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214en03

GOODS AND SERVICES

You have learnt that human wants are unlimited and insatiable. Now the question is, how many of our wants can be satisfied and how they can be satisfied.

Human wants are satisfied by goods and services, which are carried through various economic activities. In this lesson you will learn about the terms goods and services, types of goods and services and significance of goods and services in relation to production, consumption, investment and human wants.



OBJECTIVES

After completing this lesson, you will be able to:

- *explain the terms goods and services;*
- *identify various types of goods and services;*
- *distinguish between goods and services;*
- *understand the basis for different types of goods and services;*
- *know about free and economic goods and services;*
- *make out the difference between consumer and producer goods and services;*
- *explain how goods can be single use and durable use;*
- *differentiate between public goods and private goods.*

3.1 GOODS AND SERVICES

In our daily life, we come across variety of goods and services. When we are hungry, we take food. When we are thirsty, we take water. In a similar way we need many goods such as pen and paper to write, house to live in, chairs to sit, a washing machine to wash

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the clothes,, a television to watch the programmes etc. All these are the examples of goods that satisfy our wants.

But goods alone are not sufficient to fulfill our wants. We need the services of different people for different jobs. For example we require a hairdresser to cut our hair, a doctor to cure us, a tailor to stitch our clothes, a cobbler for mending our shoes etc. These are a few examples of services that satisfy our wants. Both goods and services satisfy human wants. These goods and services are as diverse as our wants.

3.2 DISTINCTION BETWEEN GOODS AND SERVICES

Now that we know that both goods and services are important to satisfy human wants, let us understand how both are different from each other. The main points of distinction are:

Goods

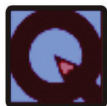
1. Goods are tangible in nature i.e. they can be seen and touched.
2. There is a time gap between production and consumption of goods as they are produced first and consumed later.
3. They can be stored and utilized when required.
4. They can be transferred from one place to another.

Let us take example of any one good, say chair. You can see a chair and can also touch it. The carpenter first makes it in his workshop. You use it after purchasing it from the market. So there is a time gap between production of chair and its consumption. If suppose you do not require that chair immediately you can keep it in your store and can use it when you require it. You can even give it or sell it to another person.

Services

1. Services are non-tangible in nature i.e. they can neither be seen nor be touched.
2. There is no time gap between the production and consumption of services. That is why they are produced and consumed simultaneously.
3. Services cannot be stored.
4. Transfer of service is not possible.

Let us consider the example of services of a doctor. The doctor examines a patient and writes the medicines. Now he has delivered a service (for the treatment of the patient), which we cannot see or touch. The moment he examines the patient, he has delivered his services which is also consumed by the patient. So there is no time gap between production and consumption of services. Now this service cannot be stored or transferred.

**INTEXT QUESTIONS 3.1**

1. Which of the following items are goods.
 - (a) Car
 - (b) Cell phone
 - (c) Transportation of passengers
 - (d) Mending of shoes
2. Out of the following, which are the characteristics of a good.
 - (a) Goods can be seen or touched
 - (b) Goods cannot be transferred
 - (c) There is no time gap between the production and consumption of goods
3. Out of the following, which are the characteristics of services
 - (a) Services can be seen or touched
 - (b) There is no time gap between production and consumption of services
 - (c) Services can be stored
4. Human wants are satisfied by consuming.
 - (a) Goods
 - (b) Services
 - (c) Both goods and services
 - (d) None of the above

**Notes****3.3 CLASSIFICATION OF GOODS AND SERVICES**

We know that different types of enterprises produce different types of goods and services. It is not possible to study them individually; therefore to understand them properly we have to classify them in a number of broad groups. This classification can be done in many ways. This classification helps us to understand the relative economic significance of different goods. We will study the following classifications:

1. Free goods and economic goods.
2. Free services and economic services.
3. Consumer goods and producer goods.
4. Consumer services and producer services.
5. Single use goods and durable use goods.
6. Private goods and public goods.



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1. Free goods and economic goods

Let us assume that you are in a desert. If you fill a bag with sand, you need not pay any price. But otherwise in a city, you have to pay for it. This example helps us to differentiate a free good from an economic good. Free goods are free gifts of nature. They are available in abundance i.e. in unlimited quantity and the supply is much more than the demand. You don't have to pay anything to get them. That is why they are called free goods. In short we can define free goods as goods which possess utility but which are not scarce.

In our daily life, we use toothpaste, soap, shaving cream, footwear, bread etc. These goods are man made and their supply is not unlimited. Similarly we use machines, buses, table, chair, books, fans, television etc. They too are man made and their supply is not unlimited. We use water for various purposes at home, sand for construction and different minerals in different forms. Now these are not man made but free gifts of nature. But because they are scarce i.e. their demand is more than their supply, they command a price and are not freely available. They are the economic goods.

Economic goods are those goods (manmade or free gifts of nature) whose demand is more than supply. They command a price and they can be bought in the market.

2. Free services and economic services

In case of services too, there are free services and economic services. Free services are those, which cannot be bought in the market and which are rendered due to love, affection etc. For example services of parents for their children. All those services, which can be bought in the market, are economic services such as services of doctors, engineers etc. The rest of the classification of goods and services deal only with economic goods and services.

3. Consumer goods and Producer goods

This classification is based on the purpose for which a particular good is used. Consumer goods are those goods, which satisfy the want of consumer directly. They are goods, which are used for consumption. For example bread, fruits, milk, clothes etc.

Producer goods are those goods, which satisfy the want of consumers indirectly. As they help in producing other goods, they are known as producer goods. For example machinery, tools, raw materials, seeds, manure and tractor etc are all example of producer goods.

3a. Intermediate goods

Raw materials, power, fuels etc. used by the producers for further production of final goods and services are also called intermediate goods. Example : Wheat flour is an intermediate good in the production of bread in the bakery.



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4. Consumer's services and producer's services

Here too the basis of classification is the same as that of goods. When the consumers or the households directly use services, they are known as consumer services. For example services of a tailor stitching your shirt or services of a doctor giving you the treatment or services of a plumber repairing your leaking tap, etc.

Producer services on the other hand are used to produce other goods and services, which are in turn demanded by the consumers. In other words producer services satisfy the human wants indirectly. For example a tailor stitches a shirt for a readymade garment shop, an electrician repairs fault in the electric supply in a production unit or even a truck-transporting raw material to a factory.

5. Single use and durable use goods

All types of goods whether consumer goods or the producer goods are further classified into single use and durable use goods. Single use goods are those goods, which can be used only once. They are finished only in one use. For example bread, butter, egg, milk etc are the single use consumer goods as they are consumed immediately and once for all. Similarly single use producer goods are exhausted in one production process. For example coal, raw material, seeds, manure etc. To elaborate it further let us take the example of production of sugar. Here the raw material is sugarcane, which is used only once.

Durable use goods are those goods, which can be used again and again for a long period of time. There are durable use consumer goods as well as durable use producer goods. Durable use consumer goods are cloth, furniture, television, scooter etc. that can be used by consumer again and again. Durable use producer goods are used in production again and again for example, machines, tools, tractors and implements etc. this does not mean that repeated use of these goods does not make any difference to them. In fact the value of these goods gets depreciated after continuous use.

6. Private goods and public goods

Goods can be classified on the basis of their ownership. All goods that are privately owned and are exclusively enjoyed by individuals are called private goods. For example all the goods owned by you are private goods. This includes your watch, pen, scooter, books, table, chair, bed, clothes etc. If you own a factory then its building, machinery; tools etc are your private goods.

Public goods are those goods, which are owned and enjoyed by the society as a whole. For example roads, bridges, park, town hall etc. are all collectively owned. They are available to all people in a society without any discrimination, i.e. no one is denied from the consumption of public goods. Both government and private entrepreneurs may produce public goods.



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INTEXT QUESTIONS 3.2

Which of the following are correct?

1. Economic goods are-
 - (a) Those which are scarce
 - (b) Those which have a price
 - (c) Those which are scarce and also have a price
2. Consumer goods are those goods –
 - (a) Which help in further production
 - (b) Which satisfy the human wants directly
 - (c) None of these
3. Examples of producer goods are-
 - (a) Machinery
 - (b) Tractors
 - (c) Bread
 - (d) Raw material
4. Which of the following statements are correct?
 - (a) Free goods are those goods whose supply is more than the demand.
 - (b) Single use goods are those goods, which are used one for all.
 - (c) Durable use goods can be used again and again.
 - (d) Public goods are those goods, which are collectively owned.

3.4 ROLE AND SIGNIFICANCE OF GOODS AND SERVICES IN AN ECONOMY

Goods and services have a multidimensional role to play in an economy. Their role can be stated in relation to-

1. Human wants

You have studied that human wants are unlimited and they are also ever increasing. It means if the availability of different goods and services like clothes, shoes, furniture,

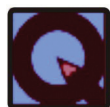
utensils, television, scooter, fruits, vegetable, food grains and services of doctor, plumber, electrician etc increases, it will satisfy more human wants.

2. Production

We require consumer goods and services to satisfy increasing human wants. But this increase in availability of consumer goods and services depends on the increased availability of producer goods and services. We can produce more if we have more and better machinery, raw material, tractors, seeds, manure etc. similarly we require more of transportation services, banking and insurance services. Thus it is the quantity and quality of producer's goods and services that will determine the availability of consumer goods and services in the market.

3. Investment

Increase in the production of goods and services will also determine the level of investment. Given the quantity of goods and services, a part of it is consumed, which satisfies the human wants. Whatever is not consumed is used for further production and it results in capital formation in the economy. If the production of goods and services is more, it is likely that the consumption will be more and the investment will also be more. The larger is the surplus, the larger is the productive capacity of the economy.



INTEXT QUESTIONS 3.3

Write true or false against each of the following statements

1. Consumption of goods and services helps in the satisfaction of human wants. []
2. Availability of goods and services depends on the availability of producer goods. []
3. More production results in more consumption and more investment. []



WHAT YOU HAVE LEARNT

- Human wants are unlimited. Goods and services can satisfy them.
- Free goods are those goods which are available in unlimited quantity and do not command a price in the market.
- Economic goods are limited in supply in relation to their demand. They also command a price in the market.



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**Notes**

- Free services are rendered out of love, affection etc. They cannot be bought in the market.
- Economic services are the services, which can be bought in the market.
- Consumer goods are those goods, which satisfy consumer's want directly.
- Both consumer goods and producer goods are further classified into single use and durable use goods depending upon the number of times that good is used. If used only once, it is single use and if used again and again it is durable use good.
- Consumer services satisfy the wants of consumers directly whereas producer services help in the further production of goods and services.
- Quality and quantity of goods and services determine the level of production, investment, consumption and satisfaction of human wants.

**TERMINAL EXERCISE**

1. Distinguish between goods and services.
2. Distinguish between economic goods and free goods.
3. Distinguish between consumer goods and producer goods.
4. Distinguish between single use and durable use goods.
5. What is the role and significance of goods and services in an economy?

**ANSWERS TO INTEXT QUESTIONS****Intext Questions 3.1**

1. a, b
2. a
3. b
4. c

Intext Questions 3.2

1. c
2. b
3. a, b, d
4. a, b, c, d

Intext Questions 3.3

1. True
2. True
3. True

MODULE-2
ABOUT ECONOMY

4. Economy – Its Meaning and Types
5. Central Problems of an Economy
6. Basic Economic Activities



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BASIC ECONOMIC ACTIVITIES

Production, consumption and capital formation are called the basic economic activities of an economy. Scarce resources are used in the production of goods and services with the objective of satisfying our needs and wants. The process of production of goods and services is carried by combining the factors like land, labour, capital and entrepreneurship. Factors are paid rent, wages, interest and profits for their productive services. The consumption activity consists of the use of goods and services for the direct satisfaction of individual or collective human wants. A part of current production is saved for future to add to existing capital stock like, plant, machinery, building etc. every year in order to expand production potential in future. So whatever is produced is disposed of either for consumption or for capital formation or both.



OBJECTIVES

After completing this lesson, you will be able to:

- *understand production and its goals;*
- *know the factors of production and factor incomes;*
- *know about consumption;*
- *be familiar with the goods produced for consumption;*
- *understand how production and consumption help in capital formation;*
- *explain circular flow of economic activities.*

6.1 PRODUCTION

In the last lesson you have read about scarcity of resources and making choice. These scarce resources are used in the production of goods and services. The goal of



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production is to satisfy our wants. These goods and services produced can be sold in markets or can be provided by the government to public at nominal charge. Therefore Production is defined as creation of utility.

Production activities involve making of goods and services. People who make and sell these goods and services are known as producers. The producers combine the factors like land, labour, capital and entrepreneurship along with raw materials in order to transform them into various goods and services. **Land, labour, capital and entrepreneurship are called the factors of production.** The producers try to produce maximum amount of goods and services by using various combination of factors of production. Let us know more about these factors of production.

6.1.1 Land

Land is a gift of nature. It includes plain region, mountains and plateau region. The plain region is useful for agriculture and industrial activities. Mountains ensure flow of rivers into the plain region and provide facilities for tourism. Plateau region possesses reserves of minerals, fossil fuels and forests. Production of food grains, vegetables, fruits etc require agricultural land in the plain region. Along with this people also carry out animal husbandry, fisheries and forestry which are called allied activities. In India rural area is known for carrying out agricultural and allied activities. Some amount of land in the plain region is specially developed to establish industries and urban areas such as towns and cities.

6.1.2 Labour

In general labour implies the human effort through physical and mental exertions in the production of goods and services. A person working on the agricultural field is said to provide his physical labour while a writer of a book is said to provide his mental labour. People who provide labour are known as human resources. Production activities require both skilled and unskilled labour. Purely physical labour such as loading and unloading, ploughing on the field etc do not require special skill. But to become an engineer, doctor, teacher, lawyer, mechanic, electrician or tailor etc one must acquire skill through education and training.

6.1.3 Capital

By **capital**, we mean all man made appliances and all types of wealth used in production. Capital consists of machinery, tools, buildings, materials etc. Whereas land is a natural resource, capital is a man made resource. Capital is used to increase the efficiency of other factors of production like land or labour. The efficiency of land can be increased by use of better irrigation facilities and machines. However, capital is a passive factor of production and cannot be used without employing labour to work. Capital has a limited span of life, and becomes obsolete after a certain period. Small tools like, screwdrivers, calculators to heavy machines like engines, tractors,

ships are all examples of **fixed capital**, as they can be used in production for many years. Fixed capital also includes the buildings and heavy machines. The **working capital** includes raw materials like cotton yarn, clay, seeds, fertilizers, which are used-up in the process of production.

6.1.4 Entrepreneurship

Somebody must take the initiative to start the process of production of goods or services by bringing land, labour and capital together in right proportion. He will be responsible for choosing the right type of land, labour and capital and take important decisions with respect to quantity to be produced, money to be spent to buy the factors and raw materials, marketing the output produced etc. **Entrepreneurship** is the art of organizing the production activity. The person who makes the decisions and controls the production process and bears the risks and uncertainties involved in production is called an **entrepreneur**. He/She should be knowledgeable, courageous and should possess leadership qualities. The objective of an entrepreneur is to get maximum production by using the given resources and make arrangements for the sale of the finished products. He/she is also responsible to make payments to other factors of production.

He/she pays wages to the labourers, rent to the landlords and interest to the owner of capital in return for their productive services. Similarly, they earn profit for their productive activity. **Since these payments, rent, wages, interest and profits are received by the factors for their productive services, they are termed as factor incomes.**



INTEXT QUESTIONS 6.1

- Below is a list of some of the factors that are used to produce shirts. Group them into **natural resources**, **human resources**, **fixed capital** and **working capital**

Yarn, machinery, tailors, land for factory, wooden doors, colour, dye, building, sewing machines, telephones, marketing managers, advertising managers, packaging machines, scissors, buttons, bank loans, cash money

- Which one of the following is not a characteristic of land:
 - Mobile
 - Gift of nature
 - Limited in quantity
 - Indestructible



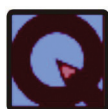
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6.2 FACTOR INCOMES

These factors of production are owned by people. Land is owned by the landlord, labour is owned by labourer, capital is owned by people who acquire capital goods, entrepreneurship is owned by the entrepreneur. The owners of factors of production are paid in return for their productive services. When you hire a piece of land, you pay rent to the landlord for using the services of land. Thus the tenant pays rent for the services of land. Labour refers to the services rendered by the workers. It refers to the all types of workers, manual labour, technical workers and so on. When an employer requires the services rendered by a worker, he/she is ready to pay for his services. By hiring a worker, actually his services are hired. When a loan is taken from a bank to buy a tractor, seeds, machinery etc. interest is paid to bank. Thus, rent is paid to the landlords, wages to the labourers, interest to the owners of capital resources and profit to the entrepreneurs. Since they are paid in return to their productive services, they are called factor payments and their incomes are called factor incomes.



INTEXT QUESTIONS 6.2

Ram Singh is farmer in a village of Haryana, who owns 2 hectares of land. Both, he and his wife Rani, work in the field. Earlier, they only grew paddy on their land. Now they want to increase the productivity of their land by growing two crops and better variety of seeds and irrigation. They want to grow two crops, paddy and potatoes. For this they need money to buy good quality seeds and fertilizers. As they do not have enough money, both work in other's farms as labourer. They spend some money on the fertilizers, seeds, pump sets etc. After working very hard, they manage to have a good crop of both paddy and potato. They keep some paddy and potato grown in their farm for their personal use and sell the rest. They earn Rs. 12,000 by selling their crops.

- Identify the factors of production in this story?
- What are the capital goods used in this example?

