Documents about Ethiopia's economic policy
- Charts and figures of overall basic economic information for Ethiopia

4.4 Lesson Presentation

a) Introduction to the Lesson

The ups and downs in business activity occurring regularly in a market economy due to changes in variables such as employment, income, output, etc., are known as *the business cycle*. Since World WarII, the concept of the business cycles has gained importance as various economies of the world, particularly developed ones, have been regularly experiencing the problem of fluctuations in business activity.

In this subunit, our aim is to make the students understand the phases, characteristic features and causes of business cycles. In this context, when you introduce the topic, be sure to refer to the global economic crisis of 2007 and the well-known Great Depression of 1930s to give our students two critical examples. Suggested Activity6.2 focus broadly on this theme.

b) Body of the Lesson

You should concentrate on the central themes of the main problems of macroeconomics. These are categorized and identified as; business cycle, unemployment, inflation and budget deficit. The subject will be authentic if it is studied in contrast to the negative impact of the factors on the development of macroeconomics. For instance in a business cycle, there are wave- like fluctuations in four interlinked economic variables: employment, income, output and price level. The fluctuations are cyclical in nature. While you are discussing problems in unemployment stees on its burden on the economic development of a country. It should be clear that unemployment defines the situation in which people who are able to work and willing to work on an activity which gives them income or a means of securing a livelihood. In the meantime discuss and pose a question on the possible means to solve the problem of unemployment. The other problem is the staggering effect of inflation on the economy of a country. In connection to this issue, involve the students for suggestion on the critics of a market dominated by a condition of 'too much money chasing too few goods'. Elaborate the result of the discussion with a clear identification of the causes for the problem.

The last factor that remained to be the major concern of macroeconomics is budget deficit. Explain the students that this would happen when the receipt of the government are less than expenditure. It will be recovered by pumping money into the economic system. It is also financed by domestic and external borrowing and printing of new currency.

4.5 Evaluation and Follow-Up

a) Evaluation

Organize the student in groups based on their capacities and give them the following instructions and ask the following questions.

- Discuss the types of unemployment.
- How do you measure unemployment?
- What is inflation?
- What are the adverse effects of inflation?
- What are the objectives of a government budge?

b) Follow-up

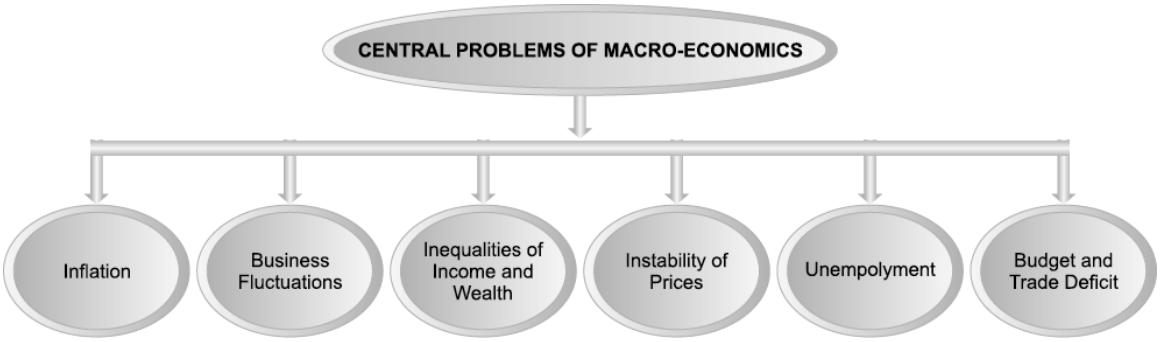
Record and grade the students' achievements and make the students informed.

ANSWERS TO ACTIVITES

Activity 6.1

1. Yes, Ethiopia low output, low rate of economic growth, low level of employment, inflation, and unhealthy balance of payment situation-most of the general objectives of a macroeconomic policy (as given in students' text) are applicable to the specific case of Ethiopia.

2.



Activity 6.2

1. Two well-known global depression in the recent economic history are:
   i. The Great Depression in 1930s.
   ii. Global Financial Crisis (starting from December 2007).

2. The Great Depression of 1930s which set the stage for second world war lasted for 43 months from 1929 to 1933. But its effect was felt up to 1939. During this time the prices of stock fell to 40 per cent. Around 9,000 banks went out of business and about 9 million savings accounts were wiped out. About 86,000 businesses failed and wages were decreased by an average of 60 per cent. The unemployment rate went up from 9 per cent all the way to 25 per cent. About 15 million people became jobless. Another about 50 million people were died. The International Trade activities had declined to 65 per cent.

3. *Global Financial Crisis of 2007* – The global economic slowdown of 2007 and onwards is notable for both its length and breadth across all the regions of the world, leading to a contraction in the most wealthy nations and a sharp downturn in emerging economies, including China, India, Russia and Brazil. The indicators of this slowdown include contraction of world trade volumes for the first time since 1982; nearly 50 per cent fall in investment from the 2007 levels; and an

unprecedented liquidity crunch which has effected businesses all over the world.

Origin, Causes and Consequences – Though sharp eyes noticed the global financial crisis much earlier, it became prominently visible to everyone in September 2008 with the failure, merger and conservatorship of several large financial firms of the United States. The crisis was faced by leading United States and European investment banks, insurance firms and mortgage banks as a consequence of subprime mortgage crisis.

The failure of large financial institutions in the United States rapidly evolved into global credit crisis, deflation, sharp reductions in shipping and commerce, leading to failure of several European banks, declines in various stock indexes, substantial reductions in market values of equities and commodities all over the world including in the centrally controlled economies like China and Russia. The crisis was sharpened by Section 128 of the Emergency Economic Stabilisation Act of 2008 which permitted the Federal Reserve bank to pay interest on excess reserve requirement balances held on deposits from banks, removing the long standing incentive for banks to extend credit instead of hard cash with America's premier bank which play sale a dershiprole in monetary policy, financial super vision and the payment system. It led to a liquidity problem and the de-leveraging of financial institutions particularly in the United States and Europe which aggravated liquidity crisis and brought about a decline in international shipping and commerce.

The crisis which originated from widespread subprime mortgage failures quickly engulfed the entire financial system and industry resulting in widespread layoffs, for example, nearly 70,000 job losses in a single day in six companies ranging from manufacturing to telecom across the United States and Europe as a measure of cost cutting to grapple with slump in consumer spending. Construction machinery manufacturer Caterpillar, pharmamajor Pfizer, telecom firm Sprint Nextel Corporation and home improvement retailer Home Depot were among the top companies adversely affected.

For all the activities as suggested at the end of this sub-unit, we have to encourage the students for the use of print as well as electronic media for the required statistical and factual information. Our active involvement in their search for information is a must and it will be definitely appreciated by our students. Make sure that we form a part of the group that makes a discussion on Activity 3. Encourage the students to prepare a report on the Group Discussion. It will be of much reference use by others.

Activity 6.3

1. Structural unemployment and seasonal unemployment are most common types of unemployment in Ethiopia.
2. You can given this task as a group assignment to your students.
3. Make students to discuss this questions. It is obvious that unemployment rate is high in Ethiopia.
4. Major causes of unemployment in Ethiopia includes low level of investment, low level of entrepreneurship, low level of education.
5. The most important impacts of unemployment are:
    - Loss of valuable human resources.
    - Increase in poverty.
    - Unemployment is demoralizing.
    - Exploitation of labour.
    - Lower level of national growth.

Activity 6.4

1. *Tools and methods used by the Government to control inflation*
    a. Reduction in government expenditure.
    b. Increase in tax rates.
    c. Increase in public borrowing.
    d. Cut down in deficit financing.
    e. Increase in discount (bank) rate.
    f. Selling of government securities by the Central Bank.
    g. Increase in cash reserve ratio by the Central Bank.
    h. Enlargement of import surplus.

Activity 6.5

1. Following are the major direct taxes as prevalent in Ethiopia:
    a. Income tax on employment.
    b. Income tax on business and other profits.
    c. Rental income tax.
    d. Income tax on agricultural income.

e. Tax on income from mining activity.

f. Capital gain tax.

g. Income tax on the other sources of income.

h. Income from chance winning and lottery.

i. Income from royalty.

j. Income derived from service rendered to any person or organisation in Ethiopia.

2. Main objectives of government expenditure in a developing economy are as under:

a. For satisfaction of collective needs of the people.

b. For smooth functioning of government machinery.

c. For economic and social welfare of the people.

d. For creation/addition of capital goods and infrastructure.

e. For controlling depressionary tendencies in the economy.

f. For accelerating the speed of economic development.

g. For reducing regional disparities of growth.

3. **Merits of Direct Taxes**

a. *Economical* – Direct taxes are economical in the sense that cost of collecting these taxes is relatively low as they are usually collected at source and they are paid to the government directly by the tax-payers.

b. *Certainty* – Direct taxes satisfy the canon of certainty.The tax-payers know how much they have to pay and on what basis they have to pay.The government also knows fairly definitely the amount of tax revenue it will receive.

c. *Equity* – Direct taxes can be made to conform to the principles of ability to pay by choosing the appropriate rate-schedules.

d. *Reducing inequalities* – Direct taxes are progressive in nature. Rich people are subjected to higher rate of taxation as compared to poor people.

e. *Elasticity* – Another advantage of direct taxes is that these taxes are elastic as the government revenue can be increased by raising the tax rates in time of crisis.

f. *Civic consciousness* – Direct taxes inculcate a spirit of civic responsibility amongst the tax-payers. Since the tax-payers provide the funds to the government, they take keen interest in seeing that these funds are properly utilised. This awareness and consciousness plays an important role in checking the wastage of public expenditure.

Demerits of Direct Taxes

Direct Taxes	
Merits	**Demerits**
1. Economical	1. Unpopular
2. Certainty	2. Tax evasion
3. Equity	3. Inconvenient
4. Reducing inequalities	4. Adverse effects on will to work and save
5. Elasticity	5. Narrow in scope
6. Civic consciousness	

a. *Unpopular* – Direct taxes are directly imposed on individuals. They cannot be shifted. Tax-payers feel their pinch directly. Consequently, they are not popular among the people.

b. *Possibility of tax evasion* – Direct taxes encourage tax evasion. People conceal their income from the tax officials so as to pay less taxes.

c. *Inconvenience* – Sometimes, the tax-payers (largely businessmen) are required to pay the entire tax in one installment which causes inconvenience to the tax-payers. Besides, the tax-payers have to maintain elaborate accounts to the satisfaction of the tax authorities.

d. *Adverse effects on the will to work and save* – Direct taxes may have adverse effect on the will to work. High rates of income tax, for example, may discourage people from working hard or working overtime. These taxes are likely to discourage saving and investment as well.

e. *Narrow in scope* – Direct taxes are generally imposed on certain group of persons rather than on all groups. Therefore, these taxes have narrow and limited scope.

ANSWERS TO REVIEW EXERCISE FOR UNIT 6

Part I

1. Macroeconomics deals with the aggregates or averages covering the entire economy. For instance, total employment, national income, national output …etc.
   Fundamental concerns of macroeconomics can be summarized as follows: macroeconomics:
   - Deals with the national income.
   - Concerned with the determination of the level of employment in the whole system and variations in it.
   - Deals with the monetary theory and demand and supply of money.
   - Is concerned with the theories of business cycles.
   - Deals with economic growth.
   - Is concerned on macro distribution theories that deals with the distribution of income among various factors.
   - Studies the conditions of international trade and finance.
2. The general objectives of a macroeconomic policy are, to achieve.
   - Maximum feasible output
   - Fuller employment
   - Greater equality in the distribution of income and wealth.
   - Healthy balance in balance of payments
   - High rate of economic growth
   - Price stability
3. The central problems of macroeconomics is the problem of determination of income and employment.
   Macroeconomics is also concerned with problems such as inflation, business fluctuations, inequalities of income and wealth, instability of prices, budget and trade deficit, etc.
4. Business cycle on trade cycle refers to the fluctuations in economic activity occurring regularly in the market economics.
   The four main phases into which a business cycle is usually divided are:- peak or boom, contraction or recessions.
   Trough or digression and recovery.
5. Characteristic features of business cycle.
   - Business cycles are the wave – like fluctuations in economic activity.
   - These fluctuations are cyclical in nature.

- The sequence of changes in business cycle (i.e. boom, recession, depression and recovery recur frequently and in a fairly similar pattern.
- Periodicity between the cycles need not be the same on similar.
- Business cycles are fluctuations found in the overall economic activities and not in any particular firm or industry.
- Normally, if the boom is high the succeeding digression will also be severe.
- Business cycles usually last for a period of 2 to 10 years.

6. Business cycles may be caused due to the following factors.

Inflation: it is a situation characterized by a sustained increase in the general price level.

Budget deficit: the amount by which the revenues of the federal government exceed it revenues in any year.

7. Un employment refers to a situation where the persons who are able to work and willing to work, at the current market wage rate fail to secure work or activity which gives them income or means of livelihood.
Unemployment is usually measured as the ratio of the unemployed persons to the total labour force in a country and is expressed in percentage terms.

$$\text{Thus rate of unemployment} = \frac{\text{No. of unemployed persons}}{\text{Total labour force}}$$

8. Frictional un employment:- This is a temporary un employment which exists during the period of the transfer of labour from one occupation to another.
For example, big industrial units and polluting industries are sometimes moved out of the large towns and cities and relocated distant places.
Structural un employment:- refers to a situation in which workers become jobless due to loss of demand in particular regions or industries. For example, a change of energy use from coal to electric power is bound to curtail coal mining activity and cause un employment there.
Cyclical un employment: The un employment which arises due to in adequate overall demand associated with the down swing, recession on depression period of a trade cycle.
9. Some of the major adverse economic effects of unemployment are:- loss of valuable human resources.
   - Increase in poverty.
   - Unemployment is demoralising
   - Exploitation of labour

- Un employed people failing to get any legitimate means of livelihood, may take recourse to anti – social activities such as gambling, theft, robbery … etc.

10. Inflation is described as a situation characterized by a sustained increase in the general price level.

The factors responsible for inflation are divided into two demand – pull factors and cost – push factors.

Demand pull inflation:- It is when the demand for good and service exceeds the available supply at current price.

The causes for demand – pull inflation, may be:

- An increase in government expenditure.
- An increase in money supply
- An increase in wages.
- Black money
- Deficit financing
- Credit expansion

Cost – push inflation:- inflation resulting from rising costs of production and slack resource utilization.

Setbacks in agricultural and industrial production due to shortage of raw materials, bad weather conditions increases input prices so also hoarding.

11. Rate of inflation is usually measured as the percentage change in the general price level from one year to the next.

$$\text{Rate - (year t)} = \frac{\text{PCl (year t) - CPl (year t - 1)}}{\text{CPl (year t - 1)}} \times 100$$

12. Adverse effects of inflation:-

Some of the adverse effects of inflation are:-

- Inflation adversely affects fixed income groups like wage and salary earners and those whose income consists of rent from property or interest on loans.
- With a rise in prices it reduces the level of savings out of a given level of income.
- There is a redistribution of income in favour of the rich capitalist and business people while it affects the income of working class creating a gap between rich and poor.
- Due to rise in prices, laboure demand more wages.

- Effect on economic planning that is when prices start rising the actual cost of inputs to be used for achieving production targets becomes higher and hence more financial resources are needed. But under inflation it is difficult to collect more revenue and plan targets are curtailed.
- Effect on balance of payments: with inflation or rising prices the deficit increase and foreigners will not buy our high priced goods. So, our export ill fall. Since imports are more than exports, it means that the country has to make more payments than that if receives.

13. Government budget is an account of planned expenditure and expected receipts of the government usually for a year.
    The general objectives of a government budget are the following
    - Economic growth
    - Reduction of poverty and un employment
    - Reallocation of resources
    - Reduction of inequalities
    - Price stability
    - Management of public enterprise.
14. If the receipts of the government are more than its expenditure, the government is said to have a sure plus budget.
    A Surplus budget implies that the government is pumping out more many from the economic system than what it is pumping back. When the government sacks out money from the economic system. The level of economic activity falls and as a result there will be fall in investment, employment, income, consumption and savings.
15. Components of government budget are:-
    Usually, budget is divided into two parts, revenue budget and expenditure budget.
    In Ethiopia it is classified into three parts.
    a. Ordinary revenue, b. external assistance and c. capital revenue

Part II

16. The main difference between ordinary revenue and capital revenue is that in case of ordinary revenue, government is under no future obligation to return the amount, i.e., they are non-redeemable. But in case of capital revenue which are borrowings, government is under obligation to return the amount along with interest. Thus *all capital receipts either create liabilities or reduce assets*. Let it be remembered when governments finds that its current revenue/income is not sufficient, it tries to finance its expenditure by borrowings.

17.

Direct Taxes	Indirect Taxes
1. Liability to pay and the burden of direct tax falls on the same person.	1. Liability to pay this tax is on one person and the burden of the tax falls on some other person.
2. Burden of this tax cannot be shifted to others.	2. Its burden can be shifted to others.
3. Direct taxes are considered progressive because they are based on personal ability to pay.	3. They are considered regressive because their burden is more on the poor than on the rich.
4. Direct taxes are levied on the incomes and property of persons.	4. Indirect taxes are levied on goods and services on their sale, production, imports and exports.
5. Direct taxes are compulsory and cannot be escaped.	5. This tax can be avoided by refraining from purchase of the good whose price contains tax.
6. Examples are – personal income tax, rental income tax, land use fee, etc.	6. Examples are – sales tax, excise tax, etc.

18. Any expenditure that does not led to any creation of assets or reduction in liability is treated as recurrent expenditure. Generally expenditure incurred on normal running of the government departments and maintenance of services is treated as recurrent expenditure. Examples of recurrent expenditure are salaries of government employees, interest payment on loans taken by the government, pensions, subsidies, grants for rural development, education and health services etc. It is a short period expenditure and recurring in nature, as against capital expenditure which is long period expenditure and non-recurring in nature. Also, capital expenditure consists mainly of expenditure on acquisition of assets like land, buildings, machinery, equipment, investment in shares etc. Such expenditure are incurred on long period development programmes, real capital assets and financial assets. This type of expenditure adds to the capital stock of the economy and raises its capacity to produce more in future.

19. A budget is said by deficit budget when government expenditure exceeds its revenue, whereas if government revenue exceeds its expenditure, it is called a surplus budget.

20. Boom is a phase of economic activity characterised by rising demand, rising prices, rising employment and rising incomes, etc., whereas during depression business confidence is at its lowest and thus investment, employment, income and prices touch the bottom.

Part III

21. True	22. False	23. False	24. True	25. True
26. False	27. False	28. True	29. False	30. True

Part IV

31. B	32. D	33. C	34. A	35. B	36. C	37. A

Part V

38. C	39. A	40. E	41.F	42. D	43. B

Part VI

44. i. National income ii. Employment.

45. i. Full employment ii. Price stability iii. Income equality.

46. Inflation, priceinstability, unemployment, budget deficit, etc.

47. Peak, Recession, Depression and Recovery.

48. i. Supply exceeds demand ii. Unfavourable weather conditions.

49. i. Frictional unemployment ii. Structural unemployment
iii. Cyclical unemployment.

50. When more workers are engaged in a work than actually required to work, it is called disguised unemployment.

51. i. Agriculture ii. Toursim.

52. i. Loss of human resources ii. Increase in poverty.

53. Yes, a moderate inflation is necessary for economic growth.

54. i. Increase in production ii. Increase in employment.

55. i. Decrease in savings ii. Increase in income inequality.

56. Direct tax, indirect tax, and foreign trade tax

57. i. Personal income tax ii. Tax on lottery wining.

58. i. Salaries of civil servants ii. Purchase of raw materials.

59. Solution

Given number of unemployed persons = 10 million

Number of employed workers = 24 million

Number of total labour force = 34 million

$$\text{Unemployment rate} = \frac{\text{unemployed persons}}{\text{total labour force}} \times 100$$

$$\text{Unemployment rate} = \frac{10\text{million}}{34\text{million}} \times 100 = 29.41\%$$

60. Based on the given data the cost of the baskets of goods in each year is

Step 1: Compute the cost of the basket of goods in each year

2008 (Birr 3 × 200kg) + (Birr 40 × 20kg) = Birr 1,400

2009 (Birr 5 × 200kg) + (Birr 45 × 20kg) = Birr 1,900

2010 (Birr 8 × 200) + (Birr 52 × 200kg) = Birr 12,000

Step 2: Choose one year as a base year (2008) and compute the consumer price index.

2008 $$\frac{\text{cost of basket of goods in 2008}}{\text{cost of basket of goods in 2008}} \times 100 = \frac{\text{Birr1,400}}{\text{Birr1,400}} \times 100 = 100$$

2009 $$\frac{\text{cost of basket of goods in 2009}}{\text{cost of basket of goods in 2009}} \times 100 = \frac{\text{Birr1,900}}{\text{Birr1,400}} \times 100 = 136$$

2010 $$\frac{\text{cost of basket of goods in 2010}}{\text{cost of basket of goods in 2008}} \times 100 = \frac{\text{Birr12,000}}{\text{Birr1,400}} \times 100 = 857$$

Step 3: Use the consumers price index to compute the inflation rate from previous year

2009 $$\text{Inflation}_{2009} = \frac{CPI_{2009} - CPI_{2008}}{CPI_{2008}} \times 100 = \frac{136 - 100}{100} \times 100 = \mathbf{36\%}$$

2010 $$\text{Inflation}_{2010} = \frac{CPI_{2010} - CPI_{2009}}{CPI_{2009}} \times 100 = \frac{857 - 136}{136} \times 100 = \mathbf{530\%}$$

UNIT 7 NATIONAL INCOME ACCOUNT

Periods Allotted: 12 Periods

1. Introduction

National income is often considered to be the most comprehensive measure of how well an economy is performing. Therefore, in order to understand the performance of a given country's economy, we must measure that country's national income. Measuring national income is a very large and extremely complicated task. However, economists have devised various ways of estimating national income. In fact, national income estimates are made in every country these days. For example, in India, the task of estimating national income is entrusted to the Central Statistical Agency (CSA), a department of the Ministry of Planning and Programme Implementation. This unit discusses concepts related to national income accounting and presents methods of measuring national income.