6.3 CONSUMPTION

The objective of production is to produce goods and services for consumption. The consumption activity consists of the use of goods and services for the direct satisfaction of individual or collective human wants or needs. To satisfy their wants the households purchase a large variety of goods and services like cycles, furniture, television set, car, refrigerator, food grains, milk, oil, soap etc. and services like



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barber, teacher, doctor, bank and insurance companies etc. There is no time gap between the production and consumption of services. In case of services production and consumption take place simultaneously. They are consumed as soon as they are produced, such as the services of doctors, lawyers, teachers etc. As you visit a doctor to take medical advice, you consume his service. This is not the case with regard to goods. There is a time gap between the production and consumption of goods. Goods are considered to be consumed when they are purchased. However, certain durable goods like furniture, cycles etc. continue to provide services for many years, still they are considered to be consumed as soon as they are purchased.

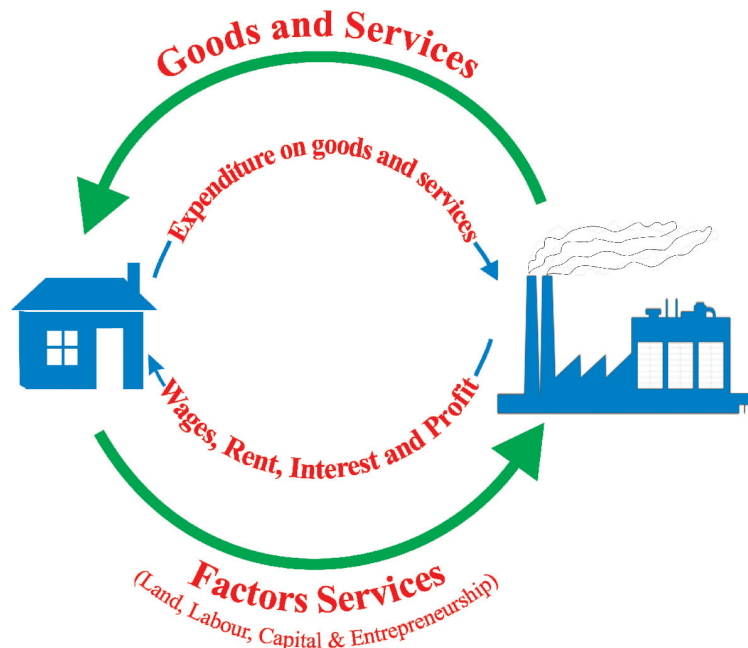
6.4 CAPITAL FORMATION

The third important activity of an economy is capital formation. As you have read, factor owners get factor incomes in return for their productive services. They spend a large part of their incomes on goods and services such as food articles, cloth, furniture, housing, bicycles, education, health care etc. However, they do not spend their entire income on these goods and services. They also save some income and deposit it in bank for future. For example, if an individual has an income of Rs. 500/ all of which she consumes, there is no saving. Instead if she restricts her consumption to Rs.300/, she saves Rs.200/ and may use this money to deposit in bank for future use. The bank, in turn, may use this money to lend an industrialist to invest in the expansion of his business. Capital formation is done by refraining from present consumption. It should be noted that saving, if kept idle, cannot constitute capital formation. If a person saves money and locks up in the house, no capital formation takes place. If only the saved money is invested in capital goods it leads to capital formation by facilitating production and consumption in future. Thus, current consumption is forgone and used towards adding to existing capital stock like, plant, machinery, building etc. every year in order to expand production potential in future. This increase in the stock of capital goods in a year is called capital formation or investment. Similarly, a part of nation's output is devoted not to immediate satisfaction of consumer wants but to the provision of plants and equipments by which production is maintained and expanded. To sum up, whatever is produced is disposed of either for consumption or for capital formation or both.

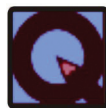
These three activities, production, consumption and capital formation are inter-related. An increase in the production of goods and services increases the level of consumption and capital formation. Increase in consumption is an indicator of rising standard of living of people and increase in capital formation is very important as the growth of the country depends on it. More consumption is possible if there is more production and more production is possible if there is more capital formation. Thus, the three economic activities have their impact on one-another to take the economy forward to the path of development.



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Circular Flow Chart



INTEXT QUESTIONS: 6.3

1. Give two examples of durable goods, non-durable goods and services.
2. There is an excess of production over consumption in a year. Where does it go?
3. How does production facilitate consumption and capital formation?



WHAT HAVE YOU LEARNT

- Production, consumption and capital formation are three basic economic activities.
- Production is defined as creation of utility.
- Land, labour, capital and entrepreneurship are four factors of production.
- Wages, interest, rent and profits are the factor payments made by the firm to the owners of factors of production. For the owners of the factor services the same are called factor incomes.
- Consumption means using up of goods and services for direct satisfaction of individual and collective wants.
- Capital formation is the surplus of production over consumption over a period of time.

**TERMINAL EXERCISE**

1. An agricultural land is a fixed resource. How can its productivity be increased?
2. How can the productivity of labour be increased?
3. What are the main functions of an entrepreneur?
4. How does capital add to the productivity of labour?
5. If there is an excess of production over consumption in a year, where does it go? Also mention two goods which help in capital formation in an economy.
6. Mention the three important economic activities and show their inter-relationship diagrammatically.
7. Purchase of a cycle by a household is treated as:
 - (a) Capital formation
 - (b) Production by household
 - (c) Consumption
 - (d) Production for self consumption
8. Which of the following statements are true or false:
 - (a) Capital formation increases the capital of a country.
 - (b) Growing vegetables in the kitchen garden is not a part of production.
 - (c) A farmer producing wheat for self consumption is a part of production.
 - (d) A teacher teaching in school is production.
 - (e) A student using stationery is production.
 - (f) Digging a well by the members of a family in their own field is a part of capital formation.
 - (g) A truck transporting wheat from a village to the market in the nearby town is a part of production.
9. Fill in the blanks:
 - (a) Roads constructed by the government are (production/ capital formation).
 - (b) Purchase of a tractor by a farmer is a part of (production/ consumption).

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- (c) A new house purchased by an individual is(consumption/production).
- (d) A doctor seeing a patient is (production/consumption).
- (e) A student studying in a school is (production/consumption).



ANSWERS TO INTEXT QUESTIONS

Intext Questions 6.1

1. Natural resources – Land for factory

Human resources – Tailors, Marketing managers, Advertising managers.

Fixed capital – Machinery, wooden doors, buildings, sewing machines, telephones, packaging machines, and scissors.

Working capital- yarn, dye, buttons, bank loan, cash money.

2. a.

Intext Questions 6.3

1. Durable goods: Television, refrigerator, washing machine etc.

Non-durable goods: Bread, butter, milk, flour.

Services: Barber's services, services of teacher, services of a doctor.

2. It goes to capital formation.
3. An increase in production of goods and services increases the level of consumption and capital formation. More consumption is possible only when there is more production and more capital formation is possible only when production is more than consumption.

MODULE-3
PRODUCING GOODS AND SERVICES

- 7. Production
- 8. Cost and Revenue



7



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PRODUCTION

In order to satisfy our wants we have to produce various types of goods and services. The production of goods takes place in agricultural fields, factories, firms, industries and production of services takes place in shops, offices, hospitals, schools, colleges, hotels, banks and at many other places. In an economy, there may be lakhs of production units which produce goods and services. Production is the result of the combined efforts of the four factors of production - land, labour, capital and entrepreneurship. These are also called inputs or resources. The relationship between inputs and output holds the key to optimum use of resources, producing maximum level of output possible and increasing the level of output etc.



OBJECTIVES

After completing this lesson, you will be able to:

- *explain the concept of production function;*
- *analyse different techniques or methods used to produce goods and services;*
- *explain the terms, total product, average product and marginal product;*
- *know the law of diminishing marginal product;*
- *explain production process and organization of production activity;*
- *understand the role of factors of production;*
- *explain the role and importance of firms and industry;*
- *identify various types of producers in the economy.*

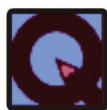
7.1 CONCEPT OF PRODUCTION FUNCTION

Production is defined as transformation of inputs into output. The resources used in production are called inputs and the goods and services produced are called output. For



example, for the production of an output called rice, we require inputs such as agricultural land, seeds, fertilizers, plough, water, pesticides, diesel to run tractor etc. All these inputs have to be combined in some prescribed amounts to produce some quantity of rice. **Production function tells us the technical relationship between inputs and output of a firm. It tells us the maximum quantity of output that can be produced with the help of given quantities of inputs.**

In short, the quantity of output is the function of inputs like land, labour, capital, entrepreneurship and required raw materials. There is a direct relationship between the amount of inputs and the amount of output produced. An increase in inputs leads to increase in output to certain extent and vice versa. The aim of every producer is to maximize the quantity of output from the given amount of inputs. The inputs must be combined in a particular manner for production of a particular type of output. Take the example of a tailoring shop. It requires a master who can cut the cloth as per measurement and one person for one stitching machine to stitch the cloth cut by the master to make shirt or pant etc. If work load is more then another machine and a person to work with it can be added. **Technology or method of production refers to the ratio in which inputs are combined to produce output.** So, the production function is also defined as ‘a technological relationship that tells us the maximum output producible from various combinations of inputs.’



INTEXT QUESTIONS 7.1

1. Define inputs?
2. Define output?
3. Define production function?

7.2 DIFFERENT TECHNOLOGIES OF PRODUCTION

Goods and services can be produced in more than one way. For example, the production of cloth can be made either with the help of handloom or with the help of powerloom. The first one is labour intensive technology of production and the second one is capital intensive technology of production.

When a farmer makes use of wooden plough, bullocks etc. in the production of food grains he uses the labour intensive technology of production. On the other hand when he uses tractor, pumpset, harvester in the production of food grains, he uses capital intensive technology of production. In this way the technology of production can be of the following two types.

1. Labour Intensive Technology
2. Capital Intensive Technology



Labour Intensive Technology: When we make more use of labour and less use of capital per unit of output in the production of our commodity that is called labour intensive technology. This type of technology is used in household enterprises and in the enterprises which make production for self consumption or in case of small scale production.

Capital Intensive Technology: When we make more use of capital and less use of labour per unit output in the production of our commodity that is called capital intensive technology of production. This type of technology is used when the production is made on a large scale for sale in the market in order to earn profit. In corporations and government enterprises generally there is the use of capital intensive technology of production because there is large scale production of goods and services.

Another aspect of organising the production activity is division of labour. Division of labour increases the efficiency of workers due to which large scale production becomes possible. Division of labour means splitting up of the production activity into many processes and assigning every process among different workers according to their aptitude and ability. Division of labour is of the following two types.

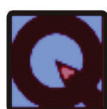
- 1. Product based division of labour:** If a worker specializes in the production of a single good or service, it is called product based division of labour. In case of small farmers, a potter, a cobbler or a carpenter in a village we see that there is the use of product based division of labour. It is very common in household enterprises of developing countries like India. When the production is made for self consumption or on a small scale there is the use of product based division of labour. For example most of the farmers in our country make production of food grains mainly for self consumption. All of them make use of product based division of labour.
- 2. Process Based Division of labour:** In big production units like corporations and government enterprises where the production is made on a very large scale, there is the use of process based division of labour. In case of process based division of labour, the production of a commodity is divided into many processes and a worker specializes in one or two processes, that is called process based division of labour. For example Britannia Bread Company manufactures bread. Raw material for bread is wheat flour. Conversion of wheat flour into bread requires three or four processes. The flour has to be converted into dough and dough has to be kept into containers for baking. Containers are kept in ovens for baking. The baked bread is cut into appropriate size and packed. All processes required in manufacturing of bread are undertaken by different workers and nobody can claim that he has manufactured the bread. He can say that he has performed one or two processes in the preparation of the bread.

In government sector also, the supply of any single good or service depends on the process based division of labour. For example, take the case of a simple street lighting



to be provided in a newly constructed group housing complex. It undergoes several processes. First is the installation of electric poles in the streets. The second process is connecting all the poles with electric wires. The third is fitting electric bulbs and tubes and the final stage is the release of electric supply from sub-station. All these processes are undertaken by different workers. For removing any defect in the functioning of the system, these are another team of workers from maintenance department who put the system in order.

Division of labour increases the efficiency of workers and lead to the possibility of inventions and discoveries because of repetitive nature of work. It encourages the use of machines in place of manual labour. It also leads to the use of capital intensive technique of production.



INTEXT QUESTIONS 7.2

1. Define labour Intensive Technology.
2. Define Capital Intensive Technology.
3. Give one example each of product based and process based division of labour?

7.3 TOTAL PRODUCT, AVERAGE PRODUCT AND MARGINAL PRODUCT

There are mainly three concepts relating to production of a commodity (i) Total Product denoted as TP (ii) Average Product denoted as AP and (iii) Marginal Product denoted as MP.

1. **Total Product (TP):** TP refers to the total quantity of output of a commodity at a particular level of employment of an input, say labour, when the employment of all other inputs is unchanged. TP can be increased or decreased by increasing or decreasing the units of labour. So amount of TP directly depends upon amount of labour employed. Because it can be changed, labour is called variable factor.
2. **Average Product (AP):** AP is the output per unit of a variable input, say labour. It can be obtained by dividing TP by the number of units of a variable factor.

$$AP = \frac{TP}{L}$$

where L is the number of units of labour input.

3. **Marginal Product (MP):** MP may be defined as increase or decrease in TP resulted due to addition of one extra unit of labour, keeping all other inputs unchanged. In order to increase output or TP we have to increase the employment



of labour by 1 or more number of units. The smallest number by which labour can be increased is 1. Since 'marginal' means very small, accordingly we can say that MP is the output contributed by the last unit of labour. So we can write,

$$MP = TP_L - TP_{L-1}$$

Example

One labourer works with a sewing machine to stitch two shirts. Another labourer joins and the two could stitch 6 shirts. Calculate MP?

Ans: $MP = TP_2 - TP_{2-1} = TP_2 - TP_1 = 6 - 2 = 4$

'L' is the units of labour employed or the level of employment of variable factor, i.e. labour. It is given numerically as 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and so on. $L=0$ means there is no employment of labour.

'L - 1' is the previous level of employment, given 'L'. For example, if $L = 3$, then $L - 1 = 2$ and so on.

The three concepts of TP, AP and MP can also be understood with the help of the following numerical example.

Table 9.1 Total Product, Average Product and Marginal Product

Units of labour (L)	TP (Units)	AP (Units)	MP (Units)
0	0	-	-
1	10	10	10
2	22	11	12
3	36	12	14
4	44	11	8
5	50	10	6
6	54	9	4
7	56	8	2
8	56	7	0
9	54	6	-2
10	50	5	-4

In the table above, $L = \text{Units of labour} = 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 \text{ and } 10$.

When $L = 1$, it means number of labour units or level of labour employment is 1. At this level $TP = 10$. We know that $AP = TP/L = 10/1 = 10$.



When $L = 2$, $TP = 22$. So $AP = 22/2 = 11$.

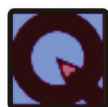
When $L = 9$, $TP = 54$. So $AP = 54/9 = 6$.

Now calculate MP. As per formula given above, $MP = TP_L - TP_{L-1}$.

Let us calculate MP at $L = 1$. Here TPL means value of TP at $L = 1$ which is 10. $L - 1$ refers to the previous level of employment of labour. Since $L - 1 = 1 - 1 = 0$, TP_{L-1} means value of TP at 0 or no employment. In the table at 0 units of labour $TP = 0$. So $TP_L - TP_{L-1} = 10 - 0 = 10$. Hence when unit of labour is 1, MP is 10.

Similarly, when there are 8 units of labour, $MP = TP_8 - TP_{8-1} = TP_8 - TP_7 = 56 - 56 = 0$.

Since MP is the difference between two consecutive values of TP, it can be negative also. In the table MP at 9 units of labour is -3 . This is obtained as $TP_9 - TP_{9-1} = TP_9 - TP_8 = 54 - 56 = -2$.



INTEXT QUESTIONS 7.3

1. Define marginal product.
2. Calculate MP and AP with the help of the following table.

Units of labour	TP (Units)	MP	AP
0	0		
1	10		
2	18		
3	24		
4	28		
5	30		
6	28		

7.4 LAW OF DIMINISHING MARGINAL PRODUCT OF LABOUR

Look at the values of MP at different units of labour in table 7.1. With increase in the units of labour from 1 onwards and by one unit at each stage the value of MP increases for first 3 units of labour i.e from 10 at $L = 1$ to 12 at $L = 2$ to 14 at $L = 3$. Then the value of MP decreases for next 4 units of labour i.e from 14 at $L = 3$ to 8 at $L = 4$ to 6 at $L = 5$ to 4 at $L = 6$ to 2 at $L = 7$ to 0 at $L = 8$. Finally the value of MP becomes negative

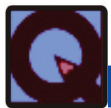


at $L=9$. In other words after increasing temporarily for some time the marginal product of labour eventually decreases. In general way, **we can say that with continuous increase in the variable factor labour, its marginal product will increase initially till certain point is reached, but after that it will decrease and may become negative, keeping all other factors unchanged. This is popularly known as the Law of diminishing Marginal Product of labour.**

To understand the law properly think that there are two factors of production, Labour and Capital, where capital is in the form of a machine. Say that labour is the variable factor which can be increased to increase output and capital is the fixed factor which is kept constant. In the beginning only 1 labourer is working. May be one labourer is not sufficient to use the machine efficiently. So the unit of labour is increased to 2 and then to 3. Initially when we increase labour, it becomes fruitful because the labourers can handle different works as per their efficiency and choice. So output of the extra unit of labour increases. But there is a limit to which labour can be increased because then we may require another machine. But machine is a fixed factor and cannot be increased or decreased. So as a result of increasing the variable factor labour only, machine gets over used. Also the work of a machine cannot be done by the labourers that were added. So the output of each of the extra unit of labour i.e. MP of labour beyond a point starts decreasing.

A very pertinent question arises here. To what extent can the variable factor be increased or employed? To get the answer, see the table 7.1 again. See that when labour has been increased up to 9, the MP has started becoming negative. At employment of the 9th unit of labour MP is -2 and then at 10th unit of labour it is -4. Because of this the TP also has started falling. This clearly implies that labour should not be increased up to 9 and further. Employment of labour should stop before 9 units which means labour should be increased or employed up to 8 units. See that when 8 units of labour are employed the MP has become minimum at this point which is 0 and TP has become the maximum which is 56.

Hence we learn that increase in the variable factor should take place till the point where its marginal product becomes minimum and stop employing further before the marginal product becomes negative.



INTEXT QUESTIONS: 7.4

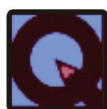
1. State the law of diminishing marginal product?
2. What is the level of Total Product when marginal product is minimum?
3. When the producer should stop employing more labour?



7.5 PRODUCTION PROCESS

Production process involves procuring or arranging the factors of production from the owners of the factors, forming the right combination of factors, purchasing and creating an inventory of raw materials for its use in the production, producing, storing and finally selling the output.

Somebody should take lead in organising the production activity. The person who takes such lead is called an entrepreneur. In lesson 6 you read that an entrepreneur is the organizer of a production unit. Entrepreneurship is the art of organising the production activity by the entrepreneur. He has to make efforts to bring labour by paying wage. Similarly, land and building, machinery etc have to be purchased or procured either by taking loan or by paying rent and interest respectively. Entrepreneur himself can keep some margin in the form of profit for all his efforts.



INTEXT QUESTIONS 9.5

1. Define production process.
2. Who organises the production activity.

7.6 ROLE AND IMPORTANCE OF FIRMS AND INDUSTRIES

A firm is an individual production unit which produces goods and services for sale in the market. There are certain production units like charitable schools, charitable hospitals and government units etc. provide services not to earn profit. They work for social welfare. Normally a firm is concerned with the production of a single commodity.

Industry is a group of all the firms making production of a commodity (one type of good). For example Bata Shoe Company is a firm which makes shoes but the shoe industry includes all the firms producing shoes. So Bata, Action, Liberty, Adidas, Nike and Reebok etc form the shoe industry.

There are various types of industries supplying us different types of goods and services. For example agriculture industry supplies us food grains, vegetable, fruits, cotton, pulses, milk and butter etc. These things are required by all us. In the same way other industries supply various other goods and services like clothes, televisions, computers, scooters, refrigerators, air conditioners, cars etc. So all these industries play a vital role in our day to day life.

The importance of the firms and industries can be explained in brief as given.



1. **Goods and services for consumption:** These days human wants are growing at a faster rate. In order to satisfy these wants various types of goods and services are required for our daily consumption. All these goods and services are provided by firms and industries.
2. **Goods for investment:** We require various types of goods for investment. We require machines, plants, transport vehicles like buses, trucks, railways and aeroplanes, ships etc. and various other things for investment. All these things are produced by firms and industries.
3. **Employment to many persons:** Firms and industries are the source of employment to the people. Most of the people get employment in firms and industries by which they get income for the satisfaction of their wants. We cannot live without employment. So the importance of firms and industries can easily be understood.
4. **Infrastructure for the development of the country:** They provide us energy, transport, communication, health, education and housing which is the basic requirement to provide infrastructure for the country. Without the development of infrastructure the all round development of the country is not possible. So we cannot deny the role and importance of firms and industries.



INTEXT QUESTIONS 7.6

1. What is a firm?
2. Give the meaning of industry?

7.7 IDENTIFYING VARIOUS TYPES OF PRODUCERS IN THE ECONOMY

On the basis of ownership the production units can be broadly classified into the following.

- (i) Indigenous production units
- (ii) Foreign production units

Let us discuss them one by one.

7.7.1 Indigenous Production Units

The production units located in a country and owned by the residents of the country are called indigenous production units. Around us most of the production units are indigenous. Farm houses in the villages, shops, small factories, big factories, hospital,



school, college, cinema hall, restaurant, dairy farm, government offices, self-employed doctors, lawyers and teachers etc are all examples of indigenous production units. Since production units are further divided into private and government, the indigenous production units can be classified into

- Private production units
- Government production units

7.7.1.1 Private Production Units

Most of the shops, offices, factories are owned by private persons or groups or families. They produce goods and services for sale in the market with the aim of earning profit.

Private sector units can further be classified on the basis of number of owners of such unit. Most of the small units like labour, washerman, cobbler, tailor, milk vender etc. are owned by a single person. But some of the production units may be owned by more than one person. The number of persons may be two, twenty, hundred, thousand or a lakh or even more. On the basis of number of owners, private sector production units can be classified into the following categories.

- (a) Sole proprietorship
 - (b) Partnership
 - (c) Company or Corporations
 - (d) Cooperative Society
 - (e) Private non-profit organizations (N.P.O.)
- (a) **Sole proprietorship:** Such production units are owned by a single person. He is responsible for the profit and loss of the production units. He is responsible for the management and working of the production unit.
 - (b) **Partnership:** Such production units are owned by two or more persons. Maximum number is 20. Owners of such production units are called partners of the company. All the partners are collectively responsible for the management and working of the production unit. The share of profit and loss is distributed among the partners according to agreement made at the time of forming the partnership.
 - (c) **Company or Corporations:** It is a production unit owned by a large number of persons. The sum invested in the company is divided into shares. The buyers of these shares are called shareholders. They are all the owners of the company. In private company the minimum number of share holders is two and the maximum number is 50. But in public company minimum number is seven but there is no maximum limit. These shareholders select some persons for the management of the company who are called directors of the company. These companies are established under companies act 1956. The profit of the company is distributed

among the shareholders according to the shares held by them. Tata iron steel company, Reliance industries limited, Bajaj auto limited, Lipton India limited are some of the examples of a company.

- (d) **Cooperative society:** It is also a production unit managed by a number of persons. It is a voluntary association of persons for mutual benefit. Its aims are achieved through self help and collective efforts. In same respects it is similar to the company. Its owners are also called shareholders. It works according to cooperative societies Act 1912. The minimum number of shareholders is ten but there is no upper limit. The shareholders select some persons among themselves for the managements of the society. The profits of the society are divided among the shareholders according to the shares held by them. Cooperative stores which sell various goods to consumers at reasonable rates, cooperative housing societies which provide flats and houses to its members are the example of cooperative societies. Kendriya Bhandar which provides various items to consumers is a very big cooperative society.
- (e) **Private Non-profit Organizations:** There are private production units which are run by institutions, such as trusts, societies etc. like charitable hospital, charitable school, welfare societies etc. Such production units provide services mainly with the aim of serving the member of society as a whole without any aim to earn profit.

7.7.1.2 Government Production Units

Government provides a lot of services such as education, health care, law and order, post and telegraph, transport, telecommunication and broadcasting etc. Some of the organizations providing these services are run by the Departments and Ministries of the government. They are called Departmental Enterprises. Some examples of Departmental Enterprises are Indian Railways under the Ministry of Railways, All India Radio and Doordarshan which are sister concerns of Prasar Bharati under the Ministry of Information and Broadcasting etc. The government has direct control over the functioning of these enterprises.

There is another type of government production units which are supported and funded by the government but function independently. They are big Corporations and autonomous in nature. These units are non-departmental enterprises and called Public Sector Undertakings. Some examples of Public Sector Undertakings are Indian Airlines, Hindustan Machine Tools (HMT), Minerals and Metals Trading Corporation (MMTC), Life Insurance Corporation (LIC), General Insurance Corporations (GIC), Indian Oil Corporation (IOC) etc.

7.7.1.3 Foreign Production Units

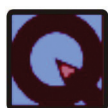
A foreign production unit is located in the country but is owned by foreigners or non-residents of the country. In such production units the contribution of foreigners must be more than 50% of total capital.





The foreign production units are further classified into:

- (i) Multinationals and
 - (ii) Collaborations
- (i) **Multinationals:** These are firms which have their main office in one country but have their business activities spread in many countries. These are called Multi-National Corporations (MNC) because they operate in more than one country other than the country of their origin. Some examples of MNCs in India are- Coca Cola, Pepsi Cola, Johnson & Johnson, Microsoft, Nokia, Sony, Samsung, International Business Machine (IBM), Nestle, Vodafone, Airtel, LG, Google, Ford Motors, Hyundai etc.
- (ii) **Collaborations:** These are production units in which foreigners and domestic entrepreneurs participate jointly. Such production units are partly indigenous and partly foreign. These are treated as foreign production units in terms of ownership if more than 50% of its total capital is contributed by the foreigners or non-residents. A good example of collaboration of Indian company with foreign company is -Maruti- Suzuki Limited,



INTEXT QUESTIONS 7.7

Tick mark (✓) the correct answers

1. A production unit owned by a single individual, is known as:
 - (a) A partnership
 - (b) A private company
 - (c) Sole proprietorship
 - (d) A public production unit
2. In a partnership the maximum number of partners is:
 - (a) 5
 - (b) 10
 - (c) 15
 - (d) 20
3. Indian Railways is a:
 - (a) Private unit
 - (b) Public unit
 - (c) Sole proprietorship
 - (d) Partnership
4. Minimum number of members in a cooperative society is:
 - (a) 20
 - (b) 15
 - (c) 10
 - (d) 5



5. Maximum number of shareholders in a public company is:
 - (a) 10,000
 - (b) 15,000
 - (c) 20,000
 - (d) No limit
6. A Govt. production unit registered under companies Act 1956 is a:
 - (a) A statutory corporation
 - (b) Government company
 - (c) Departmental enterprise
 - (d) Non of these
7. The minimum number of owners in a private company is:
 - (a) 7
 - (b) 10
 - (c) 2
 - (d) 20
8. In which situation a production unit is not considered as a foreign production unit:
 - (a) entire capital is invested by non resident
 - (b) more than 50% of the total capital is invested by non-residents
 - (c) Residents have more than 50% of the total capital
 - (d) Less than 20% of the investment is made by resident



WHAT YOU HAVE LEARNT

- Production process is the process of combining inputs, utilising their services and making production of goods and services.
- The entrepreneur organizes the production activities for which he earns profit or bears loss.
- There are two types of technologies of production (i) labour intensive in which we make more use of labour and less use of capital (ii) capital intensive in which we make more use of capital and less use of labour.
- Division of labour is of two types:
 - (i) Product based division of labour in which a worker specializes in the production of a commodity
 - (ii) Process based division of labour in which the production of a commodity is divided into different processes and a worker specializes in one or two processes only.
- Production is the result of the combined efforts of all the four factors of production i.e. land, labour, capital and entrepreneurship.
- Total Product (TP) refers to the total quantity of output of a commodity at a particular level of employment of an input, say labour, when the employment of all other inputs is unchanged.
- Average Product (AP) is the output per unit of a variable input, say labour.



- Marginal Product (MP) may be defined as increase or decrease in TP resulted due to addition of one extra unit of labour, keeping all other inputs unchanged.
- Law of diminishing Marginal Product of labour state that with continuous increase in the variable factor labour, its marginal product will increase initially till certain point is reached, but after that it will decrease and may become negative, keeping all other factors unchanged.
- Firm is a production unit which makes production of goods and services for sale in the market in order to earn profit. Industry is a group of all the firms making production of similar commodity. Both firms and industries are very important for the economic development of the country.
- On the basis of ownership production units are classified into indigenous and foreign production units. Indigenous units are owned by residents of the country and foreign units are owned by non-residents.
- Indigenous units are further classified into private and public sector production units. Private units are owned by private persons and institutions. Public sector units are owned by government.
- Private sector units are classified into (i) sole proprietorship (ii) partnership (iii) Company and (iv) Cooperative societies (v) Private non-profit organisation.
- A company is created under companies Act 1956. The minimum number of owners in a company is 7. There is no maximum limit.
- A cooperative society is created under co-operative society Act 1912. The minimum number of shareholders is 10. There is no maximum limit.
- Government production unit are classified into (i) Departmental and (ii) non-departmental enterprises. Departmental enterprises are under the direct control of some ministry. Non-departmental enterprises are autonomous known as public sector undertaking corporation.
- Production units owned by foreigners are called foreign production units. Some are multinationals and some are collaborations. A multinational has its head office in one country but its production units in many countries. Collaboration is jointly owned by residents and non-residents.

**TERMINAL EXERCISE**

1. Define production process.
2. How does an entrepreneur organise a production unit?
3. Distinguish between labour intensive and capital intensive technology of production.
4. Distinguish between product based and process based division of labour.
5. Distinguish between indigenous production units and foreign production units.
6. Distinguish between private sector and public sector production units.
7. Distinguish between sole proprietorship and partnership.



8. Distinguish between a company and cooperative society.
9. Distinguish between departmental and non-departmental enterprises.
10. Distinguish between autonomous corporations and government companies.
11. Distinguish between multinational and collaboration.
12. Distinguish between firm and industry.
13. Explain the role and importance of firms and industries.



ANSWERS TO INTEXT QUESTION

Intext Questions 7.1

1. The resources used in production are called inputs.
2. The goods and services produced by using inputs are called output.
3. Production function is defined as the technical relationship between inputs and output of a firm.

Intext Questions 7.2

1. More use of labour and less use of capital per unit of output in the production of our commodity is called labour intensive technology.
2. More use of capital and less use of labour per unit of output in the production of our commodity is called capital intensive technology of production.
3. Product based- Pot- making ; Process based- Bread manufacturing

Intext Questions 7.3

1. Marginal Product may be defined as increase or decrease in Total Product resulted due to change of one unit of labour, keeping all other inputs unchanged.
- 2.

Units of labour	TP	MP	AP
0	0	-	-
1	10	10	10
2	18	8	9
3	24	6	8
4	28	4	7
5	30	2	6
6	24	-6	4

**Intext Questions 7.4**

1. According to the law of diminishing marginal product, with continuous increase in variable factor, marginal product will increase initially till certain point is reached, but after that it will decrease and may become negative, keeping all other factors unchanged.
2. Total product is maximum.
3. When the marginal product becomes negative.

Intext Questions 7.5

1. The process of procuring inputs, utilizing their services and producing goods and services, is called production process.
2. Entrepreneur.

Intext Questions 7.6

1. Any individual production unit of a commodity is called a firm.
2. Industry is a group of all the firms making production of an identical commodity.

Intext Questions 7.7

- | | | | |
|--------|--------|--------|--------|
| 1. (c) | 2. (d) | 3. (b) | 4. (c) |
| 5. (d) | 6. (b) | 7. (c) | 8. (c) |



COST AND REVENUE

A producer has to work very hard to produce a good or service. He has to make a lot of effort in the process. In the beginning, the producer must arrange money to organize the production activity. We have already said that various factors in the form of land, labour, and capital are required to produce goods. These factors are not available for free. The producer must purchase them in the right quantity needed for production. Similarly, raw materials and other things have to be purchased and stored. To purchase these things, the producer must be ready to pay the price for them.

Once the goods or services are produced, the producer sells them in the market to various consumers. At this time, the consumers pay price to the producer to purchase the goods and services. With this the producer starts earning money. So, in order to produce goods and services, the producer first incurs expenditure to purchase factors of production and then receives money from the consumers by selling those goods and services to them.



OBJECTIVES

After completing this lesson, you will be able to:

- *know different types of cost;*
- *calculate different types of cost;*
- *know the concept of revenue.*

8.1 MEANING OF COST

In order to understand the meaning of cost let us take the example of a farmer who is producing rice/paddy. You know that, it normally takes 5 to 6 months to produce rice. The production of rice involves the following:



Notes

- (i) getting the land for cultivation
- (ii) using labour to prepare the land and make it suitable for growing the crop. This includes tilling the soil, sowing seed, fertilizing and irrigating the land and finally harvesting.
- (iii) Transporting rice to godown/mandi.

How does the farmer get land? It could be possible that, the farmer has ancestral land. Otherwise he has to hire land from others by paying rent. He has also the option of purchasing land by paying a very heavy amount. In the present example, let us say, that the farmer hires 5 acres of land on rent.

Suppose, he has to pay Rs. 5,000 as rent to the owner of the land for the whole period he uses it.

The farmer also needs labourers to work on the field for 5 months. Let us say the farmer hires 4 labourers. In the first two months he uses the labourers to till the soil, sow seeds, transporting the seedlings and planting them by hand, fertilising and irrigating the field. In order to hire a labourer, the farmer must pay wage. The wage rate prevailing in the market on an average is say, Rs. 75 per worker per day. When the farmer used only two labourers for two months to look after the standing crop. When the time of harvesting arrives, he again hires 4 labourers for 15 days. What is the total amount paid to the labourers by the farmer? First, 4 labourers work for two months or sixty days. So at Rs. 75 per worker it comes to $75 \times 4 \times 60 = \text{Rs.}18,000$. Then two labourers work for two months. This comes to $75 \times 2 \times 60 = \text{Rs.}9,000$. Finally 4 labourers worked for 15 days. This comes out to be $75 \times 4 \times 15 = \text{Rs.}4,500$. The total money paid to the labourers was $18,000 + 9,000 + 4,500 = \text{Rs.}31,500$

To grow the crop, the farmer uses some raw materials such as seeds, water, fertilizer, pesticides etc. for which he spends, say, Rs. 3,000. He also uses tractor for which he pays rent of Rs. 2500. After harvesting the farmer produces, say, 30 quintals of rice.

Now, calculate the total money spent by the farmer to produce rice? We can do it in the following manner.