2. Unit Objectives

At the end of this unit, the students will be able to:

- *Appreciate national income account and its importance;*
- *Understand and compute the different approaches used to measure GDP;*
- *Analyse the difference between nominal and real GDP.*

3. Main Contents

7.1 MEASUREMENTS OF GDP

7.2 OTHER NATIONAL INCOME ACCOUNT

7.3 GDP AND INCOME DISTRIBUTION

7.1 MEASUREMENTS OF GDP

Periods Allotted: 8Periods

1. Competencies

At the end of this subunit, the students will be able to:

- *Define and state national income account and its importance;*
- *Define GDP and GNP;*
- *Identify the problems associated with measure GDP;*
- *Identify and define the three approaches that are used to measure GDP;*
- *Define and compute GDP based on product approach;*
- *Define and compute GDP based on income approach;*
- *Define concept of GDP;*
- *Define the three approaches to compute GDP;*
- *Distinguish the differences between nominal and real GDP.*

2. Sub Contents

- Approaches of measuring GDP
- Problems of measuring GDP
- Nominal and real GDP

3. Overview

Start-Up Activity

Use Activity 7.1 as start-up activity to interest your students in the concept of *national income* and in the issues associated with it:

Explain the following statement to them, and provide examples for it. Encourage the students to ask questions and discuss the concepts and issues.

*Typically, a **firm** – or even an **individual household** – maintains an account of its income over a given period, such as a year. The purpose of this activity and its results are*

- *recording and understanding financial positions*
- *using that information to plan future expenditure, investment, savings, etc.,*
- *assessing economic progress*
- *comparing one's economic position with that of others*

*Similarly, a **nation** must estimate its income over a given period in order to understand the economic performance of its economy and to take actions based on that knowledge.*

With this, or a similar introduction, we motivate the students to study this unit.

Next we begin our lesson with a formal definition of *national income*. Then we graduall yprecede with the main contents of the unit, including characteristic features of national income, the significance of national income accounts, the measurement of GDP and other related concepts.

National Income Accounts

National income is defined as the aggregate monetary value of all final goods and services produced in a country during a year.

National income accounting is a method of preparing and presenting national income accounts using the double entry system of business accounting.

Preparing national income accounting is important to formulate economic policies, measuring economic growth and to give information about the activities to the different sectors of the economy.

Measures of National Income Account:- The two most important measures of national account are the Gross Domestic Product and the Gross National Product.

Gross domestic product (GDP): It is the market value of all final goods and services produced within a country during a year.

Gross National Product (GNP): It is the money value of all final goods and services produced within a country in a year plus net factor income from abroad.

There are three approaches adopted to measure national income. These approaches are:

1. Value added approach
2. Income approach and
3. Expenditure approach

It is the value added and expenditure approaches often adopted or used.

GDP can be measured at current market prices and at constant prices. When final goods and services are valued at the current prevailing prices we call it GDP at current market prices or nominal GDP.

In addition to GDP and GNP, national income is also measured by Net National product at factor cost and market price. Net National Product differs from Gross National Product less by Depreciation value (NNP = GNP – Depreciation). NI is obtained by subtracting indirect taxes from NNP (NI = NNP – IT). From National Income we obtain Personal Income by subtracting corporate tax, undistributed profit and adding all transfer incomes (PI = NI – corporate tax – undistributed profit + transfer incomes).

4. Teaching-Learning Process

4.1 Suggested Teaching Aids

- Graphs and figures
- Charts and tables
- Structures

4.2 Suggested Teaching Methods

- Open-ended questioning
- Problem solving
- Data analysis
- Group discussion

4.3 Pre Lesson Preparation

- Organize the references, tables, and diagrams that are vital to the lesson.
- Organize the class on the basis of student capacity (e.g., slow, medium, and fast learners).
- Take notes of the arrangement of basic facilities appropriate to the lesson.

4.4 Lesson Presentation

a) Introduction to the Lesson

In this introductory section, our major objective is to interest the students in studying the present unit. Highlighting the need for and importance of national income accounting, we explain the concept of *national income*. Then, using the definition itself we help the students in identifying the main features of national income. We also discuss with them the significance of national income accounts as an indicator of economic progress and also in their functions in policy making, planning and economic analysis. Be sure to include references to the Ethiopian context in order to develop additional student interest.

b) Body of the Lesson

The measurement of GDP is discussed with its relation to national income accounts. As a primary issue national income is the aggregate monetary value of all final goods and services produced in a country during a year.

Students knowledge about national income will be enhanced and stabilized when they are able to realize the major features of national income and the following points must be discerned.

1. It is counted for a period of one accounting fiscal year.
2. It is a measure of the flow of goods and service during a year.
3. We include only final goods and services in the calculation of national income.
4. It is expressed interims of the monetary value of goods and services.

It should be noticed that national income accounting is useful for measuring economic growth and formulating consistent economic policies. However, a viable economic growth cannot be realized without the two most important aggregates related to domestic and national income. These are: Gross Domestic Product{GDP} and Gross National Product{GNP}.

4.5 Evaluation and Follow-Up

a) Evaluation

Stabilize the lesson by asking questions like

- What is national income?
- What is the importance of national income accounts?
- Can you define GDP?
- How do we find GDP?
- How do you differentiate NDP from NNP?

b) Follow-up

Give assignments on the basis of the topics discussed above.

7.2 OTHER NATIONAL INCOME ACCOUNT

Periods Allotted:2Periods

1. Competencies

At the end of this subunit, the students will be able to:

- *Compute GDP based on the three approaches; and*
- *State other national income account.*

2. Overview

The two most important aggregates related to domestic income and national come ate:-

Gross domestic product (GDP) It is the market value of all final goods and services produced within the domestic territory of a country during a year.

There are three different phases in the circular flow of national income and these are production, income and expenditure.

Besides this, there are three methods of measuring national income: 1 – value added method (traditionally called the production method) 2 – income method 3 – expenditure method. The other factor to be considered in the national income account is gross national product which is the money value of all final goods and services produced in the domestic territory of a country during a year plus net factor income from abroad.

The problems that an economy faced in under developed countries like Ethiopia are conceptual problems and statistical (or practical) problems.

GDP can be measured at current market price and at constant prices final goods and services included in GDP are valued at current market prices, i.e, prices prevailing during the year for which GDP is being measured, it is called GDP at current market prices or Nominal GDP.

3. Teaching-Learning Process

3.1 Suggested Teaching Aids

- Graphs and figures indicating different countries' GDP.
- Economic reports and articles on problems of measuring GDP.

3.2 Suggested Teaching Methods

- Designing
- Problem solving
- Presentation
- Group discussion
- Brainstorming

3.3 Pre Lesson Preparation

- Get ready in advance the diagram of the structure of an organization.
- Graphs and figures indicating basic information related to the topic.

3.4 Lesson Presentation

a) Introduction to the Lesson

The present section is the main part of this unit. Most of it is technical in nature, covering the well-defined concepts of gross domestic/national product and its methods of measurement, and it focuses particularly on the production method, income method and expenditure method. The problem of double counting is crucial in the case of production method, which is generally avoided in favor of the value added method. Although these facts must be emphasized, we must also emphasize that, in Ethiopia's

national accounts, the production approach is mainly used but the expenditure method is applied in case of public administration, defense, education, and health services. The income approach is rarely used except in some service sectors. Also, the students should know that national accounts are prepared in our country by the Central Statistical Authority. Students must be encouraged to solve practical problems involving computing GDP using different methods.

b) Body of the Lesson

There are factors that determine the condition of an economy and help to decide the magnitude of their role in the economy. Among the major ones GDP is more decisive. Gross domestic product (GDP) is the market value of all final goods and services produced within the domestic territory of a country during a year. However, GDP can be measured in the context of the three different phases in circular flow of national income: production, income and expenditure. Their relationship can be exemplified in the following way. The net output emerging from production process gets distributed in the form of money income. The income is used to purchase goods and services for final consumption and investment. It ultimately creates expenditure. In general, there are three methods of measuring GDP.

a. value added method
b. income method
c. expenditure method.

However, it is difficult to attain results as desired because there are problems faced while measuring GDP. These are conceptual and statistical problems. You are required to justify the argument concerning the issue by substantive examples and remarks from other sources.

Finally, you are supposed to portray the distinction between nominal and real GDP by means of calculations using formula.

3.5 Evaluation and Follow-Up

a) Evaluation

Stabilize the lesson by asking the following questions

- How do you distinguish nominal from real GDP?
- What are the problems to be faced while measuring GDP?
- Can you state the steps involved when we use using the income method to estimate national income?
- What are the practical problems in measuring GDP?

b) Follow-up

Give assignments on the basis of the topics discussed above.

7.3 GDP AND INCOME DISTRIBUTION

Periods Allotted: 2Periods

1. Competencies

At the end of this subunit, the students will be able to:

- *Show the relationship between income and GDP.*

2. Overview

One of the aspect of national income is its relation with Net domestic product at market process (NDP_{MP}) which is the net market value of all the final goods and services produced in the domestic territory of a country during a year.

It is under stood that the net market value of goods and services is equal to the market value of the goods and services minus depreciation. That is $NDP_{MP} = GDP_{MP}$ – depreciation.

In addition the national income is determined by the net national product at factor cost (NNP_{FC}). The Net national product at factor cost is the sum total of net value added atfactor cost by all normal resident producer enterprises of a country during a year. In short NNP_{FC} or NI can be obtained by subtracting indirect taxes from the net national product at market prices.

Hence, NNP_{FC} or NI = NNP_{MP} – indirect taxes.

Moreover personal income (P1) = NI – corporate tax – undistributed profit + all types of transfer income.

3. Teaching-Learning Process

3.1 Suggested Teaching Aids

- Articles and references on taxes.
- Tables showing imports and exports.
- Charts indicating domestic, national and personal income.

3.2 Suggested Teaching Methods

- Designing
- Problem solving

- Presentation
- Group discussion
- Brainstorming

3.3 Pre Lesson Preparation

- Organize the references, tables, and diagrams that are relevant to the lesson to be discussed.
- Organize and divide the class on the basis of studentcapacity (e.g., slow, medium, and fast learners).

3.4 Lesson Presentation

a) Introduction to the Lesson

This concluding section aims at introducing the students to various national income related concepts other than those discussed in the previous section. Here we should particularly help the students in identifying different concepts such as depreciation, net factor income from abroad, indirect taxes, personal taxes and transfer payments, etc., which form the basis for the interrelationships between various concepts of national income. A comparative study of different concepts is as an exercise we can use to help the students gain a better and deeper understanding of the phenomenon of national income accounting.

b) Body of the Lesson

Net Domestic Product at Market Prices (NDP_{MP})

Net Domestic Product at market prices is the net market value of all final goods and services produced in the domestic territory of a country during a year.

The net market value of goods and services is equal to the market value of the goods and services minus depreciation.

Thus, Net Domestic Product at market prices is equal to the Gross Domestic Product at market prices minus depreciation or capital consumption allowance.

$NDP_{MP} = GDP_{MP}$- Depreciation

Net National Product at Market Prices (NNP_{MP})

Net National Product at Market Prices is the net market value of all the final goods and services produced by the normal residents of a country during a year.

It can be calculated in two ways:

i. NNP_{MP} can be obtained by subtracting depreciation from GNP_{MP}. Hence,

$NNP_{MP} = GNP_{MP}$- Depreciation

ii. NNP_{MP} can also be obtained by adding the net factor income from abroad to the Net Domestic Product at market prices (NDP_{MP}).

Hence, $NNP_{MP} = NDP_{MP} + NFIA$

Net National Product at Factor Cost (NNP_{FC})

Net National Product at factor cost is the sum total of net value added at factor cost by all the normal resident-producer enterprises of a country during a year.

It is for NNP_{FC} that we use the term national income (NI). NNP_{FC} represents payments made to the factors of production as wages, rent, interest and profits. In short, NI is the sum total of all factor payments. NNP_{FC} or NI can be obtained by subtracting indirect taxes from net national product at market prices.

Hence, NNP_{FC} or NI = NNP_{MP} – Indirect taxes.

Personal Income (Pi)

Personal income is the sum of earned income and transfer income received by persons (households) from all sources within and outside the country.

Put in the form of an equation:

Personal Income (PI) = NI - Corporate tax - Undistributed profit + All types of transfer incomes.

Personal Disposable Income (PDI)

Personal disposable income is that part of personal income which is available to the households for disposal as they like.

Personal Disposable Income (PDI) = Personal Income (PI) - Personal taxes

3.5 Evaluation and Follow-Up

a) Evaluation

- How do you find net domestic product at market prices (NDP_{MP})?
- Define net national product at factor cost (NNP_{FC})?
- How do you calculate personal and personal disposable income?

ANSWERS TO ACTIVITES

Activity 7.1

The attention of the students may be drawn to the various reasons for which national income accounting is important (as discussed in the section 7.1.2 of the text) and also to the relationship between GDP and economic welfare (as discussed in the section 7.2.6).

Activity 7.2

1. *Productive activities* – Any activity which contributes to the flow of goods and services is known as productive activity. Productive activities help in generation of income. We see people working in farms, mines, factories, shops, schools, offices, banks and getting paid for their services. All such activities are productive activities because they contribute to the flow of goods and services and also generate income. It needs to be noted that activities resulting in the production of not only material goods (like cloth, wheat, pen, table etc.) but also of services (like those of teachers, doctors, judges, are included in the category of productive activities. Income arising from productive activities is included in national income.

   Unproductive activities – Unproductive activities are those activities which do not contribute anything to the flow of goods and services. These activities are simply means of redistributing the goods and services already produced among the different members of the economy. These are known as transfer payments. Old-age pensions, scholarship to students, grants to social welfare organisation are the examples of transfer payments.

   In short, all those activities which help in generation of income are productive activities and those which are voluntary and social in nature, are unproductive activities. Income from unproductive activities is not included in national income.

2. While GDP is a measure of the gross output at the domestic level, GNP measures the same but at the national level. Thus, the difference between the two is that of income from abroad which we technically call as Net Factor Income from Abroad.

   GNP = GDP + NFI

3. If a person marries his own maid, the value of GDP falls as a result of this. This is because when a woman works as a maid (service provider) her income is included in national income, but when the same women works as a housewife, her services are not paid for and hence not included in national income.

4. Yes, in a closed economy GDP and GNP are equal. This is because a closed economy does not have any economic relation with the rest of the world (other countries) and hence in its case NFI is zero.

5. Pension, old-age pension, unemployment's allowance, scholarship, war-widows allowance, subsidies, gifts, donations, and so on.

6. Since value added by joint efforts of factors of production in the production process is distributed among factors as factor income in the form of rent, wages, interest and profit, therefore sum of value added is equal to sum of factor incomes.

7.

a. GNP = GDP + NFI

= 50,720 + 2,400

= Birr 53120 million

b. GNP = GDP + NFI

= 120,720 + (4,720 – 5,830)

= 120,720 – 1,110

= Birr 119,610 million

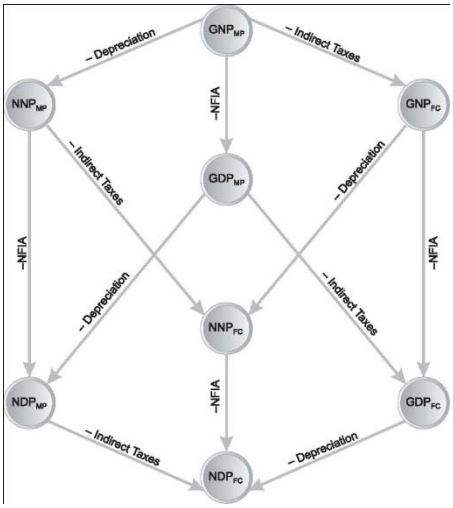
9. GDP at MP (by income method = b + e + h + i + 1

= (ii) + (v) + (xii) + (ix) + (viii)

= 28267 + 9637 + 24420 + 4046 + 8834

= Birr 75,204 million

10. Diagram showing interrelationship among different aggregates.



11. Components of different aggregates of national income

				Net factor income from abroad 9	All types of transfer incomes 10
				9	
Income from domestic product accruing to	Govt. Sector		Income of Govt. Sector* 8	8	×
	Private Sector	Profit of a co.	Undistributed Profit 7	7	×
			Dividend 6	6	6
			Profit tax 5	5	×
			Mixed Income 4	4	4
			Interest 3	3	3
			Wages 2	2	2
			Rent 1	1	1
			Domestic Income	National Income	Personal Income

*When shown separately from income of private sector.

12. a. Imputed rent of owner occupied houses will be included in national income.

b. Profit earned by foreign banks in Ethiopia will not be included in Ethiopia's national income.

c. It will be included in national income.

d. Sale of an old car will not be included in national income since the car does not form part of current production. It was treated as a part of national product in the year it was produced.

e. Wind fall gains (like gains from lottery, war etc.) will not be included in national income since there is no corresponding addition in the flow of goods and services.

f. It should not be included because shares are just paper titles which do not contribute in production directly.

g. It should be included since property dealer has rendered new service in sale/purchase of a house.

Activity 7.3

1. Gross domestic product (GDP) is the market value of all the final goods and series produced within the domestic territory of a country during a year.
   Gross national product (GNP) is the money value of all final goods and services produced in the domestic territory of a country during a year plus net factor income from abroad minus factor income of nonresidents in domestic tertiary.
2. In measuring GDP there are two approaches adopted.
   a. Final product approach:- According to this approach, in the estimation of GDP we include the market value of all final goods and services produced in a country. For example, if we man facture thread from cotton, cloth from tread and shirt from cloth, here shirt is the final good.
   b. Value added approach:- if measures the value added (contribution) by each producing enterprise in the production process in the domestic territory of accounting in an accounting year.
3. The problem of double country: in actual practice it is very difficult to distinguish between intermediate goods and final goods. Therefore, sometimes the value of intermediate goods enter into our calculation of national income. If poses the problem of double country.

Activity 7.4

1. Keeping other factors unchanged, GDP and economic welfare are directly related. Higher GDP ensure economic welfare.
2. An increase in GDP indicates growth not Development. Development is a function of several variables including GDP.

ANSWERS TO REVIEW EXERCISE FOR UNIT 7

Part I

1. National income accounting is a method of preparing and presenting national income accounts based on the principle of double entry system of business accounting. National income accounts are important because:-

   - It indicates economic progress indicates. Investment, consumption, employment etc.
   - Significance in business policy making.
   - Significance for trade unions used for measure of economic growth.

- Comparison with other countries.
- Knowledge of structural changes.
- Significance for economic analysis.

2. Gross domestic product (GDP) is the market value of all the final goods and series produced within the domestic territory of a country during a year.
   Gross national product (GNP) is the money value of all final goods and services produced in the domestic territory of a country during a year plus net factor income from abroad minus factor income of nonresidents in domestic tertiary.
3. Production of goods and services is the result of combined efforts of factors of production (land, labour, capital and entrepreneur). The net output emerging from production process gets distributed in the form of money income (rent, wages, interest and profit) among factors of production with this income factors of production we purchase goods and services for final consumption and investment. In this way income creates expenditure. Expenditure in turn gives rise to further production.
4. In measuring GDP there are two approaches adopted.
   a. Final product approach:- According to this approach, in the estimation of GDP we include the market value of all final goods and services produced in a country. For example, if we manufacture thread from cotton, cloth from tread and shirt from cloth, here shirt is the final good.
   b. Value added approach:- it measures the value added (contribution) by each producing enterprise in the production process in the domestic territory of accounting in an accounting year.
5. The problem of double country: in actual practice it is very difficult to distinguish between intermediate goods and final goods. Therefore, sometimes the value of intermediate goods enter into our calculation of national income. It poses the problem of double country.
6. The following steps are involved in estimating rational income by income method.
   - Identify enterprises which employ factor of production (land, labour, capital and entrepreneur),
   - Classifying various types of factor payments like rent, wages, interest and profit,
   - Estimating amount of factor payments made by each enterprise,
   - Summing up of all factors payments made within domestic territory to get domestic income at factor cost,

- Adding the value of depreciation and indirect taxes to domestic income at factor cost to get DGP_{MP},
- Estimating net factor income from abroad which is added to GDP_{MP} to obtain GNP_{MP}.

7. For correct computation of national income by income method, following precautions need to be taken.
   - Only factor incomes which are earned by rendering productive services are included. All types of transfer income are not included.
   - Imputed rent of owner - occupied dwellings and value of production for self – consumption are included but value of self – consumed services is not included.
   - Income from illegal activities like smuggling, black marketing, etc., as well as wind fall gains from lotteries, etc., are not included.
8. Components of GDP in expenditure phase are:-
   - Private final consumption expenditure
   - Government final consumption expenditure.
   - Gross fixed capital formation.
   - Change in stocks.
   - Net exports (exports less imports.
9. The following precautions need to be taken for correct estimation of national income by expenditure method:
   - To avoid double counting expenditure on all intermediate goods and services is excluded.
   - Government expenditure on all transfer payments such as scholarship, unemployment allowance, old age pension etc., is excluded because non-productive services are rendered by the recipients in exchange.
   - Expenditure on purchase of second hand goods is excluded from national income because this type of expenditure is not on currently produced goods.
   - Expenditure on purchase of old shares/bonds or new shares/bonds etc, is excluded because it is not payment for goods or services currently produced. It shows mere transfer of property from one person to another.
10. There are two types of problems in estimation of national income.
    a. Conceptual problems
    b. Statistical or practical problems.

11. Real GDP (i.e., at constant prices) truly reflects performance and level of economic growth in an economy where as Nominal GDP (i.e., at current prices) does not.
    - Nominal GDP is affected by two factors namely, change in physical output and change in prices.
    - On the contrary real GDP is affected by only one factor namely change in physical output because prices are fixed or constant.
    - Real GDP can rise only when there is rise in physical output during a year. Nominal GDP because an increase in real GDP leads to rise in standard of living of the people.
12. Real GDP is a better tool to make a year to year comparison of changes in the physical output of goods and services. It is real GDP which is often used in making international comparison of economic performance across the countries.
13. Nominal GDP is converted into real GDP using the following formula.

$$\text{Real GDP} = \frac{\text{Nominal GDP}}{\text{Price index of current year}} \times 100$$

14. Personal income is the sum of earned income and transfer income received by persons (households) from all sources within and outside the country.

Part II

15. Final goods are finished goods which are meant only for final consumption (by consumers) and investment (by firms). Intermediate goods are those goods which are used as raw material for production of other goods. National income includes value of only final goods (and not of intermediate goods).