Items	Expenditure (Rs.)
Rent paid to Landlord	5,000
Wages to labour	31,500
Raw materials	3,000
Service of Tractor	2,500
Total	42,000

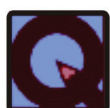


We can say that, the farmer spent Rs.42,000 to produce 30 quintals of rice.

Definition of Cost

Cost is defined as the money expenditure incurred by the producer to purchase (or hire) factors of production and raw materials to produce goods and services.

In a way, cost is a kind of sacrifice made by the producer. In this example, the sacrifice was made in terms of making payments; such as wages to labourers, rent for the use of land and tractor and incurring expenditure on raw materials etc.



INTEXT QUESTIONS 8.1

1. Name the payments made by the farmer to the factors of production?
2. Who bears cost?

8.2 TYPES OF COST

From the example above we can distinguish between following types of costs.

- (a) Fixed cost
- (b) Variable cost
- (c) Explicit cost
- (d) Implicit cost

Let us discuss them one by one.

(a) Fixed Cost

In the above example, we said that the farmer paid Rs. 5,000 as rent to the owner of the land. Once the land is procured for cultivation, the farmer must pay rent for it, even if he does not produce anything on it. The land is also fixed factor of production here. Because, whether or not the farmer cultivates on the entire 5 acres of land, he has to pay rent for the whole 5 acres. This is fixed. **So fixed cost is defined as the expenditure, on hiring or purchasing of fixed factors/inputs, which are compulsory and has nothing to do with the amount of production of the good or service.** Similarly, rent paid for the use of tractor is also a fixed cost.

(b) Variable Cost

In the above example, the farmer paid Rs.31,500 towards wage for labourers and Rs.3000 for purchase of raw materials. How much of wage was paid



Notes

depends on how many labourers the producer hired. Labour as a factor of production can be changed. In the example, we said that the producer used 4 labourers during the first two months and only 2 labourers for the next two months. This is because in the beginning the amount of work was more and more labourers were required. Accordingly more amount of money, i.e Rs.18000, was paid. But when the amount of work was less during the next two months, only 2 labourers were hired and accordingly the wage bill also decreased to Rs.9000. Hence, payment towards wages can be changed. So it is called variable cost. **We can define variable cost as the expenditure on variable factors/inputs, such as labour, which can be changed.**

(c) Explicit Cost

Both the rent and wages paid by the farmer and the expenditure on raw materials incurred by him are also called explicit cost. Explicit cost is defined as the money expenditure incurred by the producer on both fixed and variable factors of production and raw materials etc. These are direct payments and are properly calculated and recorded separately. Bills, money receipts or vouchers etc exist with respect to such expenditure by the producer.

(d) Implicit Cost

Besides purchasing factors of production and raw materials, the producer also uses his own factors and materials for producing goods and services. For this he does not pay any money to himself. But he bears this expenditure indirectly. Suppose, a farmer uses his own tractor to cultivate land. Had he hired a tractor from somebody else, he would have paid rent for this. In that case it would have been called explicit cost of the farmer. Let us say the rent for using the services of a tractor is Rs. 3000 for a particular period of time. So the farmer can earn Rs.3000 if he gives his tractor on rent. Otherwise, if he uses it for himself, then he will consume a value of Rs. 3000 for the purpose of production. In this case, it will be called implicit cost of the farmer. **So implicit cost is the cost of self supplied factors.** The value of such cost has to be calculated on the basis of market value.

8.3 TOTAL AND AVERAGE COST

Total cost is the sum of total fixed cost and total variable cost which are given explicitly. Average total cost or simply the average cost is the ratio of total cost to the total output. We can also write,

$$\text{Total Cost (TC)} = \text{Total Fixed Cost} + \text{Total Variable Cost}$$

$$\text{Average Cost (AC)} = \text{Total Cost/Total Output.}$$

Average Cost is the cost per unit of output.

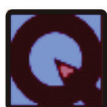


Marginal Cost (MC)

If the producer wants to increase output, then he has to engage extra units of labour. Extra units of labour will lead to extra expenditure on wage paid to the labour. As a result the total cost of production will increase. In short, increase in total output will lead to increase in total cost of production. In this context **marginal cost is defined as increase in the total cost due to increase in one extra unit of output.**

Example: Suppose a tailor makes 10 pieces of shirts by incurring a total cost of Rs. 1110. Then he increased shirt production to 11 pieces for which he incurred Rs. 1199 as total cost. What is the marginal cost?

Ans: Here increase in output is $11 - 10 = 1$ unit. Because of increase in output by one unit, cost



INTEXT QUESTION 8.2

1. If 48 units of output are produced and the total fixed cost is Rs 180 along with a total variable cost of Rs 300 what would be the average cost of production?
2. Define explicit cost?
3. Let output increase to 49 units in Q.1 due to which total variable cost increases to Rs 307. What is the marginal cost?

8.4 COMPARING MARGINAL COST AND AVERAGE COST

In the above example while there is one value of marginal cost as calculated above, we can compute two different values of average cost.

First value of average cost relates to 10 pieces of shirts. With a total cost of Rs. 1110

$$\text{So AC} = 1110/10 = \text{Rs. } 111$$

Second value of average cost relates to output of 11 shirt pieces with total cost of Rs. 1199

$$\text{Here AC} = 1199/11 = \text{Rs. } 109.$$

From this we can say that average cost is calculated for every given level of output. On the other hand, marginal cost is calculated when a given level of output is increased by one unit. That is, marginal cost is calculated between two successive levels of output.



Notes

We can express the above example in the form of a table as follows:

Units of output (shirts)	Total cost (Rs.)	Average cost (Rs.)	Marginal cost (Rs.)
10	1110	111	-
11	1199	109	89

8.5 REVENUE

Revenue is another very important concept in economics. In fact the study of cost is not complete, if we do not talk about revenue. What is revenue?

Definition of Revenue

Revenue is defined as the amount a person receives by selling a certain quantity of the commodity.

You know that a commodity can be purchased in the market by paying a certain price. So revenue can be calculated by multiplying price and quantity of the commodity. Hence we can write

$$\text{Revenue} = \text{Price of the Commodity} \times \text{Quantity of the Commodity}$$

During a given period of time, the seller sells certain quantity of the commodity.

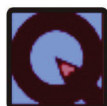
So the total amount of money received by the seller during that time period is called total revenue. We denote it as TR where TR stands for total revenue. Let us denote price as 'P' and quantity as 'Q' then we can write

$$\text{Total Revenue} = \text{Price} \times \text{Quantity or } TR = P \times Q$$

Example: Continue with the example of the farmer in our section on "Cost". Think that the farmer produced 30 quintals of rice. Let us say that the price of rice is Rs. 1600 per quintal in the market. If the farmer sells all this rice then he will earn $1600 \times 30 = \text{Rs. } 48,000$. So his total revenue will be Rs. 48,000.

From this example, we can also say that revenue is the money receipts of the producer or seller from the sale of his output.

Another term used for "total revenue" is total sales proceeds. Because revenue is received by selling a commodity. It is also called total sales proceeds from that Commodity.



INTEXT QUESTIONS 8.3

1. A seller sells 1 quintal of wheat. The Price of wheat is Rs. 15 per Kg. what is his total revenue?



You must remember that each and every commodity has its own price. A retailer sells different commodities to the buyers. Take the example of a provision store or a stationary shop. A seller sells various items in a provision store; such as rice, wheat, wheat flour, different varieties of dal, biscuits, edible oil etc. You will even find varieties of rice such as basmati, parmal, cella etc; there are different types of edible oils, such as refined vegetable oil, sunflower oil, mustard oil, soyabean oil, etc; and so on. A retail shopkeeper sells so many different kinds of goods as well as different types of the same good. So what will be his total revenue, say, after a time period of one week?

The answer is very simple. First make a list of the prices of the goods he sold during the week. Second, make a list of respective quantities of the goods. Third, find the total revenue of the shopkeeper for the given week. We can illustrate this in the following way.

Illustration

Consider that the shopkeeper has sold 100 kg of basmati rice, 70 litres of sun flower oil, 100 packets of biscuits and 150 kg of wheat flour in the given week. The prices are Rs. 35 per kg of Basmati rice, Rs. 90 per liter of sunflower oil, Rs. 10 per packet of biscuit and Rs. 22 per kg of wheat flour.

We can calculate the total revenue of the shopkeeper in the following manner.

- (i) Total revenue from rice = $35 \times 100 = \text{Rs. } 3500$
- (ii) Total revenue from oil = $90 \times 70 = \text{Rs. } 6300$
- (iii) Total revenue from flour = $22 \times 150 = \text{Rs. } 3300$
- (iv) Total revenue from biscuit = $10 \times 100 = 1000$

Total Revenue from all goods = Rs. 14,100

So the shopkeeper's total revenue from all goods during the given week is Rs. 14,100.

8.6 AVERAGE AND MARGINAL REVENUE

Average Revenue (AR)

Average Revenue is denoted as AR. It is calculated from the total revenue. The formula for average revenue is given as

$$\text{Average Revenue} = \text{Total Revenue} / \text{Quantity sold}$$

$$\text{Symbollically, AR} = \text{TR} / \text{Q}$$

Take the case of a single commodity, we know that $\text{TR} = \text{P} \times \text{Q}$

$$\text{So} \quad \text{AR} = \text{P} \times \text{Q} / \text{Q} = \text{P}$$

Average Revenue and Price of the commodity are one and the same.



Notes

Marginal Revenue (MR)

Marginal Revenue (MR) is defined as increase in total revenue due to **one** unit increase in the sale of the quantity of output.

Refer to the above example. Let the vendor increased the sale to 21 kg. In that case the total revenue or TR becomes $50 \times 21 = \text{Rs. } 1050$. Earlier when the sale of output was 20 kg, $\text{TR} = \text{Rs. } 1000$. Hence $\text{MR} = 1050 - 1000 = \text{Rs. } 50$.

We can show it in the table below:

Sale of output (kg)	Price or AR (Rs per kg)	TR (Rs.)	MR (Rs.)
20	50	1000	-
21	50	1050	50

Comparing AR and MR

It should be noted that average revenue is calculated for each and every given level of sale of the output while marginal revenue is calculated for two successive levels of sale of the output. (This is same as average cost and marginal cost told earlier.)

One important observation: In the example, we can see that if the seller is able to sell successive quantities of output at the given or same price, then AR and MR are equal. This further implies that if the price of the commodity in the market will change for different quantities, then AR and MR will be different from each other.

Example: Price of 1 kg of guava is Rs. 50. The Vendor sold 20 kg of guava in two days. What is his average revenue?

Ans: Total Revenue is $50 \times 20 = \text{Rs } 1000$, when Quantity is 20 kg

So $\text{AR} = 1000/20 = \text{Rs. } 50$

(See that price per kg is Rs. 50. So $\text{AR} = \text{Rs. } 50$)

Example: To continue from the above example – If the vendor could sell 21 kg of guava at the same price then what is the marginal revenue?

Ans: Now $\text{TR} = 50 \times 21 = \text{Rs } 1050$. Earlier $\text{TR} = \text{Rs. } 1000$.

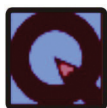
So $\text{MR} = 1050 - 1000 = \text{Rs. } 50$

Example: A shopkeeper sells 10 kg of rice at Rs 30 per kg and 11 kg of rice at Rs 29 per kg. What is the marginal revenue?

Ans: In the first case $\text{TR} = 10 \times 30 = \text{Rs. } 300$

In the second case $\text{TR} = 11 \times 29 = \text{Rs } 319$

So $\text{MR} = 319 - 300 = \text{Rs } 19$



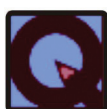
INTEXT QUESTION 8.4

1. What is the difference between average revenue and price of the good?
2. How are total and average revenue related?

8.7 USE OF REVENUE AND COST

Both revenue and cost are important concepts in economics. While cost is the expenditure incurred to produce a good or service during the production process, revenue is the money received by the producer by selling that good or service. So cost symbolizes sacrifice made by the producer and revenue symbolizes gains for the producer. By getting the required revenue from sale of the commodity the producer is able to recover the cost he has incurred earlier. In that case we say that the producer earned his due share which is called profit. **We can define that profit is the surplus of revenue over the total cost of production.**

$$\text{Profit} = \text{Total Revenue} - \text{Total Cost}.$$



INTEXT QUESTION 8.5

1. If output is 50 units, price per unit is Rs.10, fixed cost is Rs.110 and variable cost is Rs.150, what is the amount of profit?



WHAT YOU HAVE LEARNT

- Cost is the expenditure incurred to produce a good or service during the production process.
- Fixed cost is defined as the expenditure on the fixed factors of production.
- Variable cost is the expenditure on variable factors.
- Explicit cost is defined as the money expenditure incurred by the producer for production.
- Implicit cost is the cost of self supplied factors.
- Average Cost is the cost per unit of output.
- Revenue is the amount a person receives by selling certain quantity of the commodity at a given price.



Notes



- Average Revenue = Total Revenue/Quantity.
- Marginal Revenue is the change in total revenue due to change in the sale of quantity of output by one unit.
- Profit = Total Revenue – Total Cost.



TERMINAL EXERCISE

1. Give the difference between fixed and variable cost?
2. Give the difference between explicit and implicit cost?
3. How can you calculate total and average cost?
4. How can you calculate total and average revenue?
5. Give the difference between revenue and cost? Why the producer must calculate them?



ANSWERS TO INTEXT QUESTIONS

Intext Questions 8.1

1. Land – Rent
Labour – wages
Services of tractor – Rent
and payment for raw materials
2. Producer bears the cost

Intext Questions 8.2

1. $TC = TFC + TVC$
 $= 180 + 300$
 $= \text{Rs } 480$

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

$$= \frac{480}{48} = \text{Rs } 10 \text{ per unit}$$

2. Explicit cost is defined as the money expenditure incurred by the producer on production of a good.



$$\begin{aligned} 3. \quad TC &= 180 + 307 \\ &= \text{Rs. } 487 \\ MC &= 487 - 480 \\ &= \text{Rs. } 7 \end{aligned}$$

Intext Questions 8.3

$$1. \quad \text{Total revenue} = 100 \text{ kg} \times \text{Rs } 15 = \text{Rs } 1500$$

Intext Questions 8.4

1. Average revenue is revenue per unit

price of the good is the amount received by the seller for each unit of the commodity

However, $AR = \text{Price}$

$$2. \quad TR = Q \times P$$

$$\begin{aligned} AR &= \frac{TR}{Q} \\ &= \frac{Q \times P}{Q} \\ &= P \end{aligned}$$

So, average revenue = Price

Intext Questions 8.5

$$1. \quad \text{Profit} = \text{Rs } 240$$

MODULE-4
DISTRIBUTION OF GOODS AND SERVICES

- 9. Demand
- 10. Supply
- 11. Determination of Price and Quantity
- 12. Market
- 13. Role of Government in Determination of Price and Quantity



9



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DEMAND

We have already studied about needs and wants in lesson 2. To satisfy these wants, you buy goods and services from the market. We buy goods and services by paying different prices. Now a days the market is flooded with various types of goods. So we have to make a choice before purchasing any good. But, just making a choice or selecting a particular good to purchase is not enough. When we go to the market, we carry certain amount of money which we use to buy the goods and services. As consumers in the market, we decide to purchase certain amount of goods or combination of various goods depending on the amount of money we have, the price we have to pay, our liking for the goods etc. All these things are involved in the study of demand which depicts our behavior as consumers in the market.



OBJECTIVES

After completing this lesson, you will be able to:

- *explain the concept of demand;*
- *differentiate between individual demand and market demand of a commodity;*
- *discuss the factors affecting demand;*
- *state the law of demand and establish relationship between price and quantity demanded;*
- *construct an individual demand curve;*
- *interpret the shape of individual demand curve.*

9.1 MEANING OF DEMAND

Suppose, Varsha went to the market last week and made the following purchases for the week for herself.



- 1 kg of rice at 25 Rs. Per kg.
- 0.5 kg of arhar dal (pulses) at Rs. 68 per kg.
- 1 kg of wheat flour at Rs.24 per kg.
- 2 kg of mangoes at Rs.50 per kg.

Whenever one purchases a good in the market, he/she has to pay the given price for it and accordingly buy certain quantity of it for consumption during the given time period, the way Varsha did.

Definition of Demand

Demand for a good is defined as the quantity of the good purchased at a given price at given time.

We can express the above mentioned examples to show the different components of demand as follows.

Sl. No.	Name of the good	Price (Rs.per kg.)	Quantity (kg)	Time period
1.	Rice	25	1.0	Last week
2.	Arhar Dal	68	0.5	do
3.	Wheat Flour	24	1.0	do
4.	Mangoes	50	2.0	do

Thus the definition of demand includes three components

- Price of the commodity
- Quantity of the commodity bought
- Time period.

Note that time period may vary. This can be week, month, year etc.

So the examples of demand given above can be written as

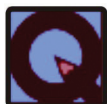
- Varsha purchased 1 kg of rice at Rs.25 per kg last week. This is the demand for rice by Varsha.
- Varsha purchased 2 kg of mangoes at Rs. 50 per kg last week. This is the demand for mangoes by Varsha. And so on.



Now read the following examples:

- (i) Nitin bought 2 pairs of shoes last month.
- (ii) Mr. Jafri purchased 5 kg of apple at Rs.40 per kg.
- (iii) Ms. Harmit Kaur paid Rs.25 per litre for milk last month.

Are these examples of demand? No. You can easily see that in the case of Nitin, price of a pair of shoe is not given. In case of Mr. Jafri, time period is not mentioned. Finally in case of Ms. Harmit Kaur, quantity of milk consumed is not given.



INTEXT QUESTIONS 9.1

1. Define demand.
2. Name the three components included in the definition of demand.

9.2 DIFFERENCE BETWEEN DEMAND AND DESIRE

On many occasions people confuse between desire and demand and use them interchangeably. In fact these are two different terms. Demand is desire backed by ability to purchase. This means that if somebody desires to have a good, he/she can demand it if he/she has the money to purchase it by paying its price. Anyone can desire any good or service. But just by desiring something, one cannot have it without paying the price. Once the price is paid by the person who has desired it, only then it becomes the demand for the good by that person. Take the example given above once again- “Varsha purchased 2 kg of mangoes at Rs. 50 per kg last week.” This is the demand for mangoes by Varsha. Had Varsha desired to have mangoes but could not pay the price to buy, then it would have been said as Varsha’s desire but not demand for mangoes.

9.3 FACTORS AFFECTING INDIVIDUAL DEMAND

Individual demand refers to the quantity of a commodity that an individual buyer is willing to buy at given price per unit of time. But how much quantity of a commodity one is willing to buy depends upon the following factors. These are also called determinants of demand. These are

- (i) Price of the commodity
- (ii) Price of related goods
- (iii) Income of the buyer
- (iv) Tastes and preferences of the buyer



Let us discuss these factors one by one.

1. Price of the commodity

When you visit a market to buy a commodity, you go to a seller of that commodity and ask for its price first. If you think that the price is reasonable, you buy the required quantity of the commodity. On the other hand, if the price is higher in your opinion, you may not buy or buy less quantity of it. Generally we are willing to buy more quantity of a commodity at a lower price and less of it at a higher price, if all other factors determining demand remain constant.

2. Price of related goods

The demand for a commodity is also influenced by the prices of its related goods. Related goods can be of two types : (a) substitute goods (b) complementary goods

Substitute goods are those goods which can easily be used in place of each other. Example of substitute goods are coke and pepsi, tea and coffee etc. If price of coffee increases, people will demand more of tea and thus demand for tea will increase. If price of coffee falls, people will demand more of coffee and thus demand for tea will fall. So, the demand for a commodity is directly related to the price of its substitute goods.

On the other hand, complementary goods are those goods which are used together in satisfying a particular want. Examples of complementary goods are car and petrol, ball pen and refill etc. If we have a car, we also require petrol to run it. Imagine, if price of petrol rises, what will happen to the demand for car? Demand for car will decrease. If the price of one of them increases, the demand for other good will decrease and if price of one of them falls, the demand for the other will increase. So, the demand for a commodity is inversely related to the price of its complementary goods.

3. Income of the buyer

The demand for a commodity also depends on the income of the buyer. When your income increases, you are likely to spend more on purchase of some goods such as fruits, full cream milk, butter etc. Such goods are normal goods. Normal goods are those goods whose demand increases with the increase in income. So, the demand for normal goods is directly related to the income of the buyer.

But there are some goods whose demand decreases when income of the buyer increases, such as jowar, bajra, toned milk etc. These goods are called inferior goods, so, the demand for inferior goods is inversely related to the income of the buyer.

4. Tastes, preferences and fashion

Tastes, preference and fashion are important factors which affect the demand for a commodity. For example, if Monika prefers jeans and tops in comparison to salwar



and kameej, her demand for jeans and tops will increase. So demand for those goods increases which are preferred by the buyer or which are in fashion. On the other hand, demand for those goods decreases which are not preferred by the buyer or which are out of fashion.

9.4 INDIVIDUAL DEMAND SCHEDULE

Every individual demands some goods and services for the satisfaction of his/her wants. In the example given earlier we talked about Varsha's demand for rice, dal, wheat flour and mangoes for a week. Varsha's purchases will not stop there. She will again purchase these items whenever she needs them. Whether she will buy the same quantity or not next time when she goes to the market depends on whether the price of the goods have remained same or not. Let us only consider the purchase of any one commodity, say mangoes by her in order to analyze the demand of one commodity by her over time. Let us also think that prices of other items, money in Varsha's pocket and her taste have not changed. After observing Varsha's purchases of mangoes over time we noticed the following.

"If price of mangoes is Rs. 50 per kg, Varsha buys 2 kg of mangoes for a week. If the price of mangoes rises to Rs 60 per kg she buys only 1.5 kg of mangoes for a week. If price falls to Rs 40 per kg. she is willing to buy more i.e. 2.5 kg. of mangoes for a week. It means, if price is Rs 50 per kg. Varsha's demand for mangoes is 2 kg per week, at a price of Rs 60 per kg, her demand is only 1.5 kg, per week and at a price of Rs 40 per kg, her demand is 2.5 kg." We can present this in the table 9.1 below.

Table 9.1 Varsha's demand for mangoes

Price of mangoes (Rs per Kg)	Quantity demanded of mangoes per week (in Kg)
80	0.5
70	1.0
60	1.5
50	2.0
40	2.5
30	3

Table 9.1 shows different quantities of mangoes demanded at different prices by Varsha per week. Such a tabular presentation of different quantities of a commodity demanded at different prices is called an individual demand schedule. Demand for a commodity by an individual buyer is called individual demand. Individual demand is the quantity of a commodity that an individual buyer is willing to buy at given price per unit of time.



Notes

9.5 LAW OF DEMAND

The law of demand gives the relationship between price of a commodity and its quantity demanded, when all factors other than price of the commodity remain unchanged.

As discussed earlier, the demand for commodity is affected by many factors such as price of the commodity, price of related goods, income of the buyer, tastes and preferences etc. So the law of demand gives effect of change in price of the commodity on the quantity demanded, assuming that all other factors such as, price of related goods, income of the buyer, tastes and preferences remain constant.

The law of demand is given as, “If price of a commodity falls, its quantity demanded increases and if price of the commodity rises, its quantity demanded falls, other things remaining constant.”

The law of demand means that, other factors determining the demand remaining constant, price of a commodity and its quantity demanded are inversely related.

9.6 INDIVIDUAL DEMAND CURVE

When the above mentioned relationship of price and quantity demanded is represented diagrammatically, it is called demand curve. Thus demand curve is a diagrammatic representation of law of demand. The demand curve shows different quantities of a commodity demanded at different prices in diagrammatic form.

We can construct Varsha’s demand curve for mangoes (individual demand curve) with the help of table 9.1. See the demand curve in Fig. 9.1.

Take quantity demanded of mangoes on X-axis and price of mangoes on Y-axis. On the Y-axis (vertical) the prices starting from Rs 30 to 80 are plotted. On the X-axis (horizontal) the quantities of mangoes starting from 0.5 to 3 kg are plotted. Varsha has demanded 0.5 kg of mangoes at Rs 80. This combination is shown at point A in graph given in Fig. 9.1. Similarly, the other combinations of price and quantity of mangoes as given in table 9.1 are shown as points B, C, D, E and F. By joining these points Varsha’s demand curve for mangoes has been derived.

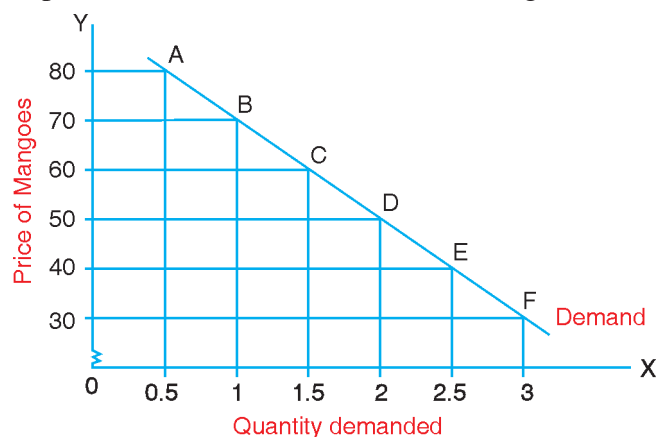


Fig. 9.1 Individual demand curve



Thus, the demand schedule and the demand curve both represent the same relationship between price and quantity demanded but the demand schedule represents it in a tabular form and demand curve in a diagrammatic form.



INTEXT QUESTIONS 9.2

1. State the law of demand.
2. What are the assumptions of law of demand.
3. What will happen to your demand for apples if price of apples rises from Rs 80 per kg to Rs 100 per kg, assuming that your income, taste and preferences etc. do not change?

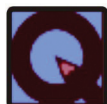
9.7 SHAPE OF INDIVIDUAL DEMAND CURVE

According to the law of demand, when all other factors determining demand remain constant, the buyer buys more quantity of a commodity at lower price and less of it at a higher price. Due to this inverse relationship between price and quantity demanded, the demand curve slopes downwards from left to right. But the question arises why does a buyer buys more quantity of commodity at a lower price and less of it at a higher price? Put it in another way, why does the demand curve slope downwards from left to right? The most important reasons for the inverse relationship between price and quantity demanded are explained below.

1. When more and more units of a commodity are consumed, satisfaction derived from successive units of the commodity goes on diminishing. For example, a hungry person gets maximum satisfaction from the first chapatti, lesser satisfaction from second chapatti and still lesser from third chapatti, and so on. If he gets more satisfaction, he will be ready to pay more and if he gets less satisfaction, he will be ready to pay less price for it. It means he will be willing to buy more quantity of a commodity at lower price and less of it at higher price. The law of demand also provides the same information which will lead to downward slope of demand curve.
2. Suppose, you buy mangoes from the market. If the price of mangoes is Rs 40 per kg and you buy 2 kgs of mangoes at this price. If the price of mangoes falls from Rs 40 per kg to Rs 20 per kg, your real income or purchasing power is doubled and you can now buy double quantity i.e. 4 kg of mangoes with the same money income. Thus a buyer can buy more quantity of a commodity when its price falls and less of it when its price rises leading to the downward slope of the demand curve.



- When price of a commodity falls, it becomes relatively cheaper than its substitutes (although price of substitutes remains the same). For example, if the price of coke falls, it becomes comparatively cheaper than its substitute i.e. pepsi. People start buying coke in place of pepsi. (alternatively pepsi is substituted by coke), leading to more demand for coke when its price falls. On the other hand, demand for the commodity will fall when its price rises. It will lead to downward slope of the demand curve.



INTEXT QUESTIONS 9.3

- What will happen to the real income of the buyer if price of a commodity falls?
- What will be the shape of the demand curve when there is an inverse relationship between price and its quantity demanded?
- You are thirsty and you have already taken one glass of water. Whether the satisfaction derived from second glass of water you drink, will increase or decrease?
- Draw demand curve with the help of data given below:

Price (Rs per unit)	1	2	3	4	5
Quantity demanded (units)	20	16	12	8	4

9.8 MARKET DEMAND FOR A GOOD

Varsha is not the only buyer of mangoes in the market. There may be some other persons who may demand mangoes in the market. Suppose there are two other buyers Vibha and Somya who are willing to buy mangoes in the market.

The total quantity of a commodity demanded by all the individual buyers in the market at the given price at given time is called market demand of that commodity.

Let there are only three buyers buying mangoes in the market – Varsha, Vibha and Somya, market demand will be the sum of individual demand schedules of these three buyers. Now if we add another two columns showing respective demand of Vibha and Somya in table 9.1 along with the demand by Varsha, we can get the market demand schedule. This is shown in table 9.2 below.

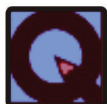


Notes

Table 9.2 Market demand for Mangoes

Price of mangoes (Rs per Kg)	Quantity demanded of mangoes per week (in kg)			Market demand of mangoes per week (in kg)
	Varsha	Vibha	Somya	
80	0.5	1.0	0	1.5
70	1.0	1.5	0.5	3.0
60	1.5	2.0	1.0	4.5
50	2.0	2.5	1.5	6.0
40	2.5	3.0	2.0	7.5
30	3	3.5	2.5	9.0

When price of mangoes is Rs. 80 per Kg, Varsha demands 0.5 Kg of mangoes, Vibha demands 1.0 kg of mangoes and Somya demands no mangoes. Thus market demand for mangoes at a price of Rs 80 per kg. is $0.5 + 1.0 + 0 = 1.5$ kg of mangoes per week. Likewise, market demand for mangoes can be obtained at other prices also as shown in the table 9.2.



INTEXT QUESTION 9.4

1. If there are only three households buying a commodity in the market, calculate their market demand in the table given below:

Price (Rs per unit)	Quantity demanded (in units)			Market demand (in units)
	House- hold A	House- hold B	House- hold C	
5	15	13	30	—
6	12	11	25	—
7	9	9	20	—
8	6	7	15	—
9	3	5	10	—



Notes

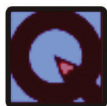
2. Complete the following table

Price (Rs per unit)	Quantity demanded (in units)			Market demand (in units)
	House- hold A	House- hold B	House- hold C	
1	10	12	–	48
2	8	15	–	40
3	6	12	–	32
4	4	9	–	24
5	2	6	–	16

9.9 FACTORS AFFECTING MARKET DEMAND

As stated earlier, market demand is the total quantity of a commodity that all the individual buyers in the market are willing to buy at given prices per unit of time. In addition to the factors affecting individual demand for a commodity market demand is also influenced by the following factors.

- 1. Number of buyers:** Number of buyers buying a commodity determine the demand for the commodity in the market. As you have seen in Tale 9.2 showing market demand of mangoes there were three buyers of mangoes in the market namely, Varsha, Vibha and Somya. Now if one more buyer Abha also starts buying mangoes, what will happen to the market demand of mangoes? Market demand of mangoes will definitely increase, so, if the number of buyer of a commodity is large, market demand for the commodity will be more. On the other hand, if the number of buyers is small, market demand for the commodity will be less.
- 2. Distribution of income and wealth:** The distribution of income and wealth in a society also determines the market demand of a commodity. If the distribution of income and wealth is more in favour of the rich, demand for the commodities preferred by the rich is likely to be higher. On the other hand, if the distribution of income and wealth is more in favour of poor, demand for the commodities preferred by the poor is likely to be higher.
- 3. Climatic condition:** It is generally observed that the demand for ice increases during summer season. Similarly, demand for umbrella and rain coats increases during rainy season and demand for woollens increases during winter season. So the market demand for a commodity is also influenced by the climatic conditions.



INTEXT QUESTIONS 9.5

1. Name four factors that affect the individual demand for a commodity.
2. What will happen to the demand for tea if price of sugar increases?
3. What will happen to the demand for coke if price of pepsi falls?
4. Distinguish between normal goods and inferior goods.
5. Prepare a list of at least five items which are in fashion now a days.
6. Fill in the blanks with appropriate words:
 - (i) If the income of a buyer falls, his demand for inferior goods will
 - (ii) When price of ink increases, the demand for fountain pen will
 - (iii) is the number of buyers of a commodity in the market, higher will be the demand for the commodity.
 - (iv) If the distribution of income and wealth is more in favour of the the demand for goods used by the poor will be more.



WHAT YOU HAVE LEARNT

- Demand for a commodity refers to the quantity of the commodity that a buyer is willing to buy at given price at given time.
- Individual demand is the quantity of a commodity that an individual buyer is willing to buy at the given price at given time.
- Market demand is the total quantity of a commodity that all the individual buyers in the market are willing to buy at given price at given time.
- The determinants of individual demand are – price of the commodity, price of related goods, income of the buyer, tastes, preferences and fashion.
- The determinants of market demand are – number of individual buyers buying that commodity, distribution of income and wealth and climatic condition in addition to the determinants of individual demand.
- The law of demand states that if all other factors affecting demand remain constant, the buyers will buy more quantity of a commodity at lower price and less of it at a higher price.
- Demand curve is a diagrammatic representation of law of demand.
- The demand curve of a commodity slopes downwards from left to right.



Notes



TERMINAL EXERCISE

1. Define demand. Distinguish between individual demand and market demand.
2. Briefly explain the determinants of individual demand for a commodity.
3. State the factors which may affect market demand for a commodity.
4. State and explain the law of demand with the help of a hypothetical numerical example/schedule.
5. What is a demand curve? Draw an individual demand curve with the help of a hypothetical demand schedule.
6. Why does the demand curve slope downwards from left to right?
7. What are the reasons behind the law of demand.



ANSWERS TO INTEXT QUESTIONS

Intext Questions 9.1

1. Demand refers to the quantity of a commodity that a buyer is willing to buy at given price per unit of time.
2. (i) Price of the commodity
(ii) Quantity of the commodity to be bought
(iv) The time period

Intext Questions 9.2

1. The law of demand states that other factors determining the demand remaining constant, price of a commodity and quantity demanded are inversely related.
2. (i) Income of the buyer does not change.
(ii) Price of related goods does not change
(iii) Tastes, preferences and fashion do not change.
3. Demand for apple will fall

Intext Questions 9.3

1. Real income will increase
2. Demand curve will slope downwards from left to right.



3. Decrease

Intext Questions 9.4

1. 58, 48, 38, 28, 18
2. 26, 17, 14, 11, 8

Intext Questions 9.5

1. Price of the commodity, Price of related goods, Income of the buyer, tastes, preferences and fashion.
2. fall
3. fall
4. Demand for normal goods increases with the increase in income whereas demand for inferior goods decreases with the increase in income of the buyer.
5. Jeans, Tops, electronic watches, ball pen, Mobile phone
6. (i) Increase (ii) Decrease (iii) More (iv) poor

MODULE - 4

Distribution of Goods and Services



Notes



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10

SUPPLY

In the previous chapter we have studied about the meaning of demand for a commodity, determinants of demand and the law of demand. But the buyers will be able to buy a commodity only when it is available in the market. So the question arises, who supplies the commodities in the market? A commodity must be produced first, stored properly and transported to the market in order to be available for the buyers. Have you ever visited an agricultural farm? Since farmers produce food grains, fruits and vegetables etc. in their farms, they are the producers of these commodities. Similarly consumer goods such as garments, soaps, tooth paste, tooth brush, shoes, pens, etc are manufactured in the factories. Producers of such items are called manufacturers. Buyers buy these items from the sellers in the market. The original producer and the seller in the market could be the same person or different persons. If they are different, it simply means that the sellers in the market have procured these items from the original producers to sell them to the buyers in the market. So the farmers, manufactures and sellers supply the commodities in the market. They are all called producers. The production unit in which production of a commodity takes place is called a firm. Thus we can say that firms supply the commodities.