16. When goods and services produced in a year are valued at prices prevailing in the year of their production, it is called NI at current prices. When goods and services produced in a year are valued at fixed prices, i.e., prices of the base year, it is called NI at constant (or fixed) prices.

17.

Factor Income	Transfer Income
1. It comprises rent, wages, interest and profit.	1. It comprises gifts, subsidies, donations, scholarships, etc.
2. It is received in return for rendering productive services.	2. It is received without providing any good or service in return.
3. It is an earned income (earning concept).	3. It is an unearned income (receipt concept).
4. It is bilateral payment.	4. It is unilateral payment.
5. It is included in national income.	5. It is not included in national income.

18. Income generated within *domestic territory* of a country is called domestic income and income generated by *normal residents* of a country is called national income. The difference between the two is net factor income from abroad.

National Income = Domestic Income + Net factor income from abroad

Since domestic income is defined with reference to domestic territory, it is known as *territorial concept*. As against it, since national income is defined with reference to productive effort of normal residents, it is known as *economic concept*.

Part III

19. True 20. True 21. True 22. False 23. False 24. False 25. True 26. True

Part IV

27. Depreciation

28. Depreciation

Part V

29. B 30. C 31. A 32. B 33. A 34. B 35. A

Part VI

36. i. It reflects performance of the economy.

ii. It indicates structural and sectoral changes.

iii. It shows how national income is shared among various factors of production.

iv. It has several uses for economic policy and research.

37. i. Production method

ii. Income method

iii. Expenditure method.

38. By adopting 'final product approach' or 'value added approach'.

39. Product method.

40. That expenditure of an economy which is spent by household sector, business sector and govt. sector on the purchase of final goods and services.

41. i. Private consumption expenditure

ii. Govt. consumption expenditure.

42. Because they are a part of domestic product.

43. Because they are not a part of domestic product.

44. It is not a legal income.

45. Net exports means exports minus imports.

46. Yes, it is a part of domestic product.

47. Because it is a factor income and thus a part of national income.

48. GNPMP = GDPMP + NFIA

49. When NFIA is positive.

50. When NFIA is negative.

51. Net factor income from abroad (NFIA).

52. GDP = NDP + Depreciation.

53. The loss of value of fixed capital assets due to normal wear and tear and foreseen obsolescence.

54. PDI = PI – personal taxes.

55. Green GDP.

56. Based on the given data

i. GDP_{MP} (by expenditure method)

GDP_{MP} = government final consumption expenditure + Net domestic capital formation + Change is stocks + private final consumption expenditure + Net export.

GDP_{MP} = 1,400 + 275 + 210 + 820 – 50 = **2,655** (all values in millions Birr)

ii. NFI = Factor income from abroad – factor income to abroad

NFI = 194 – 78 = **116** (all values in millions Birr)

iii. GNP_{MP} = GDP + NFI

GNP_{MP} = 2655 – 116

= **2,539** (all values in millions Birr)

iv. NDP_{MP} = GDP_{MP} – Deprecation

= 2,655 – 80

= **2,575**

v. NNP = GNP – Depreciation

= 2,539 – 80

= **2,459**

UNIT 8 CONSUMPTION, SAVING AND INVESTMENT

Periods Allotted: 10 periods

1. Introduction

The main purpose of every economic activity is consumption, whatever may be the type of economy. Most people spend a major part of their income on consumption of goods and services. At the national level, it is observed that the proportion of income which is spent on consumption is higher in case of developing countries as compared to developed countries. Also, the balance of income which is not used for consumption, is saved. Thus, alternatively we can say that under developed countries save a lower proportion of their income as compared with the developed countries. Nations which save a smaller part of their income, make smaller investment, and exhibit low rates of growth in productivity. On the other hand, nations which save, and thus invest, large part of their income, exhibit high rates of growth in income and output.

From the above discussion, we may conclude that:

i. Income, consumption, saving and investment are closely interlinked with each other, and

ii. Consumption, saving and investment have a crucial role to play in determining the economic performance (income, output, employment, etc) of an economy. And hence their importance.

Although we have mentioned briefly about consumption and investment while discussing concepts such as aggregate demand and gross domestic product in the previous units, we discuss in detail the meaning and some other aspects related to consumption, saving and investment, particularly their role in economic growth of a country, in the present unit.

2. Unit Objectives

At the end of this unit, the students will be able to:

- *Realize the relationship among consumption, saving and investment;*
- *Compute average and marginal propensity to consume and save;*
- *Appreciate the role of investment in economic growth.*

3. Main Contents

8.1 CONSUMPTION

Periods Allotted: 3 periods

1. Competencies

At the end of this unit, the students will be able to:

- *Define the concept of consumption;*
- *Assess the basic determiners of consumption.*

2. Sub Contents

10.1.1 Consumption function

3. Overview

Start-up activity

We may begin our lesson with a discussion on the importance of saving at the level of an individual household. Making the students appreciate the various reasons for which saving is important for an individual, we could discuss about the source of saving and its relation with consumption (expenditure of the household). The discussion could conclude with the fact that income, consumption and saving are interlinked with each other. Highlighting their relevance and importance at the level of a country, we formally introduce the present unit and motivate the students for a study of consumption, saving and investment as aggregate economic variables.

Consumption

As discussed in the previous unit, household consumption, expenditure is one of the major components of aggregate demand or aggregate expenditure in an economy.

We also know that households spend their income (apart from savings) on consumption of final goods and services for the satisfaction of their basic wants. Consumption may thus be defined as the expenditure by households on final goods and services.

Thus, consumption expenditure as a macroeconomic variable (national consumption expenditure) is crucial in determining the economic performance of an economy. The major determinants of consumption expenditure at individual/national level are:

1. Money income
2. Distribution of income
3. Level of direct taxes
4. Future expectation
5. Rate of interest
6. Level of wealth

One of the other tool in macroeconomics is consumption function which shows the relation between the level of consumption and the level of income, also known as propensity of consumer. Consumption function indicates how consumption responds to different levels of income.

4. Teaching-Learning Process

4.1 Suggested Teaching Aids

- Tables and charts
- Pictures of market goods for consumption

4.2 Suggested Teaching Methods

- Brainstorming
- Case studies
- Discussion
- Analyzing data

4.3 Pre Lesson Preparation

- Organize the class in the way to discuss the various policies issued by the government.
- Get the appropriate policy documents issued by the government.
- Find out and organize valid materials that indicate the trend of consumption in Ethiopia

4.4 Lesson Presentation

a) Introduction of the lesson

In this section we discuss with our students the consumption behaviour of an individual household and then shift their attention to the aggregate consumption behaviour of an economy. Basically, consumption by an individual household is its expenditure on final

goods and services for the satisfaction of basic wants. We may recall from the previous unit that household consumption expenditure is one of the major parts of the aggregate expenditure in an economy. We understand that consumption is a part of income and directly depends upon income itself, may be the case of an individual household or at the level of an economy.

Discussing the meaning of consumption and its relation with income, we help our students in differentiating between induced and autonomous consumption, and identifying the various factors that determine consumption expenditure. Also, we tell them about the meaning of consumption function, its graphical representation, and its numerical presentation in the form of average propensity to consume (APC) and marginal propensity to consume (MPC), besides discussing the characteristic properties of MPC, in this sub-unit.

b) Body of the lesson

From the previous lesson we learnt that household consumption expenditure is one of the major components of aggregate demand or aggregate expenditure in an economy. We also know that households spent their income (a part from savings) on consumption of final goods and services for the satisfaction of their basic wants. Consumption may thus be defined as the expenditure by households on final goods and services. (In the meantime asks the students to slate the main demands of household consumptions).

The major determinants of consumption expenditure of individual/national level are:

1. Money income
2. Distribution of income
3. Level of direct taxes
4. Future expectation
5. Rate of interest
6. Level of wealth

Moreover, consumption function shows the relation between the level of consumption and the level of income. It indicates how consumption responds to different levels of income.

The functional relationship between consumption and income is generally expressed as: $C = f(y_d)$ where C = consumption expenditure and y_d = disposable income.

4.5 Evaluation and Follow-Up

a) Evaluation

Make an inquiry of the skill of the students by raising the following questions.

- How do you symbolically represent the relation between the ratio of total

consumption expenditure to total income at a given level of income in an economy?

- Discuss the main properties of MPC.
- Justify the relation between consumption and income in a given economy.
- What are the major determinants of consumption expenditure at individual/national level?

b) Follow-up

- Classify the class on the bases of altitude and capacity.
- Encourage them to take part the discussion.
- Grade and record each of their achievements.
- Follow closely each of their progress and performance.

8.2 SAVING

Periods Allotted: 3 periods

1. Competencies

At the end of this unit, the students will be able to:

- *Explain what saving is;*
- *Identify the determinants of saving;*
- *Show the relationship between consumption and saving.*

2. Sub Content

- Saving function

3. Overview

Saving

The part of income which is not spent on consumption is called saving.

The following points may be noted in the context of saving:

a) Just like consumption, saving directly depends upon income.
b) As income increases, saving also increases but the rate of increase in saving is more than that the rate of increase in income.
c) At lower level of incomes, saving is negative.

There are factors that determines saving at individual/national level and these are:-

1. Level of income 2. Distribution of income

Therefore, the functional relationship between saving and income is called saving function or propensity to save.

4. Teaching-Learning Process

4.1 Suggested Teaching Aids

- Graphs and tables
- Bank book
- Financial documents

4.2 Suggested Teaching Methods

- Brainstorming
- Case studies
- Discussion
- Analyzing data

4.3 Pre Lesson Preparation

- Organize the class in the way to discuss the various financial reports of a bank
- Get the appropriate policy documents issued by the government
- Make them discuss on the function of a bank in their locality

4.4 Lesson Presentation

a) Introduction of the lesson

The part of income which is not spent on consumption is known as saving. Thus we may say, saving is represented by the difference between income and consumption expenditure. It is a major source of funds required by an economy for the purpose of investment. Economies that save a large part of their income are able to make investment at a higher level and thus experience a high rate of economic growth. Motivating the students by discussing with them the significance of saving at the level of an individual as well as an economy, we carry forward our discussion on the concept of saving, its determinants, and its relationship with income. Just like the case of consumption, we talk about saving function and try to make the students understand how saving function is numerically expressed in terms of average propensity to save (APS) and marginal propensity to save (MPS). Make sure, we bring to the notice of our

students that saving function and consumption function are complementary to each other because consumption + saving is always equal to income. Finally, we discuss the relation between consumption and saving by deriving the following two equations:

APC + APS = 1

MPC + MPS = 1

b) Body of the lesson

Since our knowledge about saving is limited, it needs to be defined clearly. In the course of your discussion encourage the students to share experience and exchange views about saving. The part of income which is not spent on consumption is called saving.

In other words by deducting consumption expenditure (c) from income (y), we can get saving (s): mathematically, s = y – c

However, there are factors that determine saving. These are:

1. Level of income
2. Distribution of income
3. Level of wealth
4. Individual characteristics.
5. Future expectation
6. Rate of interest
7. Level of direct taxes

Hence, the functional relationship between saving and income is called saving function (or propensity to save).

4.5 Evaluation and Follow-Up

a) Evaluation

Stabilize the lesson by forwarding the following questions like

- What are the points to be noted in the context of saving?
- Discuss the determinants of saving.
- What is saving function?
- How do you substantiate the relation between saving and income?

b) Follow-up

- Grade and record each activities given to students
- Follow closely each of the progresses in the discussion

8.3 RELATION BETWEEN CONSUMPTION AND SAVING

Periods Allotted: 2 periods

1. Competencies

At the end of this unit, the students will be able to:

- *Show the relationship between consumption and saving.*

2. Overview

Relation between Consumption and saving

As already stated consumption function and saving function are interrelated and counter part of each other. Consumption and saving both depend on the income and the sum total of both of them is equal to the disposable income:

i.e. $C + S = y_d$, where y_d is disposable income.

3. Teaching-Learning Process

3.1 Suggested Teaching Aids

- Graphs and tables
- Bank book
- Financial documents

3.2 Suggested Teaching Methods

- Brainstorming
- Case studies
- Discussion
- Analyzing data

3.3 Pre Lesson Preparation

- Organize the class in the way to discuss the various financial reports of a bank
- Get the appropriate policy documents issued by the government
- Make them discuss on the function of a bank in their locality
- Get a bank statement showing the saving account of an individual
- Prepare diagrams of lists of items used for consumption
- Let students discuss about the advantage of saving and give further explanation on it.

3.4 Lesson Presentation

a) Introduction of the lesson

As it is attempted to illustrate in the previous lessons consumption and saving are to faces of the same coin i.e one cannot be thought without the other.

Some of the important features of their relationships are:

- Consumption and saving both depend on the income.
- The sum total of both of them is equal to the total income.
- Consumption and saving have relations with APC and MPC on one hand and APS and MPS on the other hand respectively.

But it should be underlined that the sum of APC and APS is always equal to unity (1) and the sum of MPC and MPS is always equal to unity (1)

b) Body of the lesson

Consumption and saving both depend on the income and the sum total of both of them is equal to the disposable income.

i.e. $C + S = Y_d$

From this, it also follows that the concepts of APC and MPC are also related with the concepts of APS and MPS respectively.

Relationship between APC and APS

We know $Y_d = C + S$

Dividing both sides by Y_d, we get

$$\frac{Y_d}{Y_d} = \frac{C}{Y_d} + \frac{S}{Y_d}$$

$1 = APC + APS$

or $APC = 1 - APS$, and $APS = 1 - APC$

Relationship between MPC and MPS

We know $Y_d = C + S$

$\Rightarrow$ $\Delta Y_d = \Delta C + \Delta S$

Dividing both sides by ΔY, we get

$$\frac{\Delta Y_d}{\Delta Y_d} = \frac{\Delta C}{\Delta Y_d} + \frac{\Delta S}{\Delta Y_d}$$

$$1 = \frac{\Delta C}{\Delta Y_d} + \frac{\Delta S}{\Delta Y_d}$$

$1 = MPC + MPS$

or $MPC = 1 - MPS$, ad $MPS = 1 - MPC$

We may conclude: *the sum of MPC and MPS is always equal to unity (1)*. The above proved mutual relations can be expressed at a glance, as follows:

$APC + APS = 1$

$APS = 1 - APC$

$APC = 1 - APS$

$MPC + MPS = 1$

$MPS = 1 - MPC$

$MPC = 1 - MPS$

3.5 Evaluation and Follow-Up

a) Evaluation

Make the student involved in the following class activity

- How do you prove the relationship between MPC and MPS? and the relationship between APC and APS?

b) Follow-up

- Grade and record each activities given to students
- Follow closely each of the progresses in the discussion

8.4 INVESTMENT

Periods Allotted: 2 periods

1. Competencies

At the end of this unit, the students will be able to:

- *Define investment;*
- *State the determinants of investment;*
- *Show appreciation about the impact of investment in economic growth.*

2. Sub Content

- Meaning of investment
- Determinants of investment
- Role of investment in economic growth

3. Overview

Investment

In economics the meaning of investment is quite different from its common use made by an ordinary person who speaks of investing when he purchases a piece of land, an old house or security, etc. In economic analysis, these transactions are simply the transfer of ownership rights from one person to the other and as such result in no increase in income and employment. Hence, Investment means an addition to the nations' existing stock of physical (or real) assets like the building of new factories, new machines, equipments as well as any addition to the stock of finished goods on raw materials in the current period. Investment can be induced as well as autonomous.

Induced investment refers to the new investment which is made with the motive of earning profit as it is done in private sector.

Induced investment depends directly upon profit expectations.

- It is income – elastic

In short, induced investment takes place when level of income and demand in the economy goes up.

Autonomous investment:-

It refers to the investment which is made irrespective of level of income as is generally done in government sector.

It is income – elastic, i.e, it is not affected by change in income level. The volume of autonomous investment is the same at all levels of income.

The basic motive for any private-sector entrepreneur to invest is to earn profit, which means excess of revenue over cost of production.

Besides there are factors that determines investments. These are:-

1. Profit expectations: The investment in business depends upon the expectations of the business firms.
   These mainly rely on the rate of interest the one hand and expected rate of return on capital on the other.
   If investment is to be profitable, then the expected rate of profit must not be less than the current rate of interest in the market.
2. Corporate Tax:- it is a tax imposed by the government on corporations to be paid by them out of their revenues.
3. Level of national income:- if national income goes up, induced investment also goes up. Moreover, nations that invest a large part of their income tend to have a rapid growth of output.

4. Teaching-Learning Process

4.1 Suggested Teaching Aids

- The investment policy of FDRE
- Articles on the personal history of a given investor
- Pictures or photographs of a large firm of an investor
- Pictures of a green house

4.2 Suggested Teaching Methods

- Presentation
- Discussion
- Brainstorming
- Case study and group work

4.3 Pre Lesson Preparation

- Organize the class on the basis of their trend and capacity
- Organize the class according to the topic provided and make them involve in the discussion.
- Try to get essential documents and financial reports and present it for discussion.

4.4 Lesson Presentation

a) Introduction of the lesson

Having discussed about consumption and saving in the previous two sections, we now close this unit with a discussion on investment, in the present sub-unit. At the level of an individual, we normally mean by investment an expenditure on the purchase of a house, a piece of land, or shares and debentures, etc. But in the wider context of an economy investment refers to an addition to the stock of productive assets or capital goods such as factory building, machines, equipment, etc. This addition increases the economy's potential output and promotes economic growth in the long run. Also, investment in an economy can be induced (profit motivated) or autonomous (irrespective of the level of income/profit). Normally, investment in the private sector is induced and in the government sector, it is autonomous.

Our focus in this section will be on the concept of investment, its types, determinants, and its role in economic growth. A discussion with our students on what should be the priorities of public investment in Ethiopia? will be appreciated as an additional exercise.

b) Body of the lesson

In economics, investment means an addition to the nation's existing stock of physical (or real) assets like the building of new factories, new machines, equipments as well as any addition to the stock of finished goods or raw materials in the current period.

Induced investment refers to the investment which is made with the motive of earning profit as it is done in private sector. Induced investment depends directly upon profit expectations.

Autonomous investment refers to the investment which is made irrespective of level of income as is generally done in government sector. It is income-elastic, i.e., it is not affected by change in income level.

Determinants of investment

- Profit Expectations
- Rate of Interest
- corporate Tax
- Level of National Income

Role of Public Investment in Economic Growth

Public investment plays an active role in promoting economic growth, especially in case of underdeveloped countries.

- Public investment promotes economic growth directly by developing social overheads and infrastructure, by establishing capital goods industries, basic and key industries, etc.
- Public investment may stimulate economic growth indirectly by providing education, training and research facilities. Public investment on education and training, public health and social security schemes increases efficiency and skill of people, and thereby contributes to economic growth.
- Public investment reduces disparities in income and wealth as well as regional disparities. Thus it helps in achieving economic growth with social justice.

ANSWERS TO ACTIVITES

Activity 8.1

1. $APC = \frac{C}{Y_d}$

   Here Y_d = Birr 10,000 and S = Birr 500

   $C = Y_d - S = 10,000 - 500 =$ Birr 9, 500

   $APC = \frac{9,500}{10,000} = 0.95$

   MPC cannot be calculated as information is incomplete.

2. Since income rises to Birr 12,000; the increase in income $\Delta Y = 12,000 - 10,000 =$ Birr 2,000

   When income is Birr 12,000, saving is Birr 700

   Therefore consumption is 12,000 – 700 = Birr 11,300

   Since earlier consumption was Birr 9,500, increase in consumption,

   $\Delta C = 11,300 - 9,500 =$ Birr 1,800.

   $MPC = \frac{\Delta C}{\Delta Y_d} = \frac{1,800}{2,000} = 0.9$

3. At zero level of income, consumption is Birr 2,000 and as income increases, 80 per cent of it is spent on consumption,

   Therefore $C = 2,000 + 0.8Y_d$

   When $Y_d = 20,000$

   $C = 2000 + 0.8 \times 20000 =$ Birr 18000

4.

   a. Yes, the value of APC can be greater than one. It happens at very low level of income, when minimum consumption required to meet the basic necessities exceeds income.

   b. No, the value of MPC cannot be greater than one, because with increase in income, consumption also rises, however entire increase in income is not spent. Therefore, the value of MPC is >0 but always <1.

c.

National Income Y_d	Consumption C	$APC = \frac{C}{Y_d}$	$MPC = \frac{\Delta C}{\Delta Y_d}$
0	30	∞	-
100	100	1	0.7
200	170	0.85	0.7
300	240	0.80	0.7
400	310	0.775	0.7
500	380	0.76	0.7
600	450	0.75	0.7

5. The following two points are most notable about the relationship between income and consumption:
   a. As income increases, consumption expenditure also increases but by less than the increase in income. In other words, when income increases, consumption expenditure does not increase at the same rate as income. There is tendency of people not to spend on consumption the whole of incremental income, i.e., additional consumption is less than additional income. In other words, MPC is less than 1.
   b. When income is very low, consumption expenditure is higher than income. Its reason is that some minimum level of consumption has to be maintained irrespective of low level income. In such a situation, value of APC (i.e., C/Y_d) becomes higher than 1.
6. Consumption is the major component of aggregate demand. Higher MPC implies increase in consumption demand. Thus higher MPC will lead to increase in production and the level of income, whereas lower MPC will bring down the level of income.

Activity 8.2

1. Yes, the value of APS can be negative when consumption expenditure exceeds income. For example if the income of a family is Birr 5000 and its consumption expenditure is Birr 6000, then saving will be 5000 – 6000 = Birr. –1000, i.e., there is dissaving.

$$\therefore APS = \frac{S}{Y_d} = \frac{-1000}{5000} = -0.2$$

2. We know that MPC + MPS = 1

   Also, MPC cannot be negative.

   ∴The maximum value of MPS = 1, when MPC = 0. However, in reality MPC is always greater than zero, thus MPS is always <1.

3.

   MPC + MPS = 1

   If MPS = 0, ⇒MPC = 1

   MPC = 1 indicates that whole of disposable income is spent on consumption.

4.

Y_d	C	S
1000	1500	- 500
2000	2000	0

$\Delta S = 0 - (-500) = 500$

$\Delta Y_d = 2000 - 1000 = 1000$

$\therefore MPS = \frac{\Delta S}{\Delta Y_d} = \frac{500}{1000} = 0.5$

5.