OBJECTIVES

After completing this lesson, you will be able to:

- *understand the meaning of stock and supply;*
- *understand the meaning of individual supply and market supply of a commodity;*
- *explain the determinants or factors affecting supply of a commodity;*
- *understand the relation between price of a commodity and its quantity supplied;*
- *explain how to construct an individual supply curve and know its shape.*



10.1 MEANING OF SUPPLY

We should not confuse between “availability of a commodity in the market” and “supply of that commodity. They are not the same. Even if a commodity is available, it does not mean that it has been supplied. The **definition** of supply is given as follows:

Supply of a commodity is the quantity of the commodity that a seller offers for sale at a given price at a given time.

The definition of supply includes the following three things:

1. The quantity of a commodity offered for sale by a seller.
2. The price of the commodity given in the market at which the seller is willing to sell that quantity of the commodity.
3. The time period during which the seller is willing to sell that quantity of the commodity.

Examples of Supply

- Ganga Singh sold 120 litres of milk at a price of Rs.25 per litre during last week from his dairy farm.
- The fruit seller sold 600 Kg of apples during past 15 days at Rs. 50 per Kg of apple.
- A firm called ‘X’ Ltd. sold 8 quintals of sugar at a price of Rs.2800 per quintal in one day.
- The grain merchant sold 300 quintals of rice at Rs.2300 per quintal in the month of August.

Note that the time period may vary. It may be a month, a week or two weeks and so on.

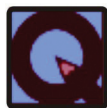
10.2 STOCK AND SUPPLY

The total quantity of a commodity available with a seller/firm at a particular point of time is called stock. On the other hand supply is that part of stock of the commodity that the seller is ready to sell at some given price during a given time period. So supply is a flow. Stock is measured at a particular point of time whereas supply is measured over a period of time. Take the example given above-“The grain merchant supplied 300 quintals of rice at Rs.2300 per quintal in the month of August.” Let us say that the merchant procured 820 quintals of rice on the first day of August 2011. This was called the stock as on 1st August 2011. Here 1st August 2011 is the point of time at which the stock has been measured. The supply of 300 quintals



at a price of Rs.2300 during August was the flow. Since there are 31 days in August, we term it as period of time during which the supply has been measured. Over these 31 days the merchant sold some amount every day which if added becomes 300 quintals at the end of that month at the given market price of Rs. 2300.

So, supply is a part of the stock of the Commodity.



INTEXT QUESTIONS 10.1

1. Define supply.
2. Name three elements included in the definition of supply.
3. Distinguish between stock and supply.

10.3 FACTORS AFFECTING INDIVIDUAL SUPPLY

What factors influence the individual supply of a commodity? The most important factors are the following:

- Price of the commodity
 - Technology of production
 - Price of inputs
 - Price of other related goods
 - Objective of the firm
 - Government policy
- (i) **Price of the commodity:** Price of the commodity is an important determinant of supply of a commodity. When a producer produces a commodity he incurs a lot of expenditure on factors of production and raw materials etc. which we call cost of production. He can recover these costs by selling the product at certain price in the market. Since price is also the average revenue, higher the price higher will be the average revenue and accordingly higher will be total revenue. So price is a very important determinant of supply.
- (ii) **Technology of production:** An improvement in technology of production reduces the cost of production per unit of the commodity which increases the margin of profit of the firm. This induces the firm to supply more of the commodity with the use of improved technology. On the other hand if a firm uses old and inferior technology; it increases the cost of production per unit of the commodity and reduces the margin of profit which leads to decrease in supply of the commodity.



Notes

- (iii) **Price of inputs:** Suppose a firm is producing ice cream. If the price of milk falls, the cost of production per unit of ice creams will fall. It will lead to increase in margin of profit per unit. So, the firm will increase the supply of ice cream. On the other hand, if the price of milk increases, cost of production per unit of ice cream will increase. It will lead to decrease in margin of profit and firm will decrease the supply of ice cream. Thus, if price of any input used in production of a commodity falls, it leads to decrease in cost of the production per unit and as a result supply of the commodity will increase. On the other hand, an increase in price of any input used in production of a commodity increases cost of production per unit and decreases supply of the commodity.
- (iv) **Price of other related goods:** Supply of a commodity is also influenced by the price of other related goods. Let us suppose that a farmer produces two goods wheat and rice with the help of given resources. If the price of rice increases, it will be more profitable for the farmer to produce more of rice. The farmer will divert his resources from production of wheat to production of rice. As a result the supply of rice will increase and that of wheat will decrease. On the other hand, a fall in price of rice will result in decrease in supply of rice and an increase in supply of wheat.
- (v) **Objective of the firm:** Different firms have different objectives. Some firms have an objective to maximize their profits whereas some may have an objective of maximizing sales. Some other firms may have an objective to increase their goodwill/prestige and some may have an objective of increasing employment opportunities. A firm having an objective of increasing sales may supply more of a commodity even at a lower price. Thus supply of a commodity is influenced by the priority given to the objective by the firm and readiness to sacrifice the one for the other.
- (vi) **Government policy:** Government policy also influences the supply of a commodity. For example if the government increases the rate of value added tax or sales tax on a commodity, it will increase the cost of production per unit which will decrease the supply of the commodity. On the other hand, a reduction in the tax on a commodity will decrease cost of production per unit and increase the supply of the commodity.

10.4 INDIVIDUAL SUPPLY SCHEDULE OF A COMMODITY

Supply of a commodity by an individual firm is called individual supply. In order to construct an individual supply schedule of a commodity, we need information on quantities supplied at different prices. In all the examples on supply given earlier in this lesson, we have only mentioned a particular quantity of the good supplied at a particular price over a given period. We know that in reality price of the commodity



does change. Now let us ask the question- what happens if the price of the commodity changes? Accordingly it is expected that the quantity of the commodity will also change. Let us take an example of a firm X Ltd which sold 8 quintals of sugar in a day at the given price of Rs. 2800 per quintal. Suppose the price increased to Rs.2900 per quintal. It is found that X Ltd supplied 9 quintals sugar in a day at this price. Similarly when the price increased to Rs.3000 the quantity supplied increased to 10 quintals. Further at prices Rs.3100 and 3200 the quantity supplied increased to 12 and 15 quintals respectively. This information about the different quantities supplied at different prices is given in the Table 10.1 below.

Table 10.1 Supply of sugar of 'X' Ltd.

Price (Rs per quintal)	Quantity supplied of sugar per day (in quintal)
2800	8
2900	9
3000	10
3100	12
3200	15

Such a tabular presentation of different quantities of a commodity supplied by a firm at different prices is called individual supply schedule.

10.5 LAW OF SUPPLY

Just now we said that the six major factors determining supply of a commodity are – price of commodity, price of other related goods, price of inputs, technology of production, objective of the firm and government policy. A change in any one or all of these factors may lead to change in the quantity supplied of the commodity. Suppose we want to know the manner in which the quantity supplied of a commodity changes due to change in one of the factors. In other words, let us try to know the effect of change in any one factor on the quantity supplied. To know this we must keep all other factors unchanged or constant. To begin with, out of the six factors, let us only consider the effect of change in price of the commodity on its quantity supplied. To know this we must assume that all other factors such as price of other related goods, price of inputs, technology of production and government policy etc. remain constant or do not change at this time. The relationship between price and quantity supplied, when all factors other than price of the commodity remain constant, is given by the law of supply.

Consider table 10.1 again. It shows different quantities of sugar supplied by 'X' Ltd. at different prices. In the table you can only see two columns on price and quantity supplied. The absence of columns on other factors implies that they are held constant. You can see that when price of sugar is Rs 3000 per quintal, the firm offers 10 quintals



of sugar for sale per day. When price rises to Rs 3200 per quintal, it offers more i.e. 15 quintals of sugar for sale per day. On the other hand, when price of sugar falls to Rs 2800 per quintal it offers less, i.e. 8 quintals for sale per day. It means the firm supplies more quantity of a commodity at a higher price and less of it at a lower price. We can state it as a law in the following manner.

All other factors determining supply remaining constant, the price of a commodity and its quantity supplied are directly related.

The law of supply can be explained with the help of another example given in table 10.2.

Table 10.2 Supply of mangoes by Mohan

Price of mangoes (Rs per kg)	Quantity supplied of mangoes per day (in kgs)
20	100
30	200
40	300
50	400
60	500

The table 12.2 shows the different quantities of mangoes supplied by Mohan, a seller of mangoes, at different prices. Mohan supplied 100 kg of mangoes per day when the price is Rs 20 per kg, when price rises to Rs 40 per kg he is ready to supply 300 kg of mangoes per day, and so on. Thus the quantity supplied increases as the price of mangoes increases. This is in accordance of law of supply.

10.6 SUPPLY CURVE

The information given in table 10.2 can also be represented diagrammatically. The diagrammatic representation of law of supply is called the supply curve. Thus, supply curve shows different quantities of a commodity supplied at different prices per unit of time in diagrammatic form.

We can construct an individual supply curve with the help of the information given in table 10.2. The supply curve is drawn in Fig. 10.1

Take quantity supplied of mangoes on X-axis and price of mangoes on Y-axis. On the Y-axis (vertical) the prices starting from Rs 20 to 60 are plotted. On the X-axis (horizontal) the quantities of mangoes starting from 100 to 500 kg are plotted. Mohan has supplied 100 kg of mangoes at Rs 20. This combination is shown at point A in graph given in Fig. 10.1. Similarly, the other combinations of price and quantity of mangoes as given in table 10.2 are shown as points B, C, D, E and F. By joining these points Mohan's supply curve for mangoes has been derived.

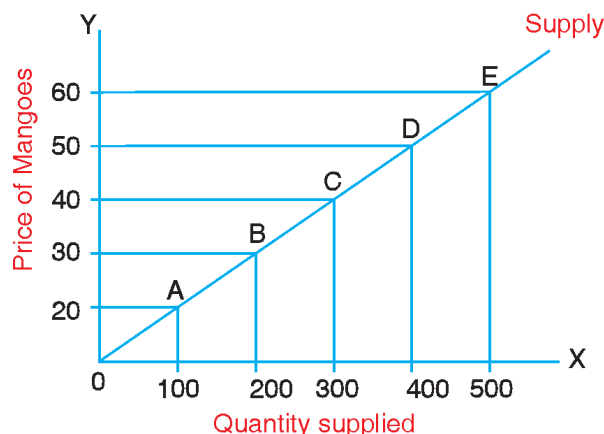
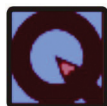


Fig. 10.1 Individual supply curve

10.7 SHAPE OF THE SUPPLY CURVE

According to the law of supply when other factors determining supply remain constant, a firm offers more quantity of a commodity for sale at a higher price and less of it at a lower price. Due to this direct relationship of price and quantity supplied of the commodity, the supply curve is upward sloping. This means that the supply curve which looks as a straight line in the diagram, starts from a point closer to the origin and then moves up towards right. Now, the question arises, why does a firm supply more quantity of a commodity at a higher price and less of it at a lower price i.e. why does the supply curve slope upwards? The following factors are responsible for upward slope of the supply curve:

- A rise in price of the commodity causes rise in profits, as a result firms are induced to supply more quantity of the commodity to increase profit.
- A rise in price of the commodity induces the seller to dispose of at least a part of his stock. The reverse happens when there is a fall in price of the commodity.
- An increase in the price of the commodity causing higher profit attracts the new firms to enter the market and this adds to the supply of the commodity leading to more quantity supplied at a higher price.



INTEXT QUESTION 10.2

- Draw a supply curve with the help of data given below:

Price (Rs per unit)	1	2	3	4	5
Quantity supplied (in units)	50	100	150	200	250

- Draw a supply curve by using Table 10.1.



10.8 MARKET SUPPLY OF A COMMODITY

'X' Ltd is not the only firm in the market supplying the sugar. There may be other firms also supplying sugar in the market. In order to know the total quantity of sugar supplied by all the firms taken together in the market we have to simply add the individual quantities at the prevailing price and time. The resultant quantity will be called the market supply of sugar.

Hence the total quantity of a commodity supplied by all the firms in the market at a given price at a given time is called the market supply of that commodity.

Example

Suppose, there are only three firms X, Y and Z who are supplying sugar in the market. At a price of Rs.2800 per quintal X, Y and Z supplied 8, 10 and 15 quintals of sugar respectively in a day. Adding these quantities, we get 33. So the market supply of sugar is 33 quintals per day at a price of Rs.2800.

10.9 MARKET SUPPLY SCHEDULE OF A COMMODITY

Like an individual supply schedule, the market supply schedule of a commodity is the sum of the quantities of the commodity supplied by all the firms in the market at different prices. We have seen that in case of individual firm/seller, when price of the commodity increases, the quantity of the same increases and when the price decreases the quantity decreases as per law of supply. Similarly all other firms/sellers in the market will also increase or decrease their respective quantities. Accordingly there will be different quantities supplied at different prices by all firms/sellers taken together in the market.

Continue with the example of supply of sugar. Study the market supply schedule of sugar as given in table 10.3.

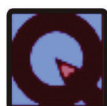
Table 10.3 Market supply of sugar

Price (Rs per quintal)	Quantity supplied of sugar per day (in quintals)			Market supply of sugar (in quintal)
	Firm X	Firm Y	Firm Z	
2800	8	10	15	33
2900	9	11	16	36
3000	10	12	17	39
3100	12	14	20	46
3200	15	17	25	57



Notes

You can see in table 10.3 that when price of sugar is Rs 2800 per quintal, firm X supplies 8 quintals, firm Y supplies 10 quintals and firm Z supplies 15 quintals of sugar per day. Therefore market supply of sugar at a price of Rs. 2800 per quintal is $8 + 10 + 15 = 33$ quintals per day. When the price changed to Rs.2900, the supply of X, Y and Z was 9, 11 and 16 quintals respectively which comes to 36 quintals. So at price Rs.2900 the market supply of sugar was 36 quintals. Similarly you can see the individual and the market supply of sugar at prices Rs.3000, 3100 and 3200 respectively in the table.



INTEXT QUESTIONS 10.3

- If there are only three firms A, B and C in the market supplying a commodity, find out the market supply of the commodity with the help of their supply schedules as given below

Price (Rs/unit)	Quantity supplied (in unit)			Market supply (in unit)
	Firm A	Firm B	Firm C	
100	1000	1500	2000	—
200	2000	2000	3000	—
300	3000	2500	4000	—
400	4000	3000	5000	—
500	5000	3500	6000	—

- Complete the following table (assuming that there are only three firms A, B and C in the market)

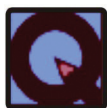
Price (Rs per unit)	Quantity supplied (in units)			Market supply (in units)
	Firm A	Firm B	Firm C	
10	150	—	200	650
11	200	—	300	1000
12	250	—	400	1350
13	300	—	500	1700
14	350	—	600	2050



10.10 FACTORS DETERMINING MARKET SUPPLY

All the factors which influence individual supply of a commodity also influence its market supply. In addition to these factors, the market supply of a commodity is also influenced by following two factors:

- Number of sellers/firms
 - Expected future price
- (i) **Number of sellers/firms:** Market supply is an aggregate of all individual supply schedules in the market. Consider table 10.2 showing market supply of sugar. There are three firms X, Y and Z supplying sugar in the market. Now suppose another firm 'W' comes into existence and starts supplying sugar. What will happen to the market supply of sugar? Market supply of sugar will increase. Therefore, it is clear that if the number of firms increases, market supply will also increase. On the other hand, if number of firms decreases, the market supply will also decrease.
- (ii) **Expected future price:** If the price of a commodity is expected to rise in the near future, the firm will supply less quantity of the commodity at present in expectation of higher profit due to rise in price in future. But if the price of a commodity is expected to fall in near future, firms will offer more quantity of the commodity for sale at present in expectation of less profit in future.



INTEXT QUESTIONS 10.4

1. Fill in the blanks with appropriate words:
 - (i) Supply of a commodity, when its price increases.
 - (ii) A firm having an objective of maximization of profit will supply quantity of a commodity at a higher price.
 - (iii) If a firm produces two goods X and Y with given resources and price of good Y falls, supply of good X will
 - (iv) A fall in wage rate will lead to in supply of a commodity.
 - (v) An increase in excise duty on production of T.V. sets will the supply of T.V. sets.
2. What will happen to the supply of a commodity, when
 - (i) The price of raw material used in production of the commodity increases.
 - (ii) A new firm supplying the commodity comes into existence.
 - (iii) There is a technological progress.
3. What will happen to the supply of stainless steel utensils if the price of stainless steel falls?



Notes



WHAT YOU HAVE LEARNT

- Supply of a commodity is the quantity of a commodity that a seller/firm offers for sale at given price per unit of time.
- The total quantity available with a seller/firm at a particular point of time is called stock. Supply is that part of stock of the commodity that the seller is ready to sell at a given price during a given period of time.
- Individual supply schedule shows the quantities of a commodity offered for sale by an individual firm at different prices in a tabular form. Individual supply curve is derived from an individual supply schedule.
- Market supply is the total quantity of a commodity offered for sale by all the firms in the market at given price and given time.
- The determinants of individual supply are – price of the commodity, price of other related goods, change in technology of production, change in price of inputs, objective of the firm and government policy.
- The determinants of market supply are number of firms supplying the commodity, expected future price in addition to the determinants of individual supply.
- The law of supply states that other factors determining supply remaining constant, price of a commodity and quantity supplied are directly related.
- Supply curve is a diagrammatic representation of law of supply.
- The supply curve of a commodity slopes upwards as per law of supply.