Here Y_d = Birr 1000, C = Birr 700

$S = Y_d - C = 1000 - 700 =$ Birr 300

$APS = \frac{S}{Y_d} = \frac{300}{1000} = 0.3$

MPS cannot be found from the given information since it does not tell about the change in income/saving.

6. From the given information,

$\Delta S = 100 - 60 =$ Birr 40

$\Delta Y_d = 200 - 100 =$ Birr 100

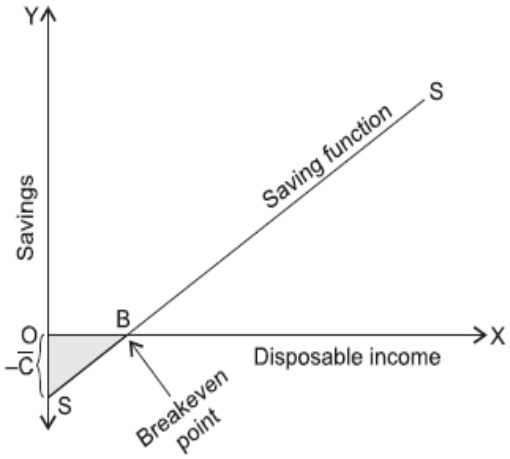
$\therefore MPS = \frac{\Delta S}{\Delta Y_d} = \frac{40}{100} = 0.4$

7.

i. As income increases, saving also increases, but the rate of increase in saving is more than the rate of increase in income.

ii. At lower levels of income, saving is negative.

The following diagram shows the relationship between income and saving.

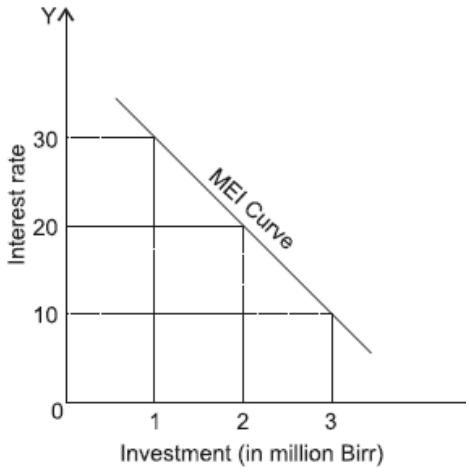


Line SS represents saving function. The saving function line SS crosses the income line at point B which is called breakeven point because at this point savings are zero (or consumption is equal to income). To the left of breakeven point, savings are negative indicating consumption being more than income whereas to the right of breakeven point, savings are positive indicating consumption expenditure being less than income. The shaded area reflects dissavings which is equal to autonomous consumption.

Activity 8.3

1.

We know that inducement to investment depends on whether or not the expected rate of return (i.e., MEI) on additional unit of investment is higher than the market rate of interest (i.e., supply price of capital). If the former is higher than the latter, the investor will go on making the additional investment until MEI becomes equal to rate of interest. This is explained with the help of Fig. 2. In the Figure, MEI curve is negatively sloped which indicates that at lower rate of interest, investment is more. For instance in the Figure at 30% rate of interest, investment is mere Birr 1 million whereas at 10% rate of interest, investment is Birr 3 million.



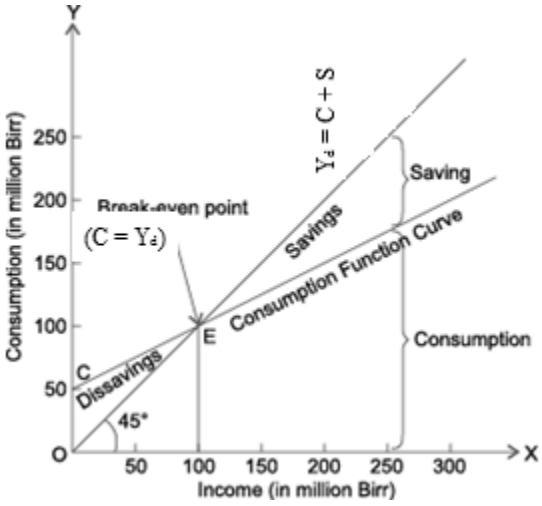
Relation between investment and rate of interest

With increase in volume of investment, MEI declines because on the one hand, with more factories and production, expected rate of profit falls and on the other hand, rate of interest (or supply price of capital) goes up. Thus there is inverse relationship between volume of investment and MEI. That is more the investment, less is MEI. Hence we can say that volume of investment will be more if rate of interest is less and vice versa.

ANSWERS TO REVIEW EXERCISE FOR UNIT 8

Part I

1. Consumption function refers to the whole of the schedule that shows consumption expenditure at various levels of income
   Consumption function demonstrates the fact that, as income increases, consumption also increases but by less than the increase in income.



2. Saving function (propensity to save) it is the functional relationship between saving and income. The saving function is the proportion of income which is saved.
3. This indicates that the consumption and saving cases, which represent the consumption and saving functions are compulsory. Thus if we know an income, we can derive the saving function directly from the consumption function.
4. The relationships between saving and income, are expressed in the following ways.
   1. Marginal Propensity to Save(APS)

   Average propensity to save is the ratio of total saving(s) to disposable income

(Y_d), it is the part of disposable income which is saved. Symbolically,

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

2. Marginal propensity to save (MPS):- it is the ratio of the change in saving (AS) to the change in disposable income (ΔY_d). Symbolically

$$MPs = \frac{\Delta S}{\Delta Y_d}$$

5. Relationship between APS

We know $y_d = C + S$, dividing both sides by y_d, we get

$$\frac{Y_d}{Y_d} = \frac{C}{Y_d} + \frac{S}{Y_d}. \; 1 = APC + APS$$

Or APC = 1- APS, and APS = 1- APC

We may conclude that the sum of APC and APS is always equal to unity(1). This is because income is either consumed or saved.

6. The major determinants of consumption expenditure at individual and natural level.

7. Determinants of saving: These are

- level of income
- distribution of income
- Future expenditure
- Rate of interest
- Level of wealth
- Level of direct taxes
- Individual nature

8. Since income is either consumed or saved, consumption + saving is always equal to income. This indicates that the consumption and saving curves which represent the consumption and saving functions are complementary.

9. You can check from table 10.6 given in the student textbook.

10. Investment means an addition during a predefined current period to national resources such as

    - existing stocks of physical (or real) assets.
    - existing stock of finished goods or raw materials.

11. Investment made by the private sector in the form of new machinery, equipment, building of new factories, inventories.

12. Induced investment is investment which is made with the motive of earning a profit as in the private sector.

13. It is not affected by changes in income level.

14. Determinants of investment are:-

    - Profit expectation
    - Corporate Tax
    - Level of national income.

15. Investment injected by the private sector into the economy, in the form new (additional) machineries and equipment, building of new factories as well as other materials and services increases the productive capacity of the economy.

    The public investment plays an active role in promoting economic growth by

    - developing social overhead and infrastructure
    - establish capital - good industries
    - providing education, training and research facilities
    - reducing disparities in income and wealth distribution among societies as well as regions.

Part II

16. *Private Investment* refers to the investment which is made by the private investors on the purchase of capital assets like machines, equipments, construction of houses, factories, etc. whereas *Public Investment* is that investment which is made by the state and the local authorities. A large amount of investment, in such things as improvement of roads, school buildings, play fields, gas work and so on, undertaken by the state and local authorities is called public investment.

17. Distinction between Induced and Autonomous Investments

    i. Induced investment is income-elastic (i.e., rise in level of national income implies rise in level of investment) whereas autonomous investment is income-inelastic.

ii. Induced investment is positively related to national income but autonomous investment is unrelated to national income.

iii. Induced investment is determined by consideration of profit, whereas autonomous investment is determined by consideration of social welfare.

iv. Induced investment curve is positively sloped (Fig. 3) but autonomous investment curve is horizontal straight line parallel to x-axis (Fig. 4).

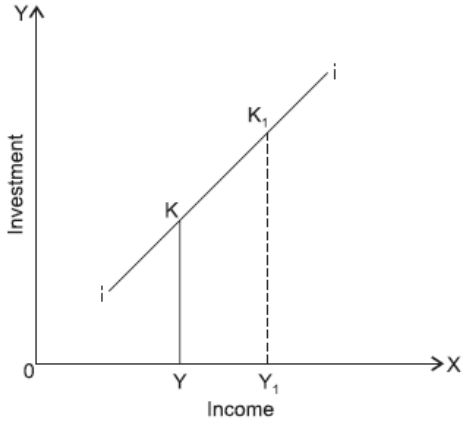


FIG. 3. Induced Investment

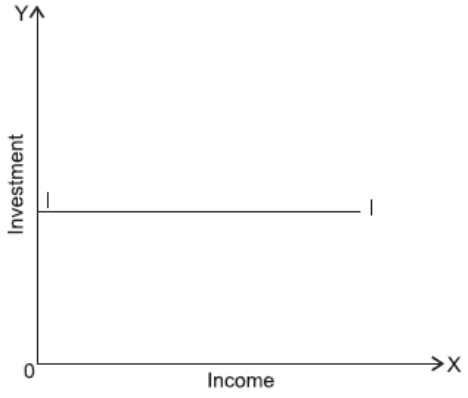


FIG. 4. Autonomous Investment

18. *Distinction between APC and MPC*

i. Total consumption expenditure divided by total income is APC whereas change in consumption expenditure divided by change in income is MPC.

ii. When income increases, both APC and MPC fall but MPC falls more rapidly iii) Between APC and MPC, the value of APC can be greater than 1 when consumption expenditure becomes, greater than income, however MPC is never greater than 1.

19. *Distinction between APS and MPS*

i. Total saving (S) divided by total income (Y) is called APS (APS = S/Y), whereas change in savings (ΔS) divided by change in income (ΔY) is called MPS (MPS = ΔS/ΔY).

ii. The value of APS can be negative when consumption expenditure becomes higher than income. For example, if income is Birr 1,000 and consumption expenditure is Birr 1,200, then saving is –200 (i.e., dissaving). Then APS $\frac{-200}{1,000} = \frac{-1}{5}$ = -0.2. However, MPS can never be negative. Its values always lies between 0 and 1.

20. Marginal propensity to consume (MPC) is the ratio of change in consumption to change in income. Symbolically MPC = $\Delta C/\Delta Y_d$, whereas marginal propensity to save (MPS) is the ratio of change in saving to change in income. It can be expressed as: MPS = $\Delta S/\Delta Y_d$.

Part III

21.True	22.True	23.False	24.False	15.True
26. False	27. True	28. False	29. True	30. False

Part IV

31. A	32. D	33.B	34.C	35. A

Part V

36. C	37. A	38. D	39. B

Part VI

40. Yes. It happens when income is less than the minimum consumption level.
41. Consumption increases with increase in income.
42. MPC + MPS = 1.
43. APC + APS = 1.
44. MPS = 1.
45. MPS = 0.4.
46. MPC = 0.8.
47. APS = 0.35.
48. APC = 0.74.
49. APS = 0.33.
50. APC = 0.75.
51. i. Profit expectations
    ii. Rate of interest.
52. i. Level of income
    ii. Rate of interest.
53. Autonomous consumption.
54. Level of investment decreases.
55. Given the consumption function, $C = 44 + 0.86Y_d$

    Disposable income, $Y_d = 3{,}600$

    a. autonomous consumption is when income is zero thus, it is equal to 44

b. the induced consumption is = total consumption − autonomous consumption

$$= 44 + 0.86 \times 3{,}600 - 44$$

$$= 0.86 \times 3{,}600 = \mathbf{3096}$$

c. Total consumption,

$$TC = 44 + 0.86 \times 3{,}600$$

$$TC = 44 + 3096$$

$$TC = \mathbf{3140}$$

d. Saving = disposable income − induced consumption

$$= 3{,}600 - 3096 = \mathbf{504}$$

e. $APC = \dfrac{\text{induced consumption}}{\text{disposable income}} = APC = \dfrac{by_d}{y_d} = \dfrac{3096}{3600} = 0.86$

$$APS = \frac{\text{total saving}}{\text{disposable}} = \frac{504}{3600} = \mathbf{0.14}$$

UNIT 9 INTERNATIONAL TRADE ANDBALANCE OF PAYMENTS

Periods Allotted: 14Periods

1. Introduction

Just as an individual produces only that commodity which he can produce with greatest skill and efficiency, similarly, a nation produces only those commodities which it can produce with great efficiency and minimum cost. On the other hand, just as an individual cannot produce all commodities he wishes to consume, similarly, a nation cannot produce all commodities which its nationals consume. Each country has to depend on others for the supply of commodities which it cannot produce. This gives rise to international trade, i.e., *the exchange of goods and services among different countries*. Naturally, this exchange of goods and services involves payments by one country to another. A concept broadly related to such payments is known as *balance of payments*. In the present unit we discuss about some select and necessary aspects related to international trade and balance of payments-meaning, nature, causes, benefits, procedures, etc.

2. Unit Objectives

At the end of this unit, the students will be able to:

- ➲ *Realize the concept of balance of payment and identify the parts of balance of payment;*
- ➲ *Understand the restriction on trade and mode of payments;*
- ➲ *Exemplify the impact of foreign trade on the economy.*

3. Main Contents

8.1 INTERNATIONAL TRADE

8.2 BALANCE OF PAYMENT

8.3 IMPACT OF EXCHANGE RATE ON BOP

9.1 INTERNATIONAL TRADE

Periods Allotted: 4 Periods

1. Competencies

At the end of this sub unit, the students will be able to:

- *Define the concept of international trade;*
- *Analyze absolute advantage and comparative advantage;*
- *Explain import and export;*
- *Distinguish the differences between trade surplus, deficit and balance;*
- *Identify and define the basic restrictions on trade;*
- *Identify and explain mode of payment in international trade;*
- *Assess the impact of foreign trade on the economy;*
- *Define revaluation and devaluation fixed exchange rates;*
- *Explain what floating exchange is;*
- *Distinguish the differences between appreciation and depreciation floating exchange rate.*

2. Overview

International Trade

Due to variations in the distribution of resources in level of technology, difference in demand, etc, countries remain to be not self-sufficient. They should exchange goods and services among themselves across territories. These exchanges of goods and services in aggregate is called international trade. All trade partners in the international trade do not benefit equally. More developed countries benefit more than the developing countries due to a number of factors. As a result, balance of payments of countries tend to be either surplus or deficit.

The present condition of international trade can be attributed by the following common features: -

1. Un equal distribution of natural resources.
2. Un equal distribution of population.
3. Un equal distribution of capital.
4. Different in level of technological development.
5. Increasing returns to scale.
6. Difference in demand

3. Teaching-Learning Process

3.1 Suggested Teaching Aids

- Articles on trade (import export)
- Charts
- Sectorial reports
- Figures and tables

3.2 Suggested Teaching Methods

- Brainstorming
- Case studies
- Discussion
- Analyzing data

3.3 Pre Lesson Preparation

Get ready in advance the following materials

- Annual report of the ministry of finance and economic development
- Organize the class on the bases of their capacity
- Get different articles on balance of payment.

3.4 Lesson Presentation

a) Introduction of the lesson

Having motivated our students for a study of international trade, as suggested in the *Start-up Activity*, we give them a formal definition of international trade, discuss about the various factors that determine international trade, and encourage them to identify and analyse its advantages. In order to make them understand the basis (causes and foundations) of international trade, we discuss in detail the two relevant principles, namely, the theory of absolute advantage and the theory of comparative advantage, making use of appropriate illustrations, preferably with Ethiopian references. Some associated concepts such as trade surplus, trade deficit and trade restrictions also make a part of the present sub-unit.

b) Body of the lesson

Factors determining International trade

Some of the factors which are responsible for international specialisation, and hence international trade, are identified as follows:

1. Unequal Distribution of Natural Resources: Natural resources are not equally distributed over the world. These resources are in the form of agricultural land, mineral deposits, forests, seas, rivers, climatic conditions, etc. For example,

Ethiopia is rich in natural resources. On the other hand Japan is deficient in natural resources. A land-abundant country may specialise in production of agricultural products, minerals, timber, fish, etc.

2. Unequal Distribution of Population: Population is the source of labour supply. Labour scarce countries prefer to import labour intensive products from labour abundant countries.

3. Unequal Distribution of Capital: Capital is probably the most important factor of production in the sense that in the absence of capital all other resources may remain inactive. Capital means man-made machines, equipment, etc. A country rich in capital, exports capital intensive goods. Japan, USA, Germany, UK, France, etc., are capital rich countries and thus export machines and equipments.

4. Level of Technological Development: Technology is another important aspect of production. Countries using sophisticated technology specialise in technology goods like computers, telecommunication equipment, aeroplanes, etc. Those countries who do not have advanced technology have no option but to import technology goods from technology rich countries.

5. Increasing Returns to Scale: The countries which are in a position to produce goods on a large scale enjoy significant reduction in per unit cost as they produce more. This gives these countries competitive advantage over its rivals in export market and helps them in specialising these particular goods.

6. Difference in Demand: Demand is largely a function of income levels and taste patterns. In high income countries demand is high and so is price. In low income countries demand is low and so is price. Naturally, high price country would like to import from low price countries. The producers in low price country would like to export to higher price countries and increase their profit. Similarly, goods move to the countries where people have tastes for them because producers can get high price of their goods from the people of these countries.

Advantages of International trade

International trade is an economic phenomenon of vital importance and has always played an important role in the economic life of nations all through the world history. We identify below, some of the major advantages of international trade.

1. Variety of Goods: International trade enables a country to consume a large variety of goods than would be available otherwise to its population.

1. Availability of Raw Material and Specialised Goods: A country is able to acquire those commodities through international trade which they cannot produce at

home with any amount of effort. For examples, raw material and mineral resources are not available in all the countries. Raw materials, which are not available within a country, can be imported through international trade. Similarly, many commodities

2. Can be grown only under particular climatic conditions or in certain soils. Most of the countries of the world, therefore, depend upon international trade to get hold of these commodities.

2. Specialisation and Division of Labour: International trade enables different countries of the world to exploit the advantages of division of labour and specialisation.

3. Increase in Efficiency through Widening of Market: International trade is a means by which efficiency in the economy increases. International trade widens the extent of the market. Consequently, every country attempts to produce goods in large quantities. This induces production on large scale and thereby generates economies of scale.

4. Cheaper Goods: International trade lowers the prices of goods and services all over the world due to lower cost of production.

5. Competition: International trade encourages countries to compete with each other. Competitiveness stimulates productivity. It also reduces monopolistic exploitation of consumers.

6. Optimum Allocation of Resources: International trade leads to optimum allocation of resources. Under a system of free trade, a country can sell its products in those markets where it can get the best price for its products, and buy its requirements from the cheapest source of supply.

7. Vent for Surplus Production: International trade enables every country to dispose of its surplus production. As a result, a country is able to avoid the possibility of deflationary pressure which may arise because of unsold stock of goods.

8. Possibility of Economic Development: International trade can be an important vehicle for promoting economic development. Underdeveloped countries are able to initiate economic development by importing machinery and technical knowhow from developed countries.

3.5 Evaluation and Follow-Up

a) Evaluation

Make the students ready to discuss this critical issues like:

- What are the factors responsible for international specialization?

b) Follow-up

Observe and assist them while they are discussing about the issue.

9.2 BALANCE OF PAYMENT

Periods Allotted: 7Periods

1. Competencies

At the end of this sub unit, the students will be able to:

- *Define balance of payment;*
- *Define and identify the components of current account;*
- *Define trade balance and show how trade balance and show how trade balance is computed;*
- *Define net service;*
- *Define current account balance:*
- *Identify the components of current account balance.*

2. Overview

Start-up Activity

A start to this unit may be done by raising the following (or similar) questions for a discussion among the students:

What do you mean by an open economy?

Is Ethiopia an open economy or a closed economy?

What are main items of export/import in case of Ethiopia?

Do we export coffee to other countries using a barter system?

Can you make payment for buying a camera from a shop in Japan, in Birr?

Do you think an Ethiopian company will accept payment in Indian Rupee for supplying coffee to India?

Balance of Payments

The principal tool for the analysis of the monetary aspects of international trade is the balance of international payments statement, which is also known as the balance of payments (BOP). BOP is a systematic record of all international economic transactions, visible and invisible of a country during a given period, usually a year. It is a device for recording all the economic transactions within a given period between the residents of a country and the residents of other countries.

Balance of payments accounts are prepared using the double entry system of accounting and when the sum of all debits equals the sum of all credits then the accounts are always in balance.

Similarly, if a transaction earns foreign currency for the country it is called a credit and is recorded using a plus sign. On the other hand, if a transaction refers to a spending of foreign currency by the country it is called a debit and is recorded in BOP accounts using a minus sign. In other words, all receipts of foreign currency are credit items, whereas all payments of foreign currency are debit items.

Eventually, if the total of the debit items and the total of the credit items are equal in value, the country's international payments are balanced.

3. Teaching-Learning Process

3.1 Suggested Teaching Aids

- Picture of a market place
- Charts
- Tables and figures
- Sectorial reports

3.2 Suggested Teaching Methods

- Brainstorming
- Case studies
- Discussion
- Analyzing data

3.3 Pre Lesson Preparation

Get ready in advance the following materials

- Annual report of the ministry of finance and economic development
- Organize the class on the bases of their capacity
- Get different articles on balance of payment.

3.4 Lesson Presentation

a) Introduction of the lesson

We begin this section by making the students understand clearly the meaning of the concept of balance of payments and the difference between visible trade and invisible trade. The crux of the section International Trade and Balance of Payments however lies in a detailed explanation of the two components (current account and capital account) of balance of payment account, and their different sub-components such as net services, net transfers, country's assets held abroad, assets held by foreigners in the country, etc. The concepts of current account balance and capital account balance must also be included in our discussion. A brief reference to the concept of statistical discrepancy, as used in capital account, is also a must. Practical work suggested as activities at the end of this sub-unit will further help our students in a better understanding of balance of payments in the specific context of our country.

b) Body of the lesson

Countries of the world are declared to be politically independent and equal in status. But in reality, there is disparity between governments and yet no country is completely self-sufficient. That is, no country produces all the goods and services that it requires. As a result, there is an interdependence and close inter- state relationship between countries in defending their security. Usually they are ready to respond collectively to their common problems.

There are differences between states in their economic stances measured by many factors like availability of resources, technological know-how's and skilled human resource etc. Thus it is impulsive for countries to specialize in production. This sort of specialization gives rise to exchange of goods across geographical boundaries of the countries. This is called international trade or foreign trade. You are supposed to discuss and enumerate the factors disadvantages and advantages of international trade.

3.5 Evaluation and Follow-Up

a) Evaluation

Stabilize the lesson by asking the following questions like

- What is balance of payment?
- What are the components of balance of payment?

b) Follow-up

Grade and record the achievements of the students in each activities.

9.3 FOREIGN EXCHANGE RATES

Periods Allotted: 3Periods

1. Competencies

At the end of this sub unit, the students will be able to:

- *Explain import and export;*
- *Distinguish the differences between trade surplus, deficit and balance;*
- *Identify and define the basic restrictions of trade;*
- *Assess the impact of foreign trade on the economy;*

2. Sub Contents

8.3.1 Impacts of exchange rate on BOP

3. Overview

Foreign Exchange rates

Every country has its own currency which is used as a medium of exchange with in the national boundary of that country.

Particularly payments across the border give rise to a new situation of international payments. Thus, currency which is used for making international payments is called foreign exchange. It refers to all currencies other than the domestic currency of a given country. But the problem lies in determining the rate of exchange between currencies of different countries. The price of one currency in terms of another is known as foreign exchange rate.

There are two types of exchange rate systems

Fixed exchange rate:- It is the rate officially fixed (or pegged) interms of gold or any other currency by the government and adjusted only infrequently. In this system foreign central banks stand ready to buy and sell their currencies at a fixed price.

Floating exchange rate:- It is the rate which is determined by forces of supply and demand in the foreign exchange market. There is no (official) government intervention. Here the value of accuracy is left completely free to be determined by market forces of demand and supply of foreign exchange.

Naturally, a change in the value of the currency of the country in terms of foreign currency has an impact on its balance of payments.

4. Teaching-Learning Process

4.1 Suggested Teaching Aids

- Pictures of international currencies
- Charts and figures of international trade
- References on international trade.

4.2 Suggested Teaching Methods

- Open ended questioning
- Debate
- Group discussion
- Presentation

4.3 Pre Lesson Preparation

- Get ready pictures of international currencies (when it is possible)
- Prepare the proper articles in relation to the topic to be discussed
- Organize the class and enable them to participate in the discussion.

4.4 Lesson Presentation

a) Introduction of the lesson

This last part of the unit deals with the concepts of foreign exchange and foreign exchange rates. Telling the students about the need and importance of the concept of foreign exchange in international trade and other international economic transaction, we explain that the price of one currency in terms of another is known as foreign exchange rate. We discuss about the different types of foreign exchange rate systems, particularly fixed exchange rate and floating exchange rate. Highlighting that the value of a currency in terms of foreign currency may increase or decrease under both these systems, we must ensure that students clearly understand the difference between revaluation and appreciation; and between devaluation and depreciation. Do not miss the opportunity to update the knowledge of our students regarding the following facts (and others) concerning Ethiopia, while working on this sub-unit:

- Currently, the exchange rate of Birr is determined by the managed floating exchange rate system, which is a hybrid of fixed and floating systems.
- Ethiopian Birr is one of the soft currencies.

b) Body of the lesson

As we tried to demonstrate in the previous topic, each country has its own political and economic independence. This would guarantee its authority to command its own currency within its national boundary. Any of these currencies are now used for making international payments that is called foreign exchange. However, the economic disparity between countries resulted in differences in the weight of currencies. Some currencies gain dominance over others and monitored the international market. Nevertheless, motives students and make them discuss the factors that determine the price of one-currency interms of the other. This is known as foreign exchange rate. At the same time, the two types of exchange rate systems named as fixed and floating exchange rate should also be discussed. However, the value of currency interms of foreign currency may increase or decrease under both systems of exchange rate.Similarly, under a fixed exchange rate, when a country raises the value of its currency interms of foreign currency, it is called revaluation. On the other hand, when a country brings down the value of its currency against foreign currencies it is called devaluation.

4.5 Evaluation and Follow-Up

a) Evaluation

Stabilize the lesson by asking the following questions like

- What is exchange rate?
- What are the two types of exchange rate? and discuss each of them.
- Discuss the impacts of exchange rate on BOP.

b) Follow-up

- Grade and record each of the achievements of the students
- Encourage the students to take part in the discussion
- Observe and monitor the progress of the discussion

ANSWERS TO ACTIVITES

Activity 9.1

1. Ethiopia's *major export* items are: coffee, gold, leather products, beeswax, canned vegetables, tea, sugar, cotton and oilseeds. Ethiopia's *major imports* include: food and live animals, petroleum and petroleum products, chemicals, machinery, civil and military aircraft, transport and industrial capital goods, agricultural equipments, and motor vehicles.

2. **Ethiopia's major trading partners**

   Exports–
   Purchasingapproximately22percentofEthiopia'sexportsin1997,GermanyisEthiopia 'slargest trading partner. Along with many other countries of EU-such as Italy, France, and the United Kingdom-Germany has steadily increased its quantity of Ethiopian imports. In 1992, for instance, the countries of the EU purchased approximately Br203.3 million worth of Ethiopian exports, whereas this figure increased dramatically to Br1,351.5 million in 1996. Similarly, the United states has increased its quantity of Ethiopian imports from Br19.6 million in 1992 to Br169.9 million in 1996. Other major importers of Ethiopian products include Saudi Arabia, China, and Japan, the latter of which purchased 12 percent of all Ethiopian exports in 1997. Ethiopia's largest trading partner in Africa is Djibouti, a neighbouring country through which Ethiopia must conduct all of its importing and exporting since Ethiopia is landlocked and thus lacks a port of its own.

   Imports – Ethiopia's imports have followed the same pattern as its exports in the 1990s, with the percentage of imports from the countries of the EU and the United States steadily increasing. In 1991, imports worth Br364.7 million were purchased from the countries of the EU, while this figure increased to Br2,006.7 million in 1995. In the same year, a similar value (Br2, 300.7 million) of imports came from various countries of Asia and the Middle East, including Japan, Saudi Arabia, and China. With imports to Ethiopia equaling Br146.8 millionin1995, Djiboutiis Ethiopia's number-one regional exporter, while Kenya is second.

3. Ethiopia's balance of trade deficit can be largely explained by the unequal terms of trade between agricultural commodities (the country's major exports) and capital goods (Ethiopia's major imports). International markets accord a higher price to commodities that are manufactured-or "value-added"-than to those that are in their raw form. Since Ethiopia is mainly an exporter of raw materials and importer of capital goods, it is continuously facing the problem of trade deficit.

Activity 9.2

1. The given table indicates that:
   i. the exports (as percent of GDP) have been decreasing continuously from the year 2004/05 to 2007/08
   ii. the imports (as percent of GDP) grew from 2003/04 to 2005/06, after which there is a continuous decline
   iii. the trade balance stood at –23.7 percent of GDP in 2005/06 and improved to –20.1 percent in 2007/08
   iv. the deficit in current account balance decreased from 8.9 percent of GDP in 2005/06 to 4.4 percent in 2006/07, but again increased to 5.6 percent in 2007/08
2. The given table shows that:
   i. the current account has continued to show deficit during the entire period. However the deficit decreased from 1999/2000 to 2001/02; experienced a sharp increase in 2002/03; but again declined during 2003/04 and 2004/05
   ii. the balance of capital account has been fluctuating—showing a deficit during 1999/2000, 2002/03 and 2003/04; and a surplus during 2000/01, 2001/02 and 2004/05
   iii. the overall balance indicates a deficit during all the years, other than 2000/01 and 2001/02

Activity 9.3

1. Prior to 1993, the official rate of the Ethiopian birr was pegged (fixed) to the U.S. dollar at US$1:Br5.000. Since a pegged exchange rate does not necessarily represent a currency's true market value, the EPRDF replaced and the fixed exchange rate system with a floating exchange rate system. The value of the birr is thus determined in an inter-bank market where the national bank sells foreign currency to private banks, the Commercial Bank of Ethiopia, and large corporations.

Exchange rates Birr (Br) per US$1	
2008 (est.)	9.5700
2007	8.9600
2006	8.6900
2005	8.6800
2004	8.6356
2000	8.3140
1999	8.1340
1998	7.5030
1997	6.8640
1996	6.4260
1995	6.3200

The value of the Birr in relation to the U.S. dollar has steadily depreciated since the implementation of the floating exchange system. In 1995, for instance, the exchange rate was Birr 6.3200 per US$1 which decreased to Birr 9.5700 per US$1 in 2008.

ANSWERS TO REVIEW EXERCISE FOR UNIT 9

Part I

1. International trade or foreign trade. We may say, international trade refers to exchange of goods and services among different Countries of the world.
2. Factors determining international specialization in production of goods: Some of the factors which are responsible for international specialization, and hence international trade, are identified as follows:

A. **Unequal Distribution of Natural Resources:** Natural resources are not equally distributed over the world. These resources are in the form of agricultural land, mineral deposits, forests, seas, rivers, climatic conditions, etc. For example, Ethiopia is rich in natural resources. On the other hand Japan is deficient in natural resources. A land-abundant country may specialise in production of agricultural products, minerals, timber, fish, etc.

B. **Unequal Distribution of Population:** Population is the source of labour supply. Labour scarce countries prefer to import labour intensive products from labour abundant countries.

C. **Unequal Distribution of Capital:** Capital is probably the most important factor of production in the sense that in the absence of capital all other resources may remain inactive. Capital means manmade machines, equipment, etc. A country rich in capital, exports capital intensive goods. Japan, USA, Germany, UK, France, etc., are capital rich countries and thus export machines and equipments.

D. **Level of Technological Development:**

Technology is another important aspect of production.

Countries using sophisticated technology specialise in technology goods like computers, telecommunication equipment, aeroplanes, etc. Those countries who do not have advanced technology have no option but to import technology goods from technology rich countries.

E. **Increasing Returns to Scale:** The countries which are in a position to produce goods on a large scale enjoy significant reduction in per unit cost as they produce more. This gives these countries competitive advantage over its rivals in export market and helps them in specialising these particular goods.

F. **Difference in Demand:** Demand is largely a function of income levels and taste patterns. In high income countries demand is high and so is price. In low income countries demand is low and so is price. Naturally, high price country would like to import from low price countries. The producers in low price country would like to export to higher price countries and increase their profit. Similarly, goods move to the countries where people have tastes for them because producers can get high price of their goods from the people of these countries.

3. Theory of Absolute Advantage:

This theory is also known as *theory of absolute advantage*. According to this theory, the fundamental basis of international trade is the difference in absolute cost. Absolute cost difference arises when one country can produce a commodity at a lower cost compared to another country and the other country can produce some other commodity at a lower cost compared to the first country. Thus, absolute cost difference arises when each of the two countries can produce some commodities at an absolutely lower production cost than the other. This may be because each country possesses a special kind of soil, climatic conditions, human resources or technology. Consequently, a country tends to specialize in producing that particular commodity which it can produce at absolutely lower cost and exports it to other

countries and imports the other commodity which it produces at a higher cost. To put it differently, if one country has absolute advantage (in cost of production) in the production of one commodity and other country has absolute advantage in the production of other commodity, each country should specialize in the production of that commodity where it enjoys absolute advantage(for example see table 8.1 in the text)

4. Comparative Cost Advantage

Comparative difference in costs means that a country can produce both the goods at absolutely lower cost than the other country but her cost is comparatively lower in the production of one good as compared to the other good. On the other hand, the other country produces both the goods at an absolutely higher cost, but it has less comparative disadvantage in the production of one good, while it has greater comparative disadvantage in the production of the other good.

According to the theory of comparative cost, a country tends to specialize in the production of those goods in which it has lower comparative cost. To put it differently, a country tends to specialize in the production of those goods in which it has got greater comparative advantage. Thus, a country would produce and export the product in which its advantage is more, or in which it has comparative advantage, and import the commodity in which its advantage is less, or in which it has comparative disadvantage (for example see table 8.2 in the text)

5. Trade Balance:

The difference between export and import of goods is called trade balance. Export and import of goods is also called *visible trade*, since goods are visible items. If total receipts on the current account of balance of payments are more than the total payments, there is said to be a surplus in current account. But if payments exceed receipts, current account is said to be in deficit. The deficit in the current account of balance of payments means that the country has, during the year, spent more than what it earned in the form of foreign exchange. But how can a country spend more than what it has earned? It can do so only by borrowing from others, or finding some other avenues to get foreign exchange. These borrowings, loans, investments, etc., form the capital account of balance of payments.

6. Trade restrictions

As a measure towards protection of domestic industries of a country, sometimes restrictions are imposed on foreign trade, particularly imports. These restrictions are broadly of two types.

A. **Tariff Restrictions:**

Tariff restrictions are in the form of taxes on import of goods, called as custom duty or import duty. Such taxes raise the price of imported goods in the domestic market. These high prices of imported goods are expected to reduce their demand in the domestic market and thus act to restrict imports.

B. **Quantitative Restriction (Import Quota):**

These restrictions take the shape of fixing the maximum quantity of goods that is permitted to be imported. Thus, the government may determine the total import quota of goods, i.e., the total amount of goods that can be imported and allot this quota to various importers. Nothing beyond the quota is allowed to be imported. This naturally limits the quantity of imports.

7. International trade has a very significant role to play in economic growth of the nations. The following points indicate how foreign trade acts as an engine of growth for an economy.

A . Since international trade results in increasing output and income of the nations, it obviously leads to economic growth. Thus, through trade, the world economy can achieve a more efficient allocation of resources and a higher level of well-being of its people.

B. The underdeveloped countries can take advantage of the superior technology of advanced countries. It is possible only when the former import capital goods from the latter.

C. When underdeveloped countries establish trade relations with advanced countries, the former are not only able to procure advanced technology but the latest technical know-how and managerial skills, which are extremely important for growth.

Thus, if each nation specialises according to its resources endowments and enters into trade with other nations, the world economy and economy of each of these trading partners can realize greater output and income and can maintain a higher level of economic growth.

8. Impact of Foreign Trade on GDP

We know that

GDP = C + I + G + (X – M)

where,

C = Consumption expenditure by households

I = Investment expenditure by firms

G = Government expenditure on goods and services

and X – M = Exports – Imports = Net exports

There are three possible situations.

I. When exports are more than imports (X > M), i.e., the country is having a trade surplus, GDP rises.

II. When imports are more than exports (X < M), i.e., the country is having a trade deficit, GDPfalls.

II. When exports and imports are equal (X = M), i.e., the country is having a trade balance, GDPis not affected by foreign trade.

9. The principal tool for the analysis of the monetary aspects of international trade is the balance of international payments. This statement, also simply known as the 'balance of payments' (BOP), is a systematic record of all international economic transactions, visible and invisible, of acountry during a given period, usually a year. In other words, the statement is a device for recording all the economic transactions within a given period between the residents of a country and the residents of other countries.

The balance of payment account is divided into two parts:

A. Current Account

B Capital Account

A. Current Account

The current account records inflows and outflows of foreign currency resulting from flow of goods, flow of services and unrequited (or unilateral) transfers. Accordingly, current account has three parts— trade balance, net services, and net transfers.

I. **Trade Balance:** The difference between export and import of goods is called trade balance. Export and import of goods is also called visible trade, since goods are visible items.

II. **Net Services:** The difference between export and import of services is called net services. There are many services that are made use of in the international trade, for example shipping, insurance and banking services. Ships have to be hired for transporting goods from one country to another. The merchandise carried by the ships has to be insured for any loss and damage in transit. Banking services are used to facilitate receipts from and payments to foreign dealers. When foreign ships (e.g., ships from some company in USA) are hired by a country to bring the goods imported from USA then, apart from payment for import of goods, payment has also to be made to US shipping company in foreign currency. Conversely if foreign countries use services of say Ethiopian insurance companies and banks, Ethiopia will receive foreign currency from such countries on account of these services. Nowadays tourism and travel among the countries has also become an important item on balance of payments. When foreign tourists come to Ethiopia, they bring in foreign currency with them and convert it into our currency to spend it in our domestic market. The country thus receives foreign currency. Similarly, when Ethiopian tourists go abroad, they have to convert Ethiopian currency into foreign currency to spend it abroad. This involves an outflow or payment of foreign exchange.

The sum total of above mentioned three components—trade balance, net services, and net transfers— is called balance of payments on current account or simply current account balance (CAB).

Remark: If total receipts on the current account of balance of payments are more than the total payments, there is said to be a surplus in current account. But if payments exceed receipts, current account is said to be in deficit. The deficit in the current account of balance of payments means that the country has, during the year, spent more than what it earned in the form of foreign exchange. But how can a country spend more than what it has earned? It can do so only by borrowing from others, or finding some other avenues to get foreign exchange. These borrowings, loans, investments, etc., form the capital account of balance of payment.

B. Capital Account

The capital account of BOP records all such transactions between residents of a country and the rest of the world which cause a change in the assets or liability status of residents of a country or its government. It represents international flow of loans and investments which bring a change in country's foreign assets and liabilities. Capital account is made up by two major parts—country's assets held abroad (which are recorded as a negative entry) and assets held by foreigners in the country (recorded as

positive entry). The sum total of these two components gives balance of payments on capital account or simply capital account bala*nce*.

Various forms of capital account transactions are as given below:

i. Private Transactions*:* These are transactions which affect assets and liabilities by individuals, businesses and other non-government entities.

ii. Official Transactions*:* These include transactions affecting assets and liabilities by Government and its agencies.

iii. Direct Investment*:* It means purchasing an asset and at the same time acquiring control of it, e.g., acquisition of a firm in one country by a firm in another country or purchase of a house by individuals abroad.

iv. Portfolio Investment*:* It is the acquisition of an asset that does not give the purchaser control over assets. Examples are purchase of shares in a foreign country or purchase of bonds issued by a foreign government.

Remark: Many times there are some omissions from and errors in, making of balance of payment accounts. Such omissions and errors are known as statistical discrepancy. Statistical discrepancies are normally included in the capital account so as to make the net capital account balance equal to and opposite of the net balance on current account.

10. The price of one currency in terms of another is known as foreign exchange rate. It is the rate at which one unit of a foreign currency is exchanged for domestic currency. Since there is symmetry between two currencies, exchange rate can be quoted in two ways i.e. foreign currency expressed in terms of domestic currency or domestic currency expressed in terms of foreign currency.

Fixed Exchange Rate

Fixed exchange rate is the rate which is officially fixed (or pegged) in terms of gold or any other currency by the government and adjusted only infrequently. Only a very small deviation from this fixed value is possible. In this system foreign central banks stand ready to buy and sell their currencies at a fixed price. In case there is disequilibrium in balance of payment causing excess demand or excess supply of foreign exchange, Central bank of the country has to buy or sell required quantities of foreign exchange to eliminate the excess demand or supply.

Remark: The value of a currency fixed in terms of another currency or in terms of gold is known as the parity value of the currency.

Floating Exchange Rate

Floating exchange rate is the rate which is determined by forces of supply and demand in the foreign exchange market. There is no official intervention. Here the value of a currency is left completely free to be determined by market forces of demand and supply of foreign exchange. Under this system, the central banks, without intervention, allow the exchange rate to adjust so as to equate the supply and demand for foreign currency. The foreign exchange market is busy at all times by changes in the exchange rate. Just like the market price of a commodity, the exchange rate of a currency is determined by demand and supply of foreign exchange in a freely fluctuating exchange market.

11. The value of a currency in terms of foreign currency may increase or decrease under both the systems of exchange rate, i.e., fixed as well as floating. Under the fixed exchange rate system, these changes take place as a result of a policy decision by the monetary authority (government) of the country; whereas under the floating exchange rate system, these changes are the result of changes in demand and supply of the currency in the free exchange market.

    Under a fixed exchange regime, when a country raises the value of its currency in terms of foreign currency, it is called revaluation. On the other hand, when a country brings down the value of its currency in terms of foreign currency it is called devaluation. For example, in 1983 E.C. the Ethiopian government devalued the exchange rate of Birr from Birr 2.07 per US Dollar to Birr 5 per US Dollar. Thus, because of devaluation, more Birr are required to buy one US Dollar, i.e., the value of Birr interms of Dollar has gone down.

    Under the floating exchange rate system, an increase in the value of a currency in terms of foreign currency is called appreciation. On the other hand, a fall in the value of a currency in terms of foreign currency is called depreciation.

12. Impacts of Foreign Exchange Rate on BOP

    Balance of payments account of a country largely indicates the monetary aspect of its foreign trade, i.e., exports and imports. Also exports earn foreign currency for a country, whereas imports imply spending of foreign currency by the country. Naturally, a change in the value of the currency of the country in terms of foreign currency has an impact on its balance of payments. An increase in the value of the currency of a country makes its imports cheaper, and exports costlier (for the foreign countries). In such a situation imports increase and exports decrease, thus leading to a trade deficit, i.e., unfavorable balance of payments. On the other hand, a decrease in the value of the currency of a country in terms of foreign currency makes its imports costlier (for the local buyers) and exports cheaper (for the foreign buyers). In this situation imports decrease and exports increase, thus leading to a trade surplus or favorable balance of payments.

Part II

13. *Difference between Appreciation and Revaluation* – When a country raises the value of its currency in terms of foreign currency under a fixed rate regime, it is called revaluation. The effect of revaluation is the same as that of appreciation. Although both appreciation and revaluation convey the same thing, i.e., a rise in the value of domestic currency in terms of foreign currency but they take place in different regimes. Revaluation takes place by government order in Fixed Exchange Rate regime whereas appreciation occurs in Flexible Exchange Rate regime in a free exchange market depending upon forces of demand and supply of currency.

14. *Difference between Depreciation and Devaluation* – Devaluation means to reduce parity rate of its currency with respect to gold or any other currency by the government. When a country brings down the value of its currency in terms of foreign currency by a government order, it is called devaluation. The effect of depreciation is the same as that of devaluation. Although both depreciation and devaluation mean the same thing, i.e., a fall in the value of domestic currency in terms of foreign currency yet the notable difference between the two is that devaluation takes place in Fixed Exchange Rate regime whereas depreciation occurs in Flexible Exchange Rate regime in a free exchange market.