TERMINAL EXERCISE

1. Define supply. Distinguish between individual supply and market supply.
2. Explain the factors which affect individual supply of a commodity.
3. Explain three determinants of market supply of a commodity in brief.
4. Distinguish between stock and supply with the help of a suitable example.
5. State and explain the law of supply using a suitable numerical example.
6. What is a supply curve? Draw an individual supply curve with the help of a hypothetical supply schedule.
7. Why does the supply curve slope upwards?
8. What are the reasons behind the law of supply?



ANSWERS TO INTEXT QUESTIONS



Notes

Intext Questions 10.1

1. Supply refers to the quantity of a commodity offered for sale at given price per unit of time.
2. Price of the commodity, quantity supplied and time period.
3. Stock is the total quantity of a commodity available with a firm at a particular point of time.

Supply is that part of stock of a commodity that the seller is ready to sell at given price during a given period of time.

Intext Questions 10.3

1. 4500, 7000, 9500, 12000, 14,500
2. 300, 500, 700, 900, 1100

Intext Questions 10.4

1. (i) Increases
(ii) More
(iii) Increase
(iv) Increase
(v) decrease
2. (i) supply of the commodity will decrease
(ii) supply of the commodity will increase
(iii) supply of the commodity will increase
3. Supply of stainless steel utensils will increase.



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MONEY AND ITS ROLE

The word “money” generates a lot of interest. In today’s busy life money has occupied a very important role. We need money to buy various types of goods in order to satisfy our wants. Similarly, we need money to avail various services such as- transport, communication, education, health, entertainment, home deliveries and so on. As a buyer, we pay money to buy goods and services and as a seller, we receive money by selling them. Normally, we pay or receive money in the form of paper currency and coins. But do you know that in ancient days people used to exchange good for good? This was called barter system. With passing of time, money replaced barter system. Why? To know all these continue reading this lesson.



OBJECTIVES

After completing this lesson, you will be able to:

- *understand the meaning of barter system;*
- *realize the need for money by the society;*
- *explain the functions of money;*
- *know paper currency and coins as types of money.*

14.1 BARTER SYSTEM

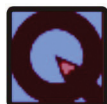
In the past when people were living in small societies and there was not much development as you see today, they were helping each other through barter system to mutually benefit one another. What is the meaning of barter system? **Barter system means exchange of one kind of goods and services for another kind of goods and services. There was no involvement of money in barter system.**



When one good is exchanged for another good without use of money, we call it trade through barter system. This was happening in ancient civilizations.

Some examples of Barter System are given below.

- (a) In the past traders from Europe used to trade goods such as fur and crafts in return for perfumes and silk from the Eastern part of the world.
- (b) In many tribal societies in India families used to exchange labour services in return for food and other labour services. For example, if a family needs labourers to harvest crop then another family would come to provide the service with the promise that it will get the same type of help in return either for harvesting crop or roofing house etc. This type of practice is still prevalent today in remote tribal areas of India.
- (c) People in various occupations, namely, farmers, artisans, cobblers, carpenters etc. used to exchange their products and services among themselves.



INTEXT QUESTIONS 14.1

1. Define barter system?
2. Give two examples of barter system?

14.2 NEED FOR MONEY

The barter system as described above is not prevalent now. In today's world nobody pays any good in exchange of another good. Everybody pays money to buy goods and services. So the following question arises - Why is the barter system not prevalent now? Why did the need for money arise? The answers to these questions lie in the fact that the barter system has many demerits as described below.

14.2.1 Demerits of barter System

The demerits of barter system are as follows.

1. A common problem with the barter system is **the lack of double coincidence of wants**. What does this mean? Double coincidence of wants mean that if one wants to exchange some good with another person then the latter must also be willing to exchange his good with the first person. Take for example, a person wants cloth and he has rice with him to offer in return. Then he can exchange rice for cloth with another person who has cloth and who also wants rice. In practical life, such situation may or may not arise. If the person who has cloth does not want rice, then exchange of rice for cloth will never take place and both the individuals cannot



satisfy their wants. This is an example of lack of double coincidence of wants. So barter system will work when there is double coincident of wants, otherwise it will not work.

A related problem of barter system was that, one had to spend lot of time in searching for the person who was ready to exchange. However, in the early period of human civilization this was a very difficult task as there was no proper facility with regard to transport and communication.

2. **Lack of division of goods:** Certain goods are not physically divisible into small pieces. Suppose, a person possesses a cow and he wants items, such as cloth, food grains etc. Then how much of cow can be traded for cloth; how much of cow can be traded for food grains? It was very difficult to determine because, a cow cannot be divided into several pieces.
3. **Because of lack of divisibility of goods:** under barter system, it was difficult to equate the values of different goods which were traded because of **lack of common unit of measurement**. Taking the example in the previous paragraph, it will be very difficult to determine the amount of cow required to trade for some specific amount of food grains, or some yards of cloth. Also it sounds absurd. This happens because a cow can never become a common measure of value. This problem is same for all other goods.
4. Another problem of barter system is that a person must **store** a large volume of his own good in order to exchange for his/her desired goods with others on day to day basis.. Take the example of a farmer who has produced wheat. Obviously he will use some amount of wheat for his own consumption and keep some amount to get other necessary items by trading with others. If he wants furniture, then he will go to a carpenter who is willing to trade furniture in return of his wheat. Similarly, if he wants cloth, then he has to trade with a weaver who is ready to give cloth by receiving wheat and so on. So the farmer must construct a warehouse first to keep a stock of his wheat in order to carry out the transactions at the time of need for his desired good. But constructing and maintaining a warehouse was itself a very difficult task in early days of civilization.
5. Finally, a major problem of barter system is that, a good loses its original quality and value if it is stored for a long period. Many goods, such as salt, vegetables etc, are perishable. Hence, goods were never accepted for trading in future because they could not be used as store of value. This also implies that no good could be used for the purpose of lending and borrowing.

Due to above problems, the barter system could not continue for long. As human civilization progressed people realized that there has to be some common medium of exchange which can be easily carried, stored, and used to express value of a good. So money came into being. Hence the need for money arose due to the failure of barter system.



INTEXT QUESTIONS 14.2

1. Define double coincidence of wants?
2. Give two difficulties associated with barter system?

14.3 DEFINITION AND FUNCTIONS OF MONEY

Money is defined as something which is generally accepted by the society as a medium of exchange and which can act as unit of account, can store value and be used for repayment of debt.

The functions of money can be known from its definition. They are given below.

1. Medium of Exchange

The primary function of money is that it acts as a medium of exchange. This means that people can buy or sell goods and services with the help of money. Money is received by the seller who sells the good. Money is paid by the buyer who buys the good from the seller.

Example: You pay Rs. 10 to buy a pen. The seller receives Rs. 10 from you by selling the pen. So a pen is exchanged for Rs. 10.

2. Measure of Value

Another fundamental function of money is that it serves as unit of account or common measure of value. The value of a good is determined by multiplying its price with quantity sold in the market. Since the price is expressed in monetary units, the value of a good is also expressed in monetary term.

Example: Let price of rice be Rs. 20 per Kilogram. One bag full of rice weighs 25 Kilograms. Then the value of the bag of rice is Rs. $20 \times 25 =$ Rs. 500

3. Store of Value

Money also acts as store of value. How? As medium of exchange you can pay money to buy goods. This means if you have money, you have the power to purchase a good or a service. So money has purchasing power. The value of the good is contained in that purchasing power. Hence value of good is indirectly stored in money you hold. Similarly as a seller of good you receive the money which means value of good you sold comes back to you through money.

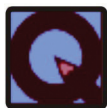
Example: Sushila has got some mangoes which she sells to a buyer for Rs. 250. This means a value of Rs. 250 was exchanged. The buyer, who purchased the mangoes, has the purchasing power to give Rs. 250 as value. Hence a value of



Rs. 250 was stored in the money received by Sushila as a seller. Sushila could not have stored mangoes but she can definitely store money which has stored the value of Rs. 250.

4. Making Payments in Future

We all indulge in lending and borrowing activities. Suppose, your friend requests you to give him Rs. 300 to purchase a book because he does not have any money at present. He promises to pay back the money after a week. If you agree with this and actually give him the money, then you will be called lender and your friend will be called borrower. As a lender, you can also charge some interest on the money you have lent to your friend. If you charge no interest, then your friend will pay you Rs.300 after a week. If you charge Re.1 as interest, then your friend will have to give you Rs.301 after a week. Like your friend, there are many people who want to borrow money today to satisfy their present needs with the condition that they will settle the payment along with interest at some future date as agreed with the lender. This payment in future is acceptable in money only. We can also say that the borrower has deferred the payment under certain condition. So money has acted as a standard of deferred payment. Let us think for a while, that, your friend gives you the book which he purchased, instead of Rs.300 or 301. Then, will you accept this? Most probably not. Because after a week the book may have lost some value as it has not remained the same new book. But money will always be acceptable in a future date as it has stored the value.



INTEXT QUESTIONS 14.3

1. Define “medium of exchange”?
2. Give the meaning of value of good?

14.4 TYPES OF MONEY

14.4.1 Paper currency and coins

How money looks like? What is the form of money? Over the years the form of money has changed. You must have read in history that during the days of Kings, people used to trade by using gold coins, silver coins, copper coins etc. Before that, in the ancient days, in some places people used to hold money in the form of cattle, salt etc.

Now a days, no body holds cattle or salt to buy or sell goods and services. Keeping cattle is not feasible as it requires huge space and special environment. Salt is perishable and cannot be stored for a long time for the purpose of exchange. Hence after so many

MODULE - 5

Money, Banking and Insurance



Notes

Money and its Role

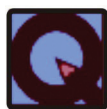
experiments over centuries, now people keep money in the form of paper notes and coins which are easy to carry. In India, we have paper notes in the denomination of 1, 2, 5, 10, 20, 50, 100, 500 and 1000. Normally they are called currency notes and named as Rupee (Singular) or Rupees (Plural). The symbol of Rupee is '₹'.

Money is paid by buyer or received by seller in the form of currency notes. For smaller denominations, we have coins called "Paisha", such as 50 paise where 50 paise is equal to half of one rupee. Now coins up to Rs. 10 denominations are in circulation in India.

You should know that the currency notes and coins which are in circulation are guaranteed by government of India. Otherwise anybody can make and misuse them.

Remember that currency notes and coins of India are valid only in India and not in other countries. Every country has its own currency. If you visit other countries, then you have to exchange Indian currency with the currency of the country you are visiting. The name of the currency of some of the countries of the world is given below.

- (a) Currency in USA is called dollar with symbol \$.
- (b) The European currency is called euro having symbol €.
- (c) Currency in United Kingdom is called pound having symbol £.
- (d) In Japan the currency is called Yen having symbol ¥.



INTEXT QUESTION 14.4

1. Give the meaning of currency note?



ACTIVITY

Make a list giving names of the currencies of France, Germany, China, Brazil.



WHAT YOU HAVE LEARNT

- Before money was invented people used to exchange goods for goods which was called barter system.

- There were many problems of barter system such as absence of a common measure of value, lack of double coincidence of wants, lack of space to store goods to exchange them for other goods etc. This prompted human society to discover money.
- The functions of money include medium of exchange, measure of value, store of value and used in making future payments.
- Money is exchanged in the form of paper currency notes and coins.

**TERMINAL EXERCISE**

1. Explain the working of barter system?
2. What are the main demerits of barter system?
3. Define money and state three of its functions?
4. Write a short note on currency notes in India?

**ANSWERS TO INTEXT QUESTIONS****Intext Questions 14.1**

1. Exchange of good for good is called barter system.
2. (i) 10 kg of wheat for 5 kg of sugar.
(ii) 8 kg of rice for a pair of shoes.

Intext Questions 14.2

1. Mutual exchange of goods between two persons.
2. (i) Lack of double coincident of wants (ii) lack of store of value.

Intext Questions 14.3

1. Anything which is generally acceptable for buying and selling goods and services.
2. Value of good = Price of the good × Quantity of the good.

Intext Questions 14.4

1. Currency note is a type of money.





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15

BANKING AND CREDIT

Money and banking go together. They are complementary to each other. So after studying 'money' we must study banking. A 'Bank' is a very important institution in the modern society. Note that when society realised the benefits of using money as a medium of exchange, it also felt the need to store money in a safe place. This 'safe place' ultimately evolved over time into a bank, which deals with money in various ways. People make visit to a bank for various purposes; such as- to deposit their surplus money, to withdraw money from their account in order to make payments in cash, to take loan etc. In the economy banks play a very important role of facilitating the production, distribution and business activities.



OBJECTIVES

After completing this lesson, you will be able to:

- *understand the meaning of a Bank and Banking;*
- *explain functions of a Bank;*
- *understand the meaning of credit and the process of credit creation;*
- *distinguish between various types of banks in India.*

15.1 MEANING OF BANK AND BANKING

A bank is an institution which accepts money from public as deposits and gives loans to them. Banking refers to accepting for the purpose of lending or investment of deposits of money from the public, payable on demand or otherwise and withdrawable by cheque, draft, order or otherwise.

15.2 FUNCTIONS OF A BANK

From the meaning as given above the functions of a bank are clearly understood. The primary functions of a bank are as follows :

1. Accepting deposits from public
2. Giving Loans.

PICTURES OF LOGOS OF SOME BANKS



Notes

15.2.1 Accepting Deposits from Public

A bank accepts monetary deposits from public which include individuals, groups, business firms etc.

It should be noted that when some body wants to deposit money in the bank, the bank accepts the money by opening an account in the name of the depositor. The bank gives an account number to the depositor. Whenever the depositor wants to deposit money again he or she has to mention the account number so that the bank will keep that money in that account. If the depositor withdraws money from his / her account then the bank deducts that money from the depositor's account. On the other hand, bank gives interest on certain types of deposits of the public.

Note that, the bank issues cheque books to its depositors. Cheques are used by the depositors to withdraw money from the bank and making payments to any party through the bank.

15.2.2 Giving Loans

The bank gives loans to public who want to borrow and who has the capability to repay that loan amount in future. What does this mean? For this we have to first know, as to why do people borrow? People borrow money because they want to buy some thing today or do some business for which there is not enough money with them at present. But they have the ability to repay that money in future. Goods, such as, television, refrigerator, washing machine, car etc are expensive items. Similarly, purchase or construction of house requires lots of money. For all these things, bank provides a loan. Bank also gives loan to start business.

15.2.3 Keeping Valuable Materials

There is another function performed by a bank. The bank also keeps valuable things of people such as jewellery, property documents etc. Normally, people want to keep valuables in safe custody which is provided by the bank in the form of '**locker facility**'.

**INTEXT QUESTIONS 15.1**

1. Name an institution in which someone can deposit surplus money?
2. Name any two purposes for which a loan can be sanctioned by a bank?

**ACTIVITY 15.1**

Visit a bank with your parents and enquire about the ways in which that bank helps people and what all it does?

15.3 MEANING OF CREDIT

Credit is defined as the claim to receive payments. When a bank gives loans to people, then the bank becomes a lender and the person who takes loan from the bank is called a borrower. When bank gives loan today it also makes arrangements to recover the same from the person in future. This means that the bank can claim the money from the borrower in future. Accordingly, the bank is able to expand its deposits. This is called credit creation by the bank. So we can say that credit is created through the act of lending and borrowing.

15.4 THE PROCESS OF CREDIT CREATION

Now the following question arises – How does a bank create credit? Or to say in other words, where from does a bank arrange the money in order to give loan to others and how much of loan or credit it can create? We provide the answer below.

We know that a bank accepts money from public as deposits. Normally these deposits are supposed to be returned back to the public if they want to withdraw them. So if all the persons, who have deposited money in the bank, withdraw their total money, then bank will be left with no money at all. But such things normally do not happen.

From common experience it has been observed that once somebody deposits money in the bank, he/she doesn't withdraw it at once. Mostly, people withdraw a smaller amount from their deposit whenever they require and leave the rest of the amount with the bank. To make this possible, the bank always keeps some fraction of its total deposits in the form of cash from which it keeps giving money to people who come to withdraw it. This fraction is given in percentage term. What percentage of the total deposit has to be kept as cash? Well, this is decided by the banking authority of the country. The cash amount is kept as reserve for making cash payments to



public who come to the bank to withdraw money. We call the fraction of the total deposit to be kept in the form of cash as **cash reserve ratio**. Once the bank calculates the amount to be kept as cash on the basis of cash reserve ratio, it deducts the amount from the total deposits and uses the rest of the amount to give loans to the borrowers. With this act of the bank, the process of credit creation starts from here. Let us describe the process of credit creation step by step through the following example.

15.4.1 Steps in Credit Creation

To make things simple, let us think that there is only one bank in the economy.

Let the banking authority has decided that the cash reserve ratio is 20 percent. So, the bank must keep 20 percent of its current deposit in the form of cash to make cash payments to persons who come to withdraw money.

Step1. A person called A, deposits Rs.100 in the bank. As a result the bank's deposits increases by Rs.100. As per rule the bank keeps 20% of 100 as cash. This comes out to be Rs.20. So the bank keeps Rs.20 to make cash payments. Now deduct 20 from 100. $100 - 20 = 80$. So the bank can use Rs.80 to give loan.

Step 2. A person called B approaches the bank to take a loan of Rs.80. After the bank gives this loan, it can claim the amount from B in future. This means that by giving loan to person B, the bank can create another deposit Rs.80.