15. *Difference between Fixed Exchange Rate and Floating Exchange Rate* – Fixed exchange rate is the rate which is fixed by the government of a country in terms of gold or any other foreign currency; whereas floating exchange rate is determined by forces of supply and demand in the free foreign exchange market.

16. *Difference between Balance of Trade and Balance of Payments*

Balance of Trade	Balance of Payments
1. Balance of trade is a narrow concept. It is a part of balance of payments.	1. Balance of payments is a broad concept. It includes balance of trade.
2. Balance of trade deals with only visible and material goods.	2. Balance of payment deals with both visible and invisible goods.
3. Balance of trade is not as significant as balance of payments for the economic analysis.	3. Balance of payment is more significant and every country takes it into the consideration while formulating its economic policy.
4. Balance of trade is only the partial record of the foreign trade of the country.	4. Balance of payment is the complete record of the foreign trade of the country.
5. Unfavourable balance of trade can be recovered out of the favourable balance of the payment.	5. Unfavourable balance of payment cannot be recovered out of the favourable balance of trade.

Part III

17.False	18.True	19.True	20.False	21.False
22.True	23.True	24.True	25.False	26.True

Part IV

27. E	28. A	29. F	30. B	31. C	32. D

Part V

33.C	34.D	35. B	36. A	37.B

Part VI

38. i. Distribution of capital
    ii. Level of technological development.
39. i. Theory of absolute advantage
    ii. Theory of comparative advantage.
40. i. Coffee
    ii. Hides and skins.
41. Fall in GDP.
42. Trade balance, net services, and net transfers.
43. Current account and capital account.
44. Outflow of foreign currency.
45. Net services.
46. Trade balance = Exports – Imports.
    $\Rightarrow -400 = 300 - \text{Imports}$
    $\therefore$ Value of imports = 300 + 400
    = Birr 700 million
47. i. Country's assets held abroad
    ii. Assets held by foreigners in the country.
48. Imports will decrease.
49. Omissions from and errors in, making of BOP accounts.
50. The value of a currency fixed in terms of another currency or in terms of gold is known as parity value of the currency.
51. Exports and imports of material goods.
52. The difference between export and import of services is called net services.

UNIT 10 MACROECONOMIC POLICY INSTRUMENTS

Periods Allotted:7 periods

1. Introduction

Every economy aims at defining and achieving certain well-defined targets relative to its national income and output. Also, economies throughout the world strive for full employment, stability in prices and equality in distribution of income and wealth.

Direct the students to answer the following questions in a whole-class brainstorming session:

- *How can nations plan to achieve these broad goals?*
- *How are the obstacles to their targets removed?*
- *What sort of macroeconomic policies do they adopt? How do such policies work?*

This unit gives the students introductory-level answers to some of these questions. Specifically, they learn about the objectives, types and instruments of major macroeconomic policies.

Macroeconomics deals with the behavior of an economy as a whole with respect to output, income, employment, general price level and other aggregate economic variables.

2. Unit Objectives

At the end of this unit, the students will be able to:

- ➲ *Realize the difference among fiscal, monetary and income policy;*
- ➲ *Distinguish the difference between expansionary, fiscal and expansionary monetary policy; and*
- ➲ *State income policy.*

3. Main Contents

9.1 DETERMINATION OF LEVELS OF OUTPUT, PRICES AND EMPLOYMENT

9.2 MACROECONOMICS POLICIES

10.1 DETERMINATION OF LEVELS OF OUTPUT, PRICES AND EMPLOYMENT

Periods Allotted: 3 periods

1. Competencies

At the end of this sub-unit, the students will be able to:

- *Define the terms of aggregate demand and aggregate supply;*
- *Identify the factors that determine aggregate demand and supply;*
- *Examine the interaction between aggregate demand and supply.*

2. Overview

Determination of Levels of Output, Prices and Employment

The level of overall economic activity in an economy particularly the level of output, prices and employment can be determined by examining the interaction of aggregate demand and aggregate supply. Hence, it is necessary to understand the meaning of aggregate demand and aggregate supply.

Aggregate demand (AD) is defined as the total amount of money which all sections (households, firms, government) are ready to spend on the purchase of goods and services produced in an economy during a given period.

The main components of aggregate demand are:

1. Private (household) consumption demand (C)
2. Private investment demand (I)
3. Government demand for goods and services (G)
4. Net export demand (X – M)

So that $AD = C + I + G + (X – M)$

Aggregate supply refers to the total output that the producers in an economy are willing to produce and sell in a given period of time at a given level of prices and costs. In other words, it is the value of total output available for purchase by the economy during a given period of time.

Moreover, the interaction between aggregate demand and aggregate supply determines the equilibrium level of national output and general price level.

3. Teaching-Learning Process

3.1 Suggested Teaching Aids

- Articles of the government monitory policy
- Charts and fiscal policy of the government
- Tables and figures
- Sectorial reports

3.2 Suggested Teaching Methods

- Brainstorming
- Case studies
- Discussion
- Analyzing data

3.3 Pre Lesson Preparation

- Get ready in advance the following materials.
- Annual report of the Ministry of Finance and Economic Development.
- Organize the class on the bases of student capacity.
- Obtain different articles on balance of payment.
- Document of the monitory and fiscal policy of the government.

3.4 Lesson Presentation

a) Introduction to the lesson

This sub-unit deals with the determination of the levels of output, prices and employment, at the national level. We may begin the lesson by having our students recall from Unit 2 that the interaction between market demand and market supply determines the equilibrium level of output and prices of individual commodities. Similarly, the equilibrium level of output and general prices at the national level is determined by the interaction between aggregate demand and aggregate supply.

But, what do we mean by aggregate demand and aggregate supply? We tell the students that aggregate demand broadly means the total demand for goods and services in an economy, and we discuss with them the formal definition of *aggregate demand*, its main components and the factors that determine it. Parallel to this discussion, and in a similar

manner, we talk about *aggregate supply*. We finally conclude the lesson with an analysis of the interaction between aggregate demand and aggregate supply.

b) Body of the lesson

In macroeconomic analysis it is possible to determine the levels of output, prices and employment through examining the interaction of aggregate demand and aggregate supply. However, before we understand their intensity to integration, it is appropriate to define the terms. Accordingly, aggregate demand refers to the total demand for goods and services in the economy.

Aggregate supply (AS), on the other hand, refers to the total output that the producers in an economy are willing to produce and sell in a given period at a given level of prices and costs. Each of the factors has their own components that determine them in essence. For example, the main components of aggregate demand are;

1. private/ household/ consumption demand (C).
2. private investment demand (I).
3. government demand for goods and services (G).
4. net export demand (X-M).

The factors that determine aggregate supplylikewise are;

1. cost inputs
2. availability of capital and labor.
3. managerial efficiency.
4. state of technology..
5. taxation policy of the government.
6. weather conditions.

The interaction between aggregate demand and supply determine the equilibrium level of national output and general price level.

3.5 Evaluation and Follow-Up

a) Evaluation

Review the lesson by considering the following questions.

- What are the main components of aggregate demand?
- State the factors that determined aggregate demand and aggregate supply.

b) Follow-up

- Organize the students on the basis of their capacities, observe their performance and record each of their achievements.

10.2 MACROECONOMIC POLICIES

Periods Allotted: 4 periods

1. Competencies

At the end of this sub-unit, the students will be able to:

- *Define macroeconomic policy instruments;*
- *Identify the type of macroeconomic policy instruments;*
- *Explain and classify fiscal policy;*
- *Distinguish the difference between expansionary and contractionary fiscal policy;*
- *Classify monetary policy;*
- *State and define monetary policy instruments;*
- *Distinguish the difference between expansionary and contractionary monetary policy;*
- *Define the concept of income policy.*

2. Overview

3. Teaching-Learning Process

3.1 Suggested Teaching Aids

- Policy documents like fiscal, monetary, income etc.

3.2 Suggested Teaching Methods

- Question and answer
- Group discussion
- Group work
- Brainstorming
- Project

3.3 Pre Lesson Preparation

- Organize the class in the best way for discussing the various policies issued by the government.
- Obtain the appropriate policy documents issued by the government.

3.4 Lesson Presentation

a) Introduction to the lesson

In this section we emphasise that every nation tries to achieve targets such as maximum feasible output, stability of prices, full employment, equality in the distribution of income

and wealth among the population of the country, high rate of economic growth, etc. Telling the students that the policies adopted by a country to achieve these targets are known as macroeconomic policies, we focus their attention on the three main types of macroeconomic policies, namely, fiscal policy, monetary policy and income policy. Also emphasizing the difference between the two opposite situations of excess demand and deficient demand, we discuss the major instruments of the macroeconomic policies used in each situation. References may also be made to other macroeconomic policies such as foreign trade policy, etc. Activity 9.2 suggested in the student' textbook at the end of this sub-unit, will help our students to better understand the topic in the Ethiopian context. We should particularly encourage and help them in carrying out these activities.

b) Body of the lesson

You must organize the class in the possible way to conduct brain storming sessions. From their previous memories ask the students to weather they remember about macroeconomics or not. Then start the lesson by defining macroeconomics and explain how macroeconomic analysis deals with the behavior of the economy. Discuss the importance of policies to a country's economy.

Explain the students that this can be realized in the context of the objectives of a macroeconomic policy given as an example.

Taking different references as sources for the discussion enlight the students that governments adopt three types of macroeconomic policies, namely – fiscal, monetary and income.

Apply and raise different issues in relation to the policies stated above and encourage student to discuss the outcomes of the policies. Assist the students in analyzing the fiscal policy interms of its definition that it is the expenditure and revenue (tax) policy defined by a government to achieve desired objectives. Discuss the major instruments of expansionary fiscal policy; this includes (a) expenditure policy (b) revenue policy. (c) Government (public) borrowing.

The other part of fiscal policy is contractionary fiscal policy that occurs when an economy focus a problem of excess demand that resulted inflation with a continuous rise in prices.

Moreover discuss on the various mechanisms designed to control excess demand and focus on the following approaches.

3 Expenditure policy approach
4 Revenue policy approach
5 Government (public) borrowing approach

5.5 Evaluation and Follow-Up

a) Evaluation

To check to see whether or not the students understand the lesson, give them the following instructions and questions to answer:

- State the general objectives of a microeconomic policy.
- Define *fiscal policy*.
- What are the major instruments of expansionary fiscal policy?
- Discuss the major instruments of contractionary fiscal policy.
- Define monetary policy and income policy.

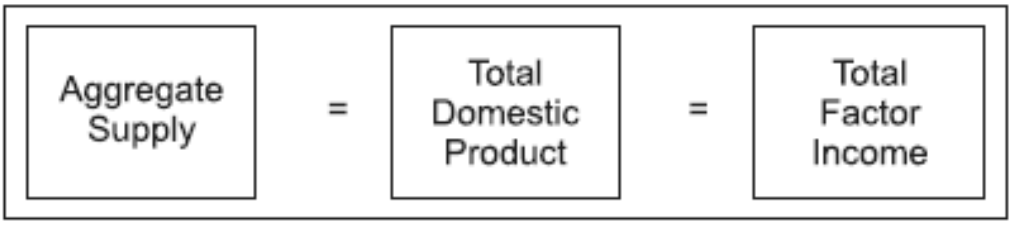
b) Follow-up

- Divide the class into groups on the bases of their attitudes and capacities.
- Encourage them to take part actively in the discussion.
- Grade and record each of their achievements.
- Closely follow the progress of each student.

ANSWERS TO ACTIVITES

Activity 10.1

1. The quantity of goods and services produced by the entire economy constitutes the total supply. Total supply of the gods and services will be the sum total of goods and services produced by the individuals, firms and government. In other words, total domestic product represents the aggregate supply. It is the aggregate cost of producing goods. The revenue received is paid to factors as rent, wages, interest and profit. Thus, aggregate supply can also be expressed as 'total factor income'.



2. We know that the determination of the equilibrium level of income and employment depends on interaction between aggregate demand and aggregate supply. At what level of employment AD and will be equal? There are three possibilities. The equality between AD and AS may be at the level of full employment, or at less than full employment or at more than full employment.

Activity 10.2

1. Public expenditure is a powerful weapon in the hands of the government for bringing about equitable distribution of income in the country. This can be done in the following manner: Public expenditure can be so devised as to help the poor sections of the society and thereby reduce the inequality of income.

   - Welfare measures like free education, free medical facilities and social security schemes like old-age pensions, unemployment relief, etc. can be given a top priority to help the poor.
   - Public expenditure through public production and subsidies on articles of common consumption like food can also help the poor persons and thereby improve income distribution.

2. **Measures To Correct Excess/Deficient Demand At A Glance**

Measures	Correction of Excess Demand	Correction of Deficient Demand
A. Monetary Measures		
1. Bank rate	Increase in the bank rate.	Decrease in the bank rate.
2. Open market operations	Selling securities.	Purchasing securities.
3. Reserve ratio	Increase in the reserve ratio.	Decrease in the reserve ratio.
4. Grant of Credit	Rationing credit.	Promotion of credit.
B. Fiscal Measures		
1. Budget	Framing surplus budget.	Framing deficit budget.
2. Taxation	Increase in taxation.	Decrease in taxation.
3. Debt	Borrowing from public by the central bank.	Lending to public by the central bank.
4. Govt. expenditure and investment	Reduction in expenditure and investment.	Promotion of expenditure and investment.
C. Other Measures		
1. Foreign trade	More imports, less exports.	More export, less imports.
2. Price control	Adopting policy of Price Control/fixation.	Adopting price support policy.
3. Wage control	Ceiling on wages.	Increase in wages.

3.

Causes of Excess Demand

Excess demand may be caused by a number of factors, among which more important are as follows:

a. **Deficit finance** – Sometimes excess demand is caused by increase in government expenditure not mobilised by corresponding increase in taxation etc. If the deficit in the budget is financed by borrowing from the central bank, it results in the increase in the money supply.

b. **Increase in the level of consumption**

c. **Increase in investment** – Excess demand may be caused by an increase in investment without corresponding increase in savings. The additional funds may be obtained from past savings.

d. **Surplus in balance of payments** – Excess demand may also be caused by increasing surplus on the balance of payments. It implies that the overall exports have exceeded the corresponding imports.**5. Diversion of resources** – The flow of consumer goods and services may come down due to the diversion of resources from the production of consumer goods to the production of war equipments and materials. The available output for the household will not be sufficient to meet their aggregate demand. This results into excess demand.

Causes of Deficient Demand

The main causes for the deficiency of demand are:

a. Decrease in public expenditure on economic and social infrastructure.

b. Decrease in the level of investment.

c. Decrease in the level of consumption.

d. Fall in disposable income.

e. Decrease in the supply of money and bank credit.

f. Fall in export demand.

4. Fiscal policy has an important role to play in an under-developed economy like Ethiopia. Keeping in mind the specific problems like poverty, unemployment, slow rate of economic growth, etc., the following objectives are suggested for a suitable fiscal policy for Ethiopia:

a. Mobilisation of resources.

b. Acceleration of economic growth.

c. Promoting investment.

d. Increasing employment opportunities.

e. Reducing inequalities of income and wealth.

f. Balanced regional growth.

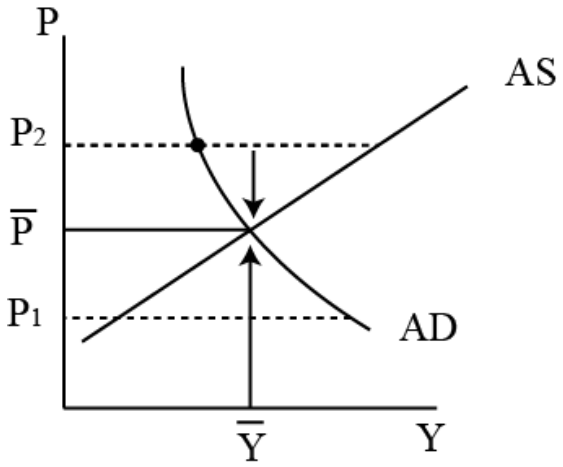
g. Controlling inflationary tendencies.

h. Reducing trade deficit.

ANSWERS TO REVIEW EXERCISE FOR UNIT 10

Part I

1.



Let $\bar{y}$ = equilibrium output

$\bar{p}$ - equilibrium price

If $p < \bar{p}$ say p_1, excess demand exerts upward pressure on price until price is equal to $\bar{p}$, which is equilibrium price and equilibrium is restore.

If $p > \bar{p}$, say p_2, excess supply exerts a downward pressure on price until price is equal to $\bar{p}$.

Finally, at $(\bar{y}_1\bar{p})$, equilibrium is restored.

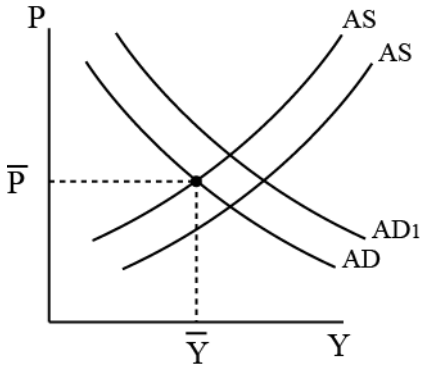
2. Aggregate demand is total demand for goods cervices. Its major components are

i. Consumption demand

ii. Investment demand

iii. Government consumption demand
AD = C + I + G in closed economy but in open economy,
AD = C + I + G + x – m

3.



i. Shift in AD occurs if for example, Income (y), or population increases
ii. Shift in AS occurs if for example new production technique is innovated, or a new resource is obtains change in price causes movement along AD or AS curves.

4. The main objectives of macroeconomic policy are

i. maximum output (GDP)
ii. High employment i.e) low unemployment
iii. Price stability
iv. Exchange rate stability, interest rate stability

In general, the overall objective of microeconomic stability is stability in the internal and external sector.

a. Internal stability refers to price and output stability
b. External stability refers to BOP stability.

5. Excess demand in an economy occurs when total demand for goods and services in greater them the total supply of goods and services at a given price.

a. Increase in taxes can reduce disposable income which inform reduces consumption that reduces excess demand.
b. Reduction in government expenditure can reduce excess demand

6. Deficient demand arises when total demand for goods and services declines or falls in an economy.

   The following monetary supply, say through credit facilities.

   a. Increase money supply, say through credit facility.
   b. Decrease loan rate, so that households can borrow and spend it.

7. **Fiscal policy** is the expenditure and revenue (tax) policy of the government to achieve the designed objectives.

   Monetary policy refers to the regulation of the money supply and the control of the cost and availability of credit by the central bank of the country. It is possible through the use of deliberate and discretionary action for achieving the desired objectives.

   To control the situation of excess demand and thereby reduce the pressure of high inflation, contractionary fiscal policies are adopted by the government. The major instruments of contractionary fiscal policy are:-

   1. Expenditure policy (reduce expenditure)
   2. Revenue policy (increase taxes)

8. Fiscal policy is the expenditure and revenue (tax) policy of the government to achieve the demand objective

   a. Change in government expenditure:- During period of deficiency in demand the government should make large investments in public works, like construction of roads, bridges, buildings, railway lines, canals etc and provide true education and medical facilities.

   - In a situation of excess demand government should curtail its expenditure on public works such as roads, buildings, rural electrification, irrigation work, etc.

     There by reducing the money income of the people and their demand for goods and services.

   b. Taxes on personal incomes and taxes on expenditures on building etc, should be reduced, if possible tax on lower incomes groups be abolished.

      During inflation, government should raise rates of all taxes especially on rich people, but care should be taken that the revenue should be disinflationary.

9. Monetary measures by which excess demand in an economy can be checked includes:-

   Bank rate (increase it). In a situation of excess demand leading to inflation, central bank raises bank rate. This raises cost of borrowing and discourages commercial banks in borrowing from central bank. As a result they are forced to increase then landing rate of interest and the demand for loans falls.

10. To control the situation of excess demand and thereby reduce the pressure of high inflation, contractinary fiscal policies are adopted by the government.

11. **Deficient demand**:- It is when aggregate demand falling short of output at full employment level of when there is a depression marked by over production, rise in un employment and fall in prices and income.

    - Deficient demand is affected by cash – reserve ratio which is a situation in which every commercial Bank is required to keep with the central bank a particular percentage of its deposits or reserves in the form of cash.
    - Tax rates affected deficient demand in such a way that taxes on personal incomes and taxes on expenditure on buildings etc. Should be reduced. It possible tax on lower income groups be abolished. This will increase their disposable income for spending.

    Excess Demand

    - Control of ways becomes necessary when there is a situation of excess demand (inflation). Ceilings on ways keep disposable income down and hence the aggregate demand for goods and services will be checked. The income policy would be appropriate when an increase of ways leads to an increase in productivity of labour.

12. **Inflationary gap**:- It is a gap created when in an economy, aggregate demand is for a level of output that is more than the full employment level of output,

    To reduce the pressure of high inflation, contractionary fiscal policies are adopted by the government the instruments are:

    - Expenditure policy that enables to reduce expenditure.
    - Revenue policy that increases taxes.

Part II

13. Difference between fiscal policy and monetary policy

Fiscal Policy	Monetary Policy
1. It is related with public revenue, public expenditure and public debt.	1. It is related with the supply, availability and cost of money.
2. The main instruments of fiscal policy are taxes, public expenditure, deficit financing and public borrowing, etc.	2. Its main instruments are bank rate, open market operations, cash reserve ratio, etc.
3. It has a direct impact on all sectors of the economy.	3. It has a direct impact on selective business activities in the economy.

14. Difference between excess demand and deficient demand

Excess Demand	Deficient Demand
1. It is a situation in which planned aggregate expenditure is greater than the output at full employment level.	1. It is a situation when planned aggregate expenditure falls short of output corresponding to full employment level.
2. It indicates over full employment equilibrium.	2. It indicates under employment or less than full employment equilibrium.
3. It generates inflation in the economy.	3. It generates deflation in the economy.
4. In this situation, output and employment do not increase with increase in aggregate demand.	4. In this situation, both output and employment increase along with increase in aggregate demand.

Part III

15. False 16. True 17. True 18. False 19. False 20. True 21. True 22. True

Part IV

23. A 24. A 25. D 26. B 27. C

Part V

28. Level of income declines.
29. When aggregate demand for goods and services falls short of their supply.
30. When economic activities start declining in an economy, the process is known as depression.
31. It reduces the aggregate demand in the economy.
32. Problem of excess demand is solved.
33. Increase in taxes and decrease in public expenditure.
34. Increase in bank rate and sale of securities in the market.
35. Deficit budget and decrease in bank rate.
36. Credit becomes costlier resulting in fall in AD.
37. i. Population
    ii. Level of income.
38. Deficient demand.
39. Increase in taxation and reduction in public expenditure.
40. Reduction in taxation and increase in public expenditure.
41. a. Aggregate demand increase with the increase in public expenditure and decreases with the decrease in public expenditure.
    b. Increase in taxes reduces aggregate demand and decrease in taxes raises the level of aggregate demand.
    c. Aggregate demand decreases with the increase in reserve ratio and increases with the decrease in reserve ratio.
    d. Aggregate demand decrease with the increase in interest rate and increases with the decrease in interest rate.
42. i. Cost of inputs
    ii. state of technology.

References

1. Mankiwi, N.Gregory Principles of Economics South Western College Publishers, 3rd edition, 2005.

2. Mankiwi, N.gregory Principles of Macro - Economic Worth Publishers, 2002.

3. Cambell R McConnell and Stanley L.Brue Macro Economics: principles, problems and policies McGraw - Hill/Irwin publishers © 2002 USA.

4. Staffard, Alan D, Catherine H. Introduction to Economics MCGraw - Hill publishers © 1995.

5. Economics; Dolan, EdwinG. The Drden press. CBS college publishing. Fourth edition © 1980.

Minimum Learning Competencies for Economics

Theme	Competencies for Grade 11
I. Concepts of Economics	• Value the concept and nature of economics • Explain how resources are efficiently used in producing out put • Compare and contrast different Economic systems • Explain the role of decision-making units and interpret the circular flow.
II. Basic Issues of Microeconomics	• Analyze demand and supply concepts with schedules, graphs and equations. • Interpret the demand and supply concepts with schedules, graphs and equations. • Identify the factors affecting demand and supply • Figure out the law governing demand and supply. • Evaluate the essence of different elasticity of demand and supply. • Compute elasticity of demand and supply. • Identify the basic principles of different theories of consumer Choice and Behavior. • Analyze different theories of consumer Choice and Behavior. • Comprehend and evaluate how firms combine economic resources so as to maximize out put. • Explain the meanings and behaviors of various types of costs • Integrate the relationship between production and cost. • Explain different market structures • Analyze how firms maximize their profit in different markets.
III. Economic Sector	• Recognize fundamental concepts of National Income Account • Practice the method of measuring economic performance of a country.
IV. Fundamental concepts of Macroeconomics	• Identify problems of macroeconomics • Analyze the Nature of trade • Recognize the nature of fiscal policy • Identify types of fiscal policy • Assess the impact of fiscal policy on unemployment and inflation. • Recognize the nature of monetary Policy. • Identify types of monetary policy • Assess the impact of monetary Policy on unemployment and inflation. • Recognize income policy • Assess the impact of income policy on inflation and unemployment.
V. Consumption, investment & saving, and recent reform program of the government	• Define concepts like consumption saving and investment. • Assess determinants of consumption, saving and investment. • Relate the role of investment to economic growth.

Content Flow Chart for Grades 11 Economics

Topic	Sub-topic	Contents of Grade 11
Concepts of economics	• Scope of Economics • Methodology • Resource allocation • Economic system • Decision making units and circular flow of economic activities • Main Sector of the Ethiopian Economy • Resource base of Ethiopia • Historical review of the national development objectives and strategies	• Definition and nature of economics • Branches of economics • Approaches of studying economics • Scarcity and choice production possibility frontier, opportunity cost and efficiency. • Basic economic questions • Pure capitalism • Command economy • Mixed economy • Decision making units • Circular flow of economic activities
Basic Issues of Microeconomics	Theory of demand Theory of supply Market equilibrium Demand and supply elasticity Consumer behavior and Utility maximization Theories of Utility Theory of production and cost Market structures	• Law of demand • The demand schedule, curve and function • Individual and market demand • Determinants of demand • Change in demand and change in quantity demand • Law of supply • The supply schedule, curve and function • Individual and market supply • Determinants of supply • Change in supply and change in quantity supply • Equilibrium • Effects of changes in demand and supply on equilibrium price and quantity • Price ceiling and floor • Price elasticity of demand • Definition and measurement of price elasticity of demand • Mathematical and graphical analysis • The total – revenue test • Determinants of price elasticity of demand • Price elasticity of supply • Determinant of price elasticity of supply • Income elasticity of demand • Cross-price elasticity of demand • Meaning of utility • Theories of utility • Cardinal theory • Utility maximizing rule, algebrical • Restatement • Ordinal theory • Utility maximizing rule, In difference analysis • The law of diminishing marginal utility

Topic	Sub-topic	Contents of Grade 11
		• Budget line • Effects of change in consumer's income or price of the product on satisfaction unit. • Production • Production period ▪ short run ▪ long run • Production function ▪ Production function with one variable input ▪ Production function with two variable input • Economic scales of production • Effects of technological change on production • Concepts of cost • Short run production of cost Fixed, variable, total, average, and marginal costs • Long run production of cost • The relationship between cost and production • Pure competition ▪ Profit maximization in the short run Two Approaches Marginal cost and short-run Supply curve ▪ Profit maximization in the long run Zero Economic profit model
		• Pure monopoly o Characteristics of pure monopoly o Profit maximization under pure monopoly • Monopolistically competition • Oligopoly
Fundamental concerns of macroeconomics	• Concerns and problems of macroeconomics • Business cycle • Unemployment • Inflation • Budget deficit • National Income Account • Role of the agricultural sector • Structure of the Agricultural Sector of Ethiopia • Specific policies and strategies of the agricultural sector since	• Objectives of macroeconomics • Meaning and types of unemployment • Rate of unemployment • The impact of unemployment in Economic growth • Measuring inflation • Causes of inflation o Demand pull o Cast push • The impact of inflation on Economic growth • The effects of budget and trade deficit • Gross domestic product (GDP) and Gross National product (GNP) • Approaches of measuring GDP and GNP o Product o Income o Expenditure

Topic	Sub-topic	Contents of Grade 11
	1950s • Performance of agricultural Sector • Major problems Impeding Agricultural development and its remedies • Roles of service Sector • Education • Education sector, policies and strategies since 1950s • Performance of the Education Sector • Major problems impending the development of Ethiopian education • Historical review of the health sector • Policies and strategies of the health sector • Performance of the health sector • Major problems of the health sector and the impact of HIV/AIDS • Transportation and communication historical review • Road transport • Rail way transport • Ethiopian shipping line • Air-transport • Development of the communication sector • Policy and strategy in the communication sector • Performance of the communication sector • Problems of communication sector • The role of the industrial sector • Specific polices and strategies of the industrial sector since 1950s	• Nominal and Real GDP • Other social accounts

Topic	Sub-topic	Contents of Grade 11
	• Structure of the industrial sector of Ethiopia • Performance of the industrial sector • Major constraints of the industrial sector in Ethiopia • The role of tourism • Historical development of Ethiopian tourism • Performance of tourism • Major obstacles for the development of Ethiopian tourism	
Trade and balance of payment	• The Economic basis of trade • Export and import • Trade barriers • The impact of international trade on GDP • Balance of payment • Exchange rate • Historical development of trade in Ethiopia • The role and importance of trade in Economic development of Ethiopia • Restrictions and mode of payments in international trade • Trade policies and strategies of Ethiopia • The structure and performance of trade • Major trading partners of Ethiopia • Balance of payments (BOP) • Problems of trade in Ethiopia • Historical development of trade in Ethiopia • The role & importance of trade in economic development • Restrictions & modes of payments in international trade • Trade policies and	• Comparative advantage • Absolute advantage • Quota • Tariff • Exchange control • Current Account • Capital Account • Fixed Exchange rate • Floating Exchange rate

Topic	Sub-topic	Contents of Grade 11
	strategies of Ethiopia • The structure & performance of trade in Ethiopia	
Macroeconomics Policy Instruments	• Macro economics policy instrument • The role of the government in public finance in Ethiopia • Historical background of public finance in Ethiopia • Structure and performance of the revenue and Expenditure • Analysis of Government budget and deficit financing • Fiscal decentralization and public sector reform in Ethiopia • Financial sector policies and reforms in Ethiopia • The performance and problems of the financial sector of Ethiopia	• Fiscal policy • Monetary policy • Income policy
Consumption, investment & saving	• Consumption and saving • Investment • The new economic policy & the need to reform • Introduction to structural adjustment program • Structural adjustment policy measures undertaken in Ethiopia • Performance of the economy after the new Economic reform program • Investment policy and climate in Ethiopia during the post 1991	• Definition, (Meaning) of consumption and saving • Determinants of consumption and saving • Average propensity to consume and save • Propensity to consume and save (Marginal) • Investment • Determinants of Investment • The Role of Investment in Economic Growth

Federal Democratic Republic of Ethiopia
Ministry of Education For

Grade 11

Economics Syllabus

Participants

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INTRODUCTION

Students at second cycle secondary education have already decided the broad stream of learning - social science/natural science – in which their future area of study to be.
The purposes of second cycle secondary education are enabling learners choose subjects/areas of training to be attended in higher education within the framework of their respective preparatory stream, and preparing students for the world of work. In pursuit of these purposes students of social science stream at preparatory (11 and 12) level are expected to study one of the specialized fields of social sciences, language, business and management and law faculties.
Economics, as one of the offered subjects in social science stream of preparatory education, aims at providing learners with necessary foundations of knowledge, attitudes, and skills to manage future higher education academic carrier and world of work. This is possible by:-

- discerning basics of economics to learners;
- enabling learners understand demand & supply and elasticity, theory of production & cost, market structure, balance of payment, basic issues of micro and macro economics, economic sectors, consumption, investment & saving and Ethiopian economics.
- facilitating conditions to create citizens who have the attitude of informed appreciation and understanding on Ethiopian economics;
- fostering certain analytical skills that enable them analyze economic condition and argue logically.

The provision of quality education has become the first line issue at present time of Ethiopia. Assessment and other feedback reports
demanded the improvement of curriculum materials. Besides, the curriculum revision made at lower education levels subsequently demanded revision of curriculum at this level.

In addressing these issues the current grades 11 and 12 Economics curriculum is founded on out come based learning which is defined in the new curriculum framework and in line to the international standards. Thus, the present curriculum is organized in such a way that
it is suitable to realize active learning methods and equate learner's performance with the specified competencies.
To enable users of this curriculum document understand it fully it is made to contain:

- Profile of Economics student at the end of grade 12 which reflects the contribution of attending Economics lesson in bringing the desired general profile of learners at the end of second cycle secondary education.
- Minimum learning competencies for Economics education grades 11 and 12.
- Content flow chart of the cycle.
- Grade level learning outcomes for each grade (11 and 12) and
- The respective grade syllabuses.

The competencies and content flow charts are organized around ten themes – concepts of economics; basic issues of microeconomics; economic sectors; fundamental concepts of macroeconomics; consumption, investment & saving and recent reform program of the government of Ethiopia; nature of trade and policy instruments. Using these themes, the syllabuses of each grade (11 and 12) have been arranged in units.
Thirty-four weeks are allotted in a year to cover the lesson of each grade with four periods per week.

Unit 1*: Concepts of Economics (12 periods)*
Unit Outcomes: Students will be able to:

- Understand the concept and nature of economics and analyse how resources are efficiently used in producing output.
- Distinguish & evaluate different Economic systems
- Apreciate the role of decision-making and interpret the circular flow model.

Competencies	*Contents*	*Suggested activities*
Students will be able to: • Define the term economics ▪ Identify the differences between micro economics and macro economics ▪ Examine the methods of studying economics ▪ Define concepts like scarcity, opportunity cost, choice and efficiency ▪ Construct production possibility curve ▪ Distinguish the differences among economic resources, free resources, and shortage of resources. ▪ Express what economic system is ▪ Compare and contrast the three economic systems. ▪ Explain the characteristics of the three decision making units ▪ Construct the circular flows of economic activities and interpret it. ▪ Define the term entrepreneurship ▪ Explain the qualities of entrepreneurs ▪ Discuss the roles of entrepreneurs in economic development.	Concepts of Economics **1.1 Scope of economics** • Definition and nature of economics • Branches of economics ▪ Micro Economics ▪ Macro Economics **1.2 Method of studying economic principles** **1.3 Resource allocation** • Scarcity and choice • Opportunity cost • Product possibility a frontier and efficiency • Economic resource, free resource shortage of resources **1.4 Economic systems** • Pure capitalism economic system • Command economic system • Mixed economic system **1.5 Decision making units and circular flow of economic units** • Household • Business firms • Government • Two-circular flow of economic units • Three circular flow economic units entrepreneurship	• Let students discuss on the definition and nature of economics and help them to differentiate the differences between microeconomics and macroeconomics. • Assist students to understand how economic principles are studied • Let students argue on whether resources are scarce or not and help them to identify free resources shortage of resources and scarce resources. • Let students discuss on the concepts of opportunity cost and let them construct the production possibility curve. • Motivate students to compare and contrast the economic systems exercised by Ethiopian government since 1960s. • Start the lesson by motivating students to say something about the characteristics of the decision-making units. • Facilitate conditions to the students so that they can construct circular flow of economic units. • Let students give examples of an entrepreneur from their locality.

ASSESSMENT

Students' performance has to be assessed continuously over the all units. The assessment will be made by comparing students performance with the specified level of competencies. Besides, the teacher has to recognize the level of performance of each student and provide assistance accordingly.

Thus: A student of a minimum requirement level will be able to define the term economics, scarcity, choice, efficiency, opportunity cost, micro economics and macro economics; compare and contract the three economics systems, explain the characteristics of the three decision making units, express what economic system is and construct the circular flow of economic activities and interpret it. Define the term entrepreneurship, explain the qualities of entrepreneurship, and discuss the roles of entrepreneurship in economic development.

In addition, a student working above the minimum requirement level and considered as a higher achiever should be able to evaluate varied definitions of economics, explain the three economic systems with real world experience, construct production possibility curve, distinguish the differences among economic resources, free resources and shortage of resources; explain the methods of studying economics.

Students working below minimum requirement level will require extra help if they are to catch up with the rest of the class. Students reaching at the minimum requirement level but achieve a little bit higher should be supported so that they can attain the higher achiever competencies. Students who fulfil the higher achievers competencies also need a special support to continue and achieve more.

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Unit 2: ***Demand, supply and Elasticity*** *(18 periods)*
Unit learning outcomes: The students will be able to: Understand, analyze and interpret the demand and supply concepts with schedules, graphs and equations.

- Recognize the factors affecting demand and supply, and then appreciate the law governing them.
- Understand equilibrium price and quantity
- Understand the essence of different elasticity of demand and supply**..**

Competencies	***Contents***	***Suggested activities***
Students will be able to: • Define concept of demand • Examine the law of demand • Identify the differences between individual and market demand • Construct and interpret the demand schedule, graph and function • Describe the basic determinants of demand	**2. Demand, supply and Elasticity** **2.1 Theory of demand** • Concepts of demand • Law of demand • Individual and market demand • Demand schedule, curve, function • Determinants of demand • Change in quantity demand and change in demand	• Motivate students to mention some of their wants and how they are getting or possessing the object they want. • Facilitate conditions that enable students to construct demand curve and demand function based on the demand schedule. • Let students identify the differences between individual and market demand
	2.2 Theory of supply • Concepts of supply • Law of supply • Individual and market supply • Determinants of supply • Change in quantity supply and change in supply	• Motivate students to speak out the factors that affect their demands of certain goods. • Start the lesson by motivating students to explain supply in their own ways
• Define market equilibrium • Compare and contrast mathematical equation and graphical representation of market equilibrium • Show how the changes in demand and supply on equilibrium price and quantity • Identify the concepts of price ceiling and price floor	**2.3 Market equilibrium** • Definition of market equilibrium • Mathematical and graphical analysis of market equilibrium • Effects of change in demand and supply on equilibrium quantity and price • Price ceiling • Price floor	• Facilitate conditions that enable students to construct supply curve and supply function based on supply schedule. • Let students identify the differences between individual and market supply. • Motivate students tospeak out the factors that affect the supply of a certain product.

Competencies	*Contents*	*Suggested activities*
• Define the concept of elasticity • Identify and explain types of elasticity • Calculate and derive the formula of price elasticity of demand • Assess the determinants of price elasticity of demand • Construct and interpret the supply schedule, graph & function • Describe the basic determinants of supply • Define concept of supply • Examine the law of supply • Identify the differences between individual and market supply • Construct and compute the price elasticity of demand equation and graphical representation • Analyze the relationship between price elasticity and total revenue • Define the concept of income elasticity • Calculate and drive the formula of income elasticity of demand • Define the concept of cross-price elasticity demand • Calculate and dive the formula of cross-price elasticity of demand	**2.4 Elasticity of demand and supply** • Definition of elasticity • Types of elasticity 2.4.1 Price elasticity of demand • Definition and measurement of price elasticity of demand • Determinants of price elasticity of demand • Mathematical and graphical analysis of price elasticity of demand • Price elasticity of demand total revenue 2.4.2 Income elasticity • Definition and measurement of income elasticity of demand. 2.4.3 Cross-price elasticity • Definition and measurement of gross price elasticity	• Let the students discuss the concept of market equilibrium. • Let learners calculate/compute and draw a graph of market equilibrium price and quantity. • Ask students what they know about the shortage and surplus other than market equilibrium. • Assist students to design the formula of price elasticity of demand. • Arrange small group discussion so that students discuss on the factors that determine the price elasticity of demand. • Ask the students how can they respond to change in income of a certain good. • Assist students to derive the formula of income elasticity of demand. • In small groups, let students discuss on the factors that determine the cross-price elasticity of demand. • Let students discuss in groups about the concept of elasticity of supply.
• Explain the concept of elasticity of supply • Drive the formula and construct the graph of price elasticity of supply	2.5 Elasticity of supply • Definition and measurement of price elasticity of supply • Determinants of price elasticity of supply	• Arrange small group discussion so that students discuss on the factors that determine the price elasticity of supply

ASSESSMENT

Students' performance has to be assessed continuously over all units. Comparing students' performance with the specified level of competencies will make the assessment logical. Besides, the teacher has to recognize the level of performance of each student and provide assistance accordingly.

A student at minimum requirement level will be able to define the concept of demand, supply; identify and explain types of elasticity, examine the law of demand and supply, construct and interpret the demand and supply schedule, graph & function; describe the basic determinants of demand; calculate and compute the price elasticity of demand, supply, cross price elasticity of demand, income elasticity of demand, the slope of demand and supply curves.

In addition, a student working above the minimum requirement level and considered as higher achiever should be able to identify the difference between individual and market demand and supply, compare and contrast
mathematical equation and graphical representation of market equilibrium; show how the changes in demand and supply on equilibrium price and quantity; Identify the concept of price ceiling and floor; assess the determinants of price elasticises of demand and supply; and drive the formula and construct the graph of price elasticity of demand and supply.

Students' working below a minimum requirement level will require extra help if they are to catch up with the rest of the class. Students reaching at the minimum requirement level but achieve a little bit higher should be supported so that they attain the higher achiever competencies. Students who fulfill the higher achievers competencies also need a special support to continue and achieve more.

Unit 3 : ***The theory of consumer behavior*** **(18 periods)**
Unit learning outcome: Students will be able to:-

- Uunderstand the basic principles of cost
- Analyse the different theories of consumer choice and behaviour

Competencies	*Contents*	*Suggested activities*

Students will be able to:
• Asses the basic determinants of price elasticity of supply
• Explain the basic theories of consumer behaviour
• Define the concept of utility and total marginal utility
• State the law of diminishing marginal utility
• Classify the theories of utility
• Describe the cardinal utility theory
• Examine how the cardinalist maximize their total utility and compute and interpret the algebrical restatement
• Define the concept of indifference set, curve and map and the theory of ordinal utility.
• State the characteristics of indifference curve
• Elaborate the concept of marginal rate of substitution
• Explain what is budget line
• Interpret how a change in consumer income and price affects consumers' satisfaction.
	3. The theory of consumer Behavior
	• Meaning of utility
	• Definition of Total and marginal utility
	• The law of diminishing marginal utility
	• Theories of utility
	3.1 Cardinal theory of utility
	• Utility maximizing rule, Algebraic restatement
	3.2 Ordinal theory of utility
	• Definition of indifference set, curve and map
	• Characteristics of indifference curve
	• Marginal rate of substitution
	• Budget line
	  • Effects of change in consumer's income on the satisfaction unit
	  • Effects of change in price of the producer on consumers satisfactory unit
		• Assist students to recall what they know about the concept satisfaction or utility.
		• Facilitate conditions that enable students show the relationship between total and marginal utility.
		• Motivate students to say something how utility or satisfaction can be measured and assist them in identifying the different measurement systems (theories).
		• Guide students to compute or measure utility by using cardinal theory and assist them to identify the utility maximizing unit.
		• Show the students the difference between indifference set and curve.
		• Assist the students to identify the main characteristics of indifference curve.
		• Brainstorming :-
		  • Ask students to recall what they know about budget and guide them identify to the basic relationship of budget and utility.
		  • Facilitate condition for students so that they can discuss the impact of changes in consumers' income and price on satisfaction unit.

ASSESSMENT

Students' performance has to be assessed continuously over all units. Comparing students' performance with the specified level of competencies will make the assessment logical. Besides, the teacher has to recognize the level of performance of each student and provide assistance accordingly.

A student at minimum requirement level will be able to:-
Explain the basic theories of consumers behaviour; define the concept of utility& total marginal utility, indifference set, curve and map; state the law of marginal utility (diminishing marginal utility) and the characteristics of indifference curve; classify the theories of utility and describe the cardinal and ordinal utility theory. Besides, explain what a budget line is.

In addition a student working above the minimum requirement level and considered as a higher achiever should be able to examine how the cardinalist maximize their total utility and compute & interpret the algebraic restatement; Elaborate the concept of marginal rate of substitution. Besides, construct the budget line with mathematical explanation; interpret how changes in consumer income and price affect consumer satisfaction, derive the Engle's curve from income consumption curve (ICC).

Students working below a minimum requirement level will require extra help if they are to catch up with the rest of the class. Students reaching the minimum requirement level but achieve a little bit higher should be supported so that they attain the higher achiever competencies. Students who fulfil the higher achievers competencies also need a special support to continue & achieve more.

Unit 4 : Theory of production and cost *(20 periods)*
Unit learning outcomes: Students will be able to:-

- Comprehend and evaluate how firms combine economic resources so as to maximize output
- Realize stages and economic regions of production
- Explain the meanings and behaviours of various types of costs and integrate the relationship with production costs
- Recognize the short run and long run production cost

Competencies	*Contents*	*Suggested activities*

Students will be able to:
• Define production, input and output
• Distinguish the differences between short run and long run production period.
• Define production function
• Explain the concept of production function with one variable input
• Distinguish the difference between total, average and marginal product
• Show the relationship between average product and marginal product.
• Describe the low of diminishing marginal product
• Identify and analyze the stapes of production
• Explain the concept of production function with two variable input.
• Define Iso quant curve, schedule and map
• State the basic characteristics of Iso quant
• Identify the economic region of production
• Show the effects of technological change on production.
• Define cost
• Differentiate private &
	4. Theory of production and cost
	Theory of production
	• Definition of production
	• Input and output
	• Production period
	  • Short run
	  • Long run
	Production function
	• Production function with one variable input
	• Total, average, marginal product
	• Relationship between average product and marginal product
	• The law of diminishing marginal product
	• Stage of production
	Production function with two variable
	• Iso quant curve schedule & map
	• Characteristics of Iso quants
	• The economic region of product
	• Marginal rate of technical substitution
	• Economic scale of production
	Effects of technological change on production function
	Theory of cost
	• Basic elements of cost
	• Private cost
	  • Explicit & implicit cost
		• Ask students what they know about theory of production and help them to arrive at a correct definition and determine the two production periods.
		• Help the students to identify the differences among total product, Average product and marginal product.
		• Facilitate conditions that enable students show the relationship between average and marginal product.
		• Demonstrate the ways of classifying stages of production and let students identify at which point a rational producer produces.
		• Help students to distinguish the differences among Isoquant curve, schedule and map.
		• Let students discuss on the general characteristics of Isoquants and help them to identify the similarities and differences from the characteristics of indifference curve:
		• Ask learners what they know about the link between input and output, and help them to easily understand the concept of economic scale of production.
		• Motivate students to say something about the impact of technological change on the production, then give explanation.
		• Let students discuss the

Competencies	*Contents*	*Suggested activities*

social cost
• Distinguish the difference between explicit and implicit cost
• Differentiate short and long run cost of production period
• Distinguish the difference among, fixed, variable, total, costs
- Define marginal cost
- Explain long run cost of production
• Display the relationship between marginal product and cost
• Show the relationship between production and cost.
	• Special cost
	• Cost of production periods
	  • Short run
	  • Long run
	Short run cost of production
	• Fixed cost
	• Variable cost
	• Total cost
	• Average, fixed, variable cost
	• Marginal cost
	Long run cost of production
	The relation between production & Cost
	• MP & MC
	• AVC AP
	• MP, MC,AVC & AP
		concept of cost and facilitate the discussion and assist in classifying cost at the end. Let them distinguish the difference between explicit and implicit costs.
		• Brain storming: ask students to tell what they know about the production periods, long run and short run and based on that help them to define (understand) long run & short run cost of production.
		• Facilitate condition so that students can understand the differences between fixed, variable, total and marginal cost.
		• Ask students to recall what they know about marginal and average product and guide them to understand the relationship between production and cost by using graphical representation.

ASSESSMENT

Students' performance has to be assessed continuously over the all units. Comparing students' performance with the specified levels of competencies will make the assessment logical. Besides, the teacher has to recognize the level of performance of each student and provide assistance accordingly. Thus:-

A student at minimum requirement level will be able to define production, input, output, production function, isoquant curve, schedule and map, cost; distinguish the difference between short run and long run production period; Explain the concept of production with one and two variable/s input/s; distinguish the difference between total, average and marginal product and the difference among fixed, variable, total and marginal costs;

Describe the law of diminishing marginal product; State the basic characteristics of Isquant; show the effects of technological change on production; Differentiate among different types of costs; show the relationship between production and cost.

In addition, a student working above the minimum requirement level and considered as higher achiever should be able to explain the relationship between production and cost curves graphically; Identify the stages of production and its economic region; explain the difference and relationship between indifferent and isoquant curves; display the relationship between production and cost.

Unit 5: Market structures and the decision of a firm *(13 Periods)*
Unit learning outcome: Students will be able to:-

- Realize and explain the different market structures and analyze how do firms maximize their profit in different markets.
- State how perfectly competitive, pure monopoly, oligopoly and monopolistically competitive market maximize their profit

Competencies	*Contents*	*Suggested activities*
Students will be able to: • Define market • Identify the different types of market structure • State the characteristics of perfectly competitive market • Compute and interpret the revenue of perfectly competitive market • Differentiate total, average and marginal revenue • Examine how profit is maximized under total approach • Examine how profit is maximized under marginal approach • Solve for profit maximization in the long run and interpret the level of profit • Derive the supply curve of perfectly competitive firm • Indicate the	**5. Market structures and the Decision of a firm** • Definition of market • Types of market structure **Perfectly competitive market** • Assumptions of perfectly competitive market • Revenue of perfectly competitive market • Total, average, marginal • profit maximization in the short run • Total approach with mathematical & graphical analysis • Marginal approach with mathematical & graphical analysis Profit maximization in the long run • Normal economic profit Deriving the supply curve of a preferably competitive form **Pure monopoly** • Assumption of pure monopoly • The reasons for the existence of pure monopoly Profit maximization under pure monopoly • Total approach • Marginal approach	Brain storm: Start the lesson by asking students about market and let students discuss the definition of the market. • Ask students what they know about the types of market structure and let them list the names. • Guide students' discussions by leading students' appropriate concept and characteristics of a perfectly competitive market. • Assist the students to compute profit in perfectly competitive market by using total and marginal approach. • Students are assigned in groups and motivate them to define what pure monopoly is • Assist students to compute profit in pure monopoly market by using total and marginal approach • Assist students compute profit in monopolistically market by using total and marginal approach. • Assist students to compute profit in oligopoly market by using total and marginal approach.

Competencies	*Contents*	*Suggested activities*
characteristics of pure monopoly • Analyse the reasons for the existence of pure monopoly • Evaluate profit minimization under pure monopoly • Calculate the profit maximization under pure monopoly using total approach and marginal approach • Identify the characteristics of monopolistically competitive firm • Compute profit maximization under a monopolistically competitive market.	**Monopolistically competitive market** • Characteristics of monopolistically competitive market Profit maximization under a monopolistically competitive market • Total approach • Marginal approach **Oligopoly market** • Characteristics of oligopoly market • Methods of coordinations among oligopoly firms ▪ Cartel ▪ Price leadership ▪ Conscious Parallelism	

ASSESSMENT

A students' performance has to be assessed continuously over the all units. Comparing students' performance with the specified level of competencies will make the assessmentlogical. Besides, the teacher has to recognize the level of performance of each student and provide assistance accordingly. Thus:-

A student at the minimum requirement level will be able to:- Define market; identify the different types of market structures and the characteristics of monopolistically competitive firm; State the characteristics of perfectly competitive market; Differentiate total, average and marginal revenues; Examine how profit is maximized under total approach and under marginal approach; Derive the supply curve of perfectly competitive firm; indicate the characteristics of pure monopoly; analyze the reasons for the existence of pure monopoly; calculate the profit maximization under pure monopols using total and marginal approaches.

In addition a student working above the minimum requirement level and considered as a higher achiever should be able to:- Compute and interprete the revenue of perfectly competitive market, compute profit maximization under a monopolistically competitive market; Solve profit maximization in the long run and interpret the level of profit, derive the supply curve of perfectly competitive firm and evaluate cost minimization under pure monopoly market.

Students working below minimum requirement level will require extra help if they are to catch up with the rest of the class. Students reaching at the minimum requirement level but achieve a little bit higher should be supported so that they attain the higher achieve competencies. Students who fulfill the higher achieves competencies also need a special support to continue and achieve more.

Unit 6: The fundamental concerns of macro economics *(13 periods)*
Unit learning outcomes: Students will be able to:-

- Recognize the objectives and problems of macroeconomics
- Elaborate the concepts of Business cycle
- Understand the relation ship among unemployment, Inflation and Budget deficit
- Appreciate the source of Government revenue

Competencies	*Contents*	*Suggested activities*
Students will be able to: • Define the concepts of macroeconomics • Identify and analyze problems of macro economics • Display the business cycle & in the over all economic activity • Explain meaning of un employment • Identify and exemplify types of unemployment • Distinguish the differences among types of unemployment • Measure unemployment level • Examine the impact of unemployment on the economic growth • Define what inflation is • Compute the rate of inflation and interpret the result – Explain causes of inflation – Examine the impact of inflation on economic growth – Explain the effects & inflation in terms or redistribution & output – Define budget – Identify and explain the source of government revenue – Classify the source of	**6. The fundamental concerns of macro economics** **6.1 Concerns of macroeconomics** 6.2 **Problems of macroeconomics** 6.2.1 Business cycle • Boom or peak • Recession or contraction • Through or depression • Recovery 6.2.2 Unemployment • Meaning of unemployment • Types of unemployment ▪ Frictional ▪ Structural ▪ Cyclical • Measurement of unemployment • The impact of unemployment of Economic growth 6.2.3 Inflation • Meaning of inflation • Causes of inflation ▪ Demand-pull inflation ▪ Cost push inflation • Measuring inflation • The impact of inflation on Economic growth • Redistribution effects of inflation • Price effect • Income effect ▪ Output effects of inflation 6.2.4 Budget deficit • Meaning of budget • Source of revenue • Ordinary Revenue ▪ Tax ▪ Non-tax	• Assist the students to recall what they known about the concept of macroeconomics. • Based on the discussion, lead students to identify the major problems of macroeconomics. • Demonstrate the ways of identify in boom, recession through and recovery on a business cycle and then let students to define what business cycle is. • Brain storming – Ask students what they know about unemployment. • Then – Let students speak out what they know about unemployment and help them to arrive at the appropriate concept and definition. • Based on the discussion, lead students to arrive at proper definition of frictional, structural and cyclical unemployment. • Help students to measure unemployment, • Students are assigned

Competencies	*Contents*	*Suggested activities*
tax and non-tax revenue - Identify and explain external assistance - Explain capital revenue - Define and identify the types of expenditure	▪ Budget cycle expenditure ▪ Recurrent expenditure ▪ Capital expenditure • External assistance ▪ Multilateral ▪ Bilateral • Capital Revenue	in groups to discuss the impact of unemployment on economic growth then help them present their ideas. • Brain storming- Ask students to tell what they know about inflation and deflation and lead them to arrive at correct concept and definition of inflation and deflation. • Motivate students to mention the causes of inflation and assist them to understand the two cause of inflation such as demand-pull and cost-push. • Help student to measure inflation • Let students discuss about the impact of inflation on economic growth and show the effect of inflation on output and redistribution • Assist students to recall what they know about budget and deficit then, help them to understand what budget deficit is • Motivate students to say something about source of government revenue and assist in identifying the source of government revenue as ordinary, external assistance and capital revenue. At the end, let them

Competencies	*Contents*	*Suggested activities*
		explain the differences among the three. - Brain storming - ask students to recall what they know about government expenditures and guide them to distinguish recurrent and capital expenditures.

ASSESSMENT

Students' performance has to be assessed continuously over all units. Comparing students' performance with the specified level of competencies will make the assessment logical. Besides, the teacher has to recognize the level of performance of each student and provide assistance accordingly.

A student at minimum requirement level will be able to:- define the concept of macroeconomics, budget, inflation and expenditure; identify and analyze problems of macro economics, the type of unemployment and sources of government Revenues; Display the business cycle over all economic activity; explain the meaning of unemployment, causes of inflation, effects of inflation and capital revenue; distinguish the type of unemployment; measure unemployment level and classify the sources of tax and non-tax revenues.
In addition, a student working above the minimum requirement level and considered as a higher achievers should be able to:- Examine the impact of unemployment and inflation on the economic growth; and compute the rate of inflation and interpret the results.

Students working below minimum requirement level will require extra help if they are to catch up with the rest of the class. Students reaching at the minimum requirement level but achieve a little bit higher should be supported so that they attain the higher achiever competencies. Students who fulfill the higher achievers competencies also need a special support to continue and achieve more

Unit 7: National income account *(12 periods)*
Unit learning out comes: Students will be able to:-
- Appreciate national income account and its importance
- Understand and compute the different approaches used to measure GDP
- Analyse the difference between nominal and real GDP

Competencies	*Contents*	*Suggested activities*
Students will be able to: • Define and state national income account and its importance • Define GDP and GNP • Identify the problems associated with measuring GDP • Identify and define the three approaches that are used to measure GDP • Define and compute GDP based on product approach • Define and compute GDP based on expenditure approach • Define and compute GDP based on income approach • Define concept of GDP • Define the three approaches to compute GDP • Distinguish the differences between nominal and real GDP • Compute GDP based on the three approaches • State other national income accounts • Show the relationship between income and GDP	7. **National Income Account** • Nature of National income account and its importance • Definition of GDP and GNP **7.1 Measurements of GDP** 7.1.1 Problems of measuring GDP 7.1.2 Approaches of measuring GDP • Product Approach • Expenditure Approach • Income Approach 7.1.3 Nominal and Real GDP **7.2 Other National income account** **7.3 GDP and income distribution**	• Help students to understand the importance of national income account. • Facilitate condition to students so that they arrive out correct definition of GDP and GNP. • Guide students to identify the major problems in measuring GDP. • Show the students how GDP is measured by using product, expenditure and income approach and give them exercise that helps them to practice measuring GDP by using income, expenditure and product approach. • Encourage students to identify the difference between nominal and real GDP. • Organize students into a small group to prepare a short report on the causes and consequences of income inequalities then let them discuss on what they submit and finally give a summary and consolidate the main points.

ASSESSMENT

Students' performance has to be assessed continuously over the whole, unit. Comparing students' performance with the specified level of competencies will make the assessment logical. Besides, the teacher has to recognize the level of performance of each student and provide assistance accordingly.

Thus:-
A student at a minimum requirement level will be able to define national income account, the terms GDP and GNP and their concept, the three approaches to compute GDP, state the importance of NIA, identify the problems associated with measuring GDP, distinguish the difference between nominal and real GDP.

In addition, a student working above the minimum requirement level and considered as higher achiever should be able to compute GDP based on the three approach, state other national income account and show the relationship between income and GDP, students who full fill the higher competencies also need a special support to continue and achieve more.

Unit 8: Balance of payment *(14 periods)*

Unit learning out comes: Students will be able to:

- Realize the concept of balance of payment and identify the parts of balance of payment
- Understand the restriction on trade and mode of payments
- Exemplify the impact of foreign trade on the economy

Competencies	*Contents*	*Suggested activities*
Students will be able to: • Define balance of payment • Define and identify the components of current account • Define trade balance and show how trade balance is computed • Define net service • Define current account balance • Identify the components of current account balance • Compute and interpret change in country's asset held abroad. • Compute and interpret change in foreign asset held in country. • Define the concept of international trade. • Analyze absolute advantage & comparative advantage • Explain import & export • Distinguish the differences between trade surplus, deficit and balance. • Identify and define the basic restrictions on trade • Identify and explain mode of payment in international trade • Asses the impact of foreign trade on the economy ▪ Classify	**8. Balance of payment(BOP)** • Meaning of BOP • Elements of BOP • Current Account • Trade Balance • Net service • Capital Account • Change in country's asset held abroad • Change in foreign asset held in country • Statistical Discrepancies • The nature of international trade • Absolute advantage • Comparative advantage • Foreign trade components: • Export and Imports • Trade surplus • Trade Deficit • Trade balance • Restriction on Trade • Tarrif • Quota • Mode of payments in international Trade • Impact of foreign trade on the economy • Impact of foreign trade on GDP • Exchange rates and the BOP • Fixed exchange rate	- Arrange a group discussion, so that students can identify the major elements of balance of payment and its definition. - Facilitate conditions that enable students to identify the elements of current account and capital account and guide them to understand what statistical discrepancy is. - Ask students to recall what they know about why nation's trade? Then help them to understand the differences between absolute and comparative advantage. - Motivate the students to say something about export and import then guide them to define trade surplus, deficit and balance. - Brain storming – Ask students what they know about tariff and quota and lead them to arrive at the correct concept of restriction on trade. - Let students discuss on how payment is made in international trade and help them to understand the different ways of payments in international trade. - Arrange small groups of learners and guide them to discuss about the impact of international trade on the economy. - Ask students what they know about how exchange rate is decided in Ethiopia and assist them to understand the

Competencies	*Contents*	*Suggested activities*
exchange rates ▪ Define fixed exchange rate and identify the types of fixed exchange rate • Define revaluation and devaluation fixed exchange rates. • Explain what floating exchange is • Distinguish the differences between appreciation and depreciation floating exchange rate. • Asses the impact of exchange rate on BOP.	▪ Revaluation exchange rate ▪ Devaluations exchange rate • Floating exchange rate ▪ Appreciation exchange rate ▪ Depreciation exchange rate **8.1 Impacts of exchange rate on BOP**	differences between floating and fixed exchange rates. - Facilitate conditions to students so that they arrive at the correct definition of revaluation, devaluation, appreciation and depreciation.

ASSESSMENT

Students' performance has to be assessed continuously over the whole unit. Comparing students' performance with the specified level of competencies will make the assessment logical. Besides the teacher has to recognize the level of performance of each student and provide assistance accordingly.

Thus:-
A student at a minimum requirement level will be able to define balance of payment, the components of current account, trade balance, net service, international trade; fixed exchange rate, and floating, revaluation and deregulation fixed exchange rate, identify the components of current account, capital account balance of payment, the basic restrictions on trade; explain types of fixed and floating exchange rate, explain import and export, distinguish the difference between trade surplus, deficit and balance.

In addition to, a student working above the minimum requirement level and considered as higher should be able to compute and interpret change in country's assets held abroad and in country, analyze absolute advantage and comparative advantages, identify and explain mode of payment in international trade.

Assess the impact of foreign trade on the economy and the impact of exchange rate on BOP. Students who fulfil the higher achievers competencies also need a special support to continue and achieve more.

Unit 9 : Macroeconomic policy instruments *(7 periods)*
Unit learning out comes: Students will be able to:-

- Realize the difference among fiscal, monetary and income policy
- Distinguish the difference between expansionary, fiscal and expansionary monotony policy
- State income policy

Competencies	*Contents*	*Suggested activities*
Students will be able to: • Define macroeconomic policy instruments • Identify the types of macroeconomic policy instruments • Explain and classify fiscal policy • Distinguish the difference between expansionary and contractionary fiscal policy • Classify monetary policy • State and define monetary policy instruments • Distinguish the difference between expansionary and contractionary monetary policy • Define the concept of income policy	**9. Policy instruments** **9.1 Definition and types of macroeconomic policies** 9.1.1 Fiscal policy • Expansionary fiscal policy • Contractionary fiscal policy 9.1.2 Monetary policy • Monetary policy instruments • Types of monetary policy ▪ Expansionary monetary policy ▪ Contractionary monetary policy 9.1.3 Income policy	• Start the lesson by motivating students to say something about policy and help them to arrive to the appropriate concept and definition of macroeconomic policy instruments. • Let students identify the difference between expansionary and contractionary fiscal policy • Facilitate conditions so that they can identify and explain monetary policy instruments. • Let students identify the difference between expansionary and contractionary fiscal policy. • Assign a group, and let the students to discuss about income policy instruments.

ASSESSMENT

Students' performance has to be assessed continuously over the whole unit. Comparing students' performance with the specified level of competencies will make the assessment logical. Besides the teacher has to recognize the level of performance of each stuent and provide assistance accordingly.

Thus:-
A student at a minimum requirement level will be able to:- Define macro economic policy instrument, monetary policy instrument , income policy, fiscal policy, identify the types of macro economic policy instruments, distinguish the difference between expansionary and contractionary fiscal policy and monetary policy; and classify monetary policy.

In addition, a student working above the minimum requirement level and considered as higher achiever should be able to assess the impact of fiscal, monetary and income policy on inflation and deflation. Students who fulfil the higher achievers competencies also need a special support to continue and achieve more.

Unit 10: Consumption, Investment and saving *(10 periods)*

Unit learning outcomes : Students will be able to:-

- Realize the relationship among consumption, saving and investment
- Compute average and marginal propensity to consume and save
- Appreciate the role of investment in economic growth

Competencies	*Contents*	*Suggested activities*
Students will be able to: • Define the concept of consumption • Asses the basic determiners of consumption • Explain what saving is • Identify the determinants of saving • Show the relationship between consumption and saving • Define Investment • State the determinants of investment • Show appreciation about the impact of investment in economic growth	**10. Consumption, Investment and saving** **10.1 Consumption** • Meaning and determinants of consumption 10.1.1 Consumption function **10.2 Saving** • Meaning and determinants of saving 10.2.1 Saving function **10.3 Relationship between consumption and saving** • Average propensity to consume and save • Marginal propensity to consume and save **10.4 Investment** 10.4.1 Meaning of investment 10.4.2 Determinants of investment 10.4.3 Role of investment in economic growth	Consumption, Investment and saving • Brain storming:- Start the lesson by asking students about consumption and saving and assist them to understand the correct definition. • Motivate the students, so that they can mention some of the factors that affect their consumption and saving. • Based on the discussion lead students to understand the relationship between consumption and saving. • Brain storming – ask students what they know about investment and let them speak out what they know about the impact of investment on economic growth.

ASSESSMENT

Students performance has to be assess continuously over he whole units. Comparing students' performance with the specified level of competency's will make the assessment logical. Besides, the teacher has to recognize the level of performance of each student and provide assistance accordingly

A student at a minimum requirement level will be able to:-
define the concept of consumption, saving and investment.; explain what saving is; asses the basic determiners of consumption, saving & investment, and show the relationship between consumption and saving.

In addition, a student working above, the minimum requirement level and considered as a higher achiever should be able to:-
Show appreciation the impact of investment in economic growth.

Students working below the minimum requirement level will require extra help, if they are to catch up with the rest of the class. Students reaching the minimum requirement level, but achieve a little bit higher should be supported, so that they attain the higher achiever competencies. Students fulfil the higher achiever competencies also need special support to continue an achieve more