Now calculate the total deposit with the bank

First, person A deposited Rs.100. By giving loan to B, the bank is able to claim Rs.80. So after two steps the bank has total deposit of Rs.180. i.e $100 + 80 = 180$

Step 3. Another person called C wants a loan from the bank. How much amount of money the bank can give as loan to C? In the previous step we saw that, the bank could increase its deposit by Rs.80 by claiming the amount from B. As per rule it has to keep 20% of 80 as cash before giving further loan to anybody. $20\% \text{ of } 80 = 16$. So the bank will now keep Rs.16 as cash and give the rest of the amount as loan. $80 - 16 = 64$. So the bank can give Rs.64 as loan to C. Again by claiming this amount from C, the bank can create another deposit of Rs.64 in step 3.

Continuing from the previous two steps, we can say that, after three steps the total deposits with the bank has increased upto $180 + 64 = 244$. Or $100 + 80 + 64 = 244$.



This chain will continue for some time. But when it will come to an end? You know that in each round the bank keeps 20% of the increase in the deposit as cash. You also know that the bank started with an increase in its deposit by Rs.100 in step 1. So the process of credit creation (or increase in deposits) will come to an end when 20% of the deposits of each and every round taken together become 100 itself. Then ask the question, 20% of what amount is 100? The answer is 20% of 500 is 100. This means that in our present example, with initial increase of the bank deposit by Rs.100 and cash reserve ratio of 20 percent, the total credit creation will be Rs.500. There is a link among these three. You know that $20\% = 20/100 = 1/5$. Here, $500 = 100 \times 1/20\% = 100 \times 1/5 = 100 \times 5$. Accordingly we can give the following formula for credit creation

$$\text{Total Credit} = \text{Initial Increase in Deposit} \times 1/\text{Cash Reserve Ratio.}$$

$$500 = 100 \times 1/20\%$$

Also remember another important point. Since the bank deposit is divided into 20% as cash and the rest as loan through various steps, the total deposit of Rs.500 can be divided in the following manner

$$\text{Cash Reserve} = 20\% \text{ of } 500 = \text{Rs.}100$$

$$\text{Loan Amount} = 500 - 100 = \text{Rs.}400$$

Now we can present the various steps (or rounds) of credit creation in the following manner

Steps	Increase in Deposit	Cash Reserve	Loan
1	100	20	80
2	80	16	64
3	64	12.8	51.2
4	51.2	10.24	40.96
5	40.96	8.19	32.77
.....			
.....			
Total	500	100	400

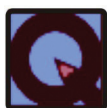
Finally, remember that, in the process of credit creation two types of deposits are recorded. The first one is called Primary Deposit. Primary deposit is the initial increase in the bank deposit resulted when the bank receives a new deposit from public. In our example given above, primary deposit is Rs.100 deposited by person A in the



beginning. The second type of deposit is called Secondary Deposit. The deposits created due to the loans given by the bank in each round are called secondary deposits. Credit creation is possible due to the increases in the secondary deposits.

15.4.2 What is the Credit Creation Capacity of a Bank?

The credit creation capacity of a bank depends on the cash reserve ratio. If the cash reserve ratio is higher, then the bank has to keep more cash to make payments to public and accordingly, fewer amounts will be available for giving loans. So less credit will be created. Credit creation will be higher, if the cash reserve ratio is lower. In our above example, total credit was Rs.500, given that the cash reserve ratio was 20% and initial increase in deposit was Rs.100. Now decrease the cash reserve ratio to 10%. As a result total credit will be $100 \times 1/10\% = 100 \times 1/10/100 = 100 \times 10 = \text{Rs. } 1000$.



INTEXT QUESTION 15.2

1. A bank received a deposit of Rs. 200. It gave a loan of Rs.180 to a borrower. What is the cash reserve ratio?
2. In the above question find out the amount of (a) primary deposit, (b) secondary deposit and (c) total deposit?
3. Define credit?

15.5 VARIOUS TYPES OF BANKS IN INDIA

In India there are following types of banks.

1. Reserve bank of India (RBI), which is the central bank of our country.
2. Commercial banks.
3. Cooperative banks.
4. Development banks.

Let us discuss them briefly.

15.5.1 Reserve Bank of India (RBI)

RBI is the head of the banking system in the country. This means that all other banks such as, commercial or cooperative or development banks, follow the rules and regulations made by RBI. Its head quarter is in Mumbai. RBI's main function is to issue currency notes. The paper currency of various denominations such as-2, 5, 10,



50, 100,500 and 1000 are issued by the RBI. You can see the signature of the governor of RBI on these currency notes. The note, bearing the signature of the Governor of RBI is approved by the government so that it can be used for buying and selling goods and services. One rupee notes and coins as well as coins below one rupee are issued by Ministry of Finance, government of India.



Source: mysarkarinaukri.com

Another function of RBI is that it acts as banker to the government. In India both central and state governments take loan from RBI and deposit their money with RBI.

15.5.2 Commercial Banks

Just now we were discussing credit creation. The 'bank', which we were talking there, was actually a commercial bank. The functions of a bank which we have discussed earlier are also functions of a commercial bank.

There are some commercial banks which are under the public sector; for example- State Bank of India (SBI), Punjab National Bank (PNB), Bank of India (BOI), Indian Bank, Canara Bank, Bank of Baroda (BOB) etc.

There are other commercial banks which are under private sector such as- ICICI Bank, Yes Bank, HDFC Bank etc. These banks are privately run.

The aim of a commercial bank is to earn profit by charging rate of interest on loans and fees for various services such as issuing draft, transferring money etc.

15.5.3 Cooperative Bank

In India there are many banks which are run by cooperative societies and are governed by the laws of the state in which they are operating. Such banks are of two types - agricultural (or rural) and non - agricultural (or urban).

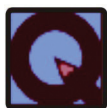
In rural areas cooperative banks provide credit for farming, cattle, fishery etc. In urban areas the cooperative banks provide credit for self employment activities, small scale industry, purchase of durable goods such as television, refrigerator etc. and personal finance.



Examples of cooperative banks are state cooperative banks, primary agricultural credit societies, urban cooperative banks, land development banks, and district central cooperative banks. These banks may bear different names in different states and areas.

15.5.4 Development Banks

To achieve economic development for the country, investment in industries and infrastructure is required. To make such thing possible there are development banks in India. These banks provide credit for a long period to private business companies and public sector units who want to establish industries and create infrastructure. Some example of development banks are Industrial development bank of India, Industrial Financial corporation of India and State Finance Corporations etc.



INTEXT QUESTIONS 15.3

1. Give one example each of a commercial bank, cooperative bank, and development bank?
2. For which activities, do the cooperative banks provide credit both in rural and urban areas? Give two examples of each.
3. Which is at the head of banking system in India?



WHAT YOU HAVE LEARNT

- Bank is an organization which accepts deposits from public and advances loans to people.
- Bank can increase its deposits by creating credit as lender. Credit means claims to receive payments from the borrowers.
- In India Reserve Bank of India is the head of the banking system.
- The different types of banks which are operating in the country are - commercial banks, cooperative banks and development banks, besides RBI.



TERMINAL EXERCISE

1. Explain two functions of a bank?
2. What is credit? How does a bank create credit?



3. What are the different types of banks in India?
4. Write short notes on the following.
 - (i) RBI
 - (ii) Cooperative Bank
 - (iii) Commercial Bank

**ANSWERS TO INTEXT QUESTIONS****Intext Questions 15.2**

1. 10 percent
2. (a) Rs.200 (b) Rs.180 (c) Rs.380
3. A contractual agreement in which a borrower receives something of value now or at present and agrees to repay the lender at some later date or future date.

Intext Questions 15.3

3. Reserve Bank of India



17



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COLLECTION AND PRESENTATION OF DATA

Getting information on various things around us has become a way of life. Information itself is a major source of knowledge. Without information it is difficult to take decisions. With development of science and technology the sources of information have increased and become accessible as well. Books, News papers, magazines, telephone, television, internet and mobile phones etc. are all medium of providing information of various kinds.

Information is both qualitative and quantitative in nature. Good, bad, ugly, beautiful, responsible, noble, handsome, educated etc are terms used to describe persons, can be said to be qualitative in nature. Information on income, expenditure, savings, rate of growth, height, weight, marks secured, population, food production, etc are given in quantitative or numerical terms. In the study of economics quantitative informations are mostly used for analysis.



OBJECTIVES

After completing this lesson, you will be able to:

- *understand the meaning of the term data;*
- *distinguish between various types of data;*
- *distinguish between variables and attributes;*
- *identify the areas of an economy where we cannot do without the data;*
- *classify and tabulate data;*
- *understand various forms of presentation of data.*

17.1 MEANING AND FEATURES OF DATA

Data means quantitative information providing facts in an aggregate manner. The information could be on any thing that can be given numerically and useful for decision



Notes

making. It is also called statistical data or simply statistics. Data is a plural term. The singular of data is datum.

From the meaning we can give some features of the term statistics or data below with example.

(i) Statistics are the aggregate of facts

A single fact cannot be considered as statistics or data. For example, the marks secured by a student of class X in mathematics are 95. This is given as single information which is simply a fact and not the data. However, the marks secured by all the students of class X of a school, either section wise or in total can be considered data, because it becomes an aggregate of facts. By just telling the marks of one student, we cannot know the performance of others and accordingly we cannot carry out any analysis to recommend for their betterment. This means that by giving aggregate of facts, data become meaningful as it provides scope for carrying out analysis.

See the table below. It gives the marks secured by all the 18 students of a class in mathematics. By looking at this we can compare the performance of the whole class. So this is an example of data.

Table 17.1

Students	Marks	Students	Marks
A	95	J	35
B	90	K	30
C	75	L	85
D	65	M	20
E	90	N	90
F	100	O	80
G	80	P	70
H	45	Q	100
I	40	R	50

From the above data we can know the following

- How many students have secured more than 90?
 - How many students have failed?
 - How many students secured less than 50?
- On the basis of the answers to these questions, the teacher can take necessary steps to improve the performance of students wherever needed. So in this way as aggregate of facts data are more meaningful than any single information.



Notes

(ii) Numerically expressed

Statistics or data are always quantitative in nature. Qualitative information such as good, bad, average, handsome, ugly are examples of some attributes, the magnitude of which can not be quantified and as such these can not be called statistics or data. When facts are put into a framework of numbers either through counting and calculation or estimation, these may be called data. In the above table marks of students are given numerically. We can give another example as in table 17.2 below which shows number of students admitted in the 1st year in different colleges in an imaginary city.

Table 17.2

College	Number of Students
Govt. College	409
Savitri College	308
J.P. College	401
N.D. College	510

(iii) Data are affected to a marked extent by multiplicity of causes

Data are not influenced by a single factor but are influenced by many factors. For Example, rise in prices of commodities may have been due to several causes like, reduction in supply, increase in demand, rise in taxes, rise in wages etc.

(iv) Reasonable standard of accuracy

100% accuracy in statistics is neither possible nor desirable. What is needed and expected is only a reasonable standard of accuracy. If a doctor has invented a new medicine to control cholesterol and statistically he ascertained that 90% of patients have responded well and statistically if 95% persons responded to the treatment, it may be considered that the new medicine is good and it has reasonable standard of accuracy as the results show that only 90% of patients have responded well and not 100%. It reflects reasonable standard of accuracy.

(v) Predetermined purpose

Data are collected for a predetermined purpose. Both the above tables serve some important purposes. The data in table 17.1 can be used to evaluate the performance of students in mathematics. Data in table 17.2 can be used to know the situation of higher education in the city to some extent on the basis of knowing number of young people entering college.

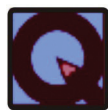
17.2 IMPORTANCE OF DATA IN ECONOMICS

Some specific areas of economics where the use of data is very important are as follows:



Notes

1. **In economic planning:** The data of the previous years are generally used to prepare future plan. For example, if we have to plan expenditure to be incurred on primary education for a year, data regarding number of students who were enrolled up to class fifth in previous years and the expenditure incurred during those years is important to look at. Forecasting is done on the basis of economic planning. For example, if we want to predict the growth of per capita income of a country, the data on the growth rate of population and the national income are also to be collected and considered.
2. **To determine national income:** In order to know the state of our economy it is important to know the national income besides various other things. But national income can be determined by using certain methods which require quantitative information on various things such as wages and salaries received by workers, rent received for use of land and building, interest received for use of funds and profit earned by the entrepreneurs in the economy in the given year.
3. **Basis of government policies:** Statistical data are widely used by government to frame policies for economic development of the country. On the basis of data on the vast number of poor and unemployed people in India, the government had to make policy to remove poverty and unemployment by enacting National Rural Employment Guarantee Act. This policy of the government guarantees an unemployed person at least 100 days of wage employment in a year. In India Census which is carried out once in every 10 years provide data on male and female population, number of literates, number of workers etc. On the basis of the data on male and female population it was found that India has 938 females per 1000 males. In some states like Haryana there are only 848 females per 1000 males. This is a very alarming situation because one of the reasons for low female population is killing of girl child before its taking birth. On the basis of this data now the government is making policy to save the girl child.



INTEXT QUESTIONS 17.1

1. Identify whether following are data or not. Write yes/no in the bracket
 - (i) Miss Monika secured 75% marks in economics ()
 - (ii) Krish is a better player than Hari ()
 - (iii) Lalita secured good marks ()
 - (iv) Number of students in the records of schools are as follows; would you call these records as data?



Notes

Table 17.3

Faculty	School A	School B
Arts	400	700
Science	600	400
Commerce	300	300

17.3 TYPES OF DATA

On the basis of the source of collection data may be classified as:

- (a) Primary data and
- (b) Secondary data

(a) Primary data

The data which are originally collected for the first time for the purpose of the survey are called primary data. For example facts or data collected regarding the habit of taking tea or coffee in a village by an investigator.

Methods of collecting primary data

1. **Direct personal investigation:** Under this method the investigator collects the data personally from the respondent. The person who collect the information is called the investigator and the person who gives the responses/answers the questions asked by the investigator is called a respondent. The data collected in this manner are therefore most reliable. However, there is a chance that the results are influenced by the personal bias and prejudice of the investigator.
2. **Indirect investigations:** Under this method the investigator obtains information indirectly from a third person who is expected to know facts about the person about whom the enquiry is done. It is generally used by the commission appointed by the government.
3. **Through correspondent:** Under this method correspondents or agents are appointed by the investigator to obtain data from various places. These correspondents are required to collect and pass the transmit information to the investigator or the central office. This method is widely used by newspaper offices.
4. **By mailed questionnaire:** Under this method a well structured questionnaire is prepared and mailed to the respondent by post. The respondent after filling up the questionnaire send it back within the given time. However, this method can only be used when respondents are literate and can fill in the questionnaire.



5. Through schedules: Under this method the field workers are asked to go to the respondent with questions contained in the schedule. They collect the answers in their own hand writing and provide data to the investigator. This method is useful when the respondent is illiterate.

(b) Secondary data

When we use the data, which have already been collected by others, the data are called secondary data. This data is said to be primary for the agency which collects it first, and it becomes secondary for all the other users.

Sources of secondary data

Secondary data may exist in the form of published or unpublished form. In its published form secondary data may be obtained from

- (a) Published reports of newspapers, RBI and periodicals.
- (b) Publication from trade associations
- (c) Financial data reported in annual reports
- (d) Data available in SEBI publication
- (e) Information from official publications
- (f) Publication of international bodies such as UNO, World Bank etc.
- (g) Others

In its unpublished form secondary data may exist as

- (a) Internal reports of the government departments
- (b) Records maintained by the institutions
- (c) Research reports prepared by students in the universities

17.4 PRESENTATION OF DATA

Data collected in the form of schedules and questionnaires are not self-explanatory. These are in the form of raw data. In order to make them meaningful, these are to be made presentable. Classification and tabulation are the basic tools of presenting raw data in systematic way.

17.4.1 Classification

Classification is a process of arranging data into classes or groups according to their resemblances and affinities. Mass data in its original form is called raw data.



Notes

Variable and attributes

Variable: When data is capable of being classified in the magnitude of time or size it is called as variable. Height, weight, length, distance are example of variables. Variables may be either discrete or continuous. Discrete variable usually have a specific value or measurement. Number of children per family, say for example, is a discrete variable because it cannot be broken into factors

Table 17.4

No. of children per family	0	1	2	3	4
No of families	4	8	20	38	10

This table reveals that there are four families without children, 8 families having one child and so on. Since the no. of children varies from family to family we call it the variable and denote it with symbol x . A variable can have different values. How frequently a value occurs is its frequency. Variable (x) 0 to 3 are values and their frequencies are 4, 8, 20 and 38.

Here value '0' occurs 4 times value '1' occurs 8 times and so on.

A continuous variable on the other hand has continuity in its scale and measurement, such as scale of height, weight, length, distance etc. continuous variables are usually placed in continuous series as given below:

Height (x)	60"-62"	62"-64"	64"-66"	66"-68"
Number of soldiers (frequency)	100	200	110	80

Table shows the range of heights (x) with the corresponding frequencies. It can be read as 100 soldiers having their height between 60"-62", 200 having height between 62"-64" and so on.

Attributes: When data cannot be classified in the magnitude of time or size it is known as an attribute such as beauty, bravery, intelligence, laziness etc. Attributes are difficult to be investigated in depth. These can only be numbered for a study of a limited purpose.

Statistical series: In statistics there are three types of series into which data can be organised.

Individual series: In this kind of series items are shown individually with their corresponding value. Each item has its separate and individual existence. Mass data in its original form are called raw data or unorganised data. But when they are arranged in ascending or descending order of magnitude, is called an array.

Suppose an investigator has got the following information about the marks obtained in economics out of 100 scored by 20 students in a school.



Notes

Table 17.5

Marks obtained by 20 students in Economics out of 100

40	50	35	40	48
50	80	70	75	47
45	75	90	60	57
60	50	80	55	73

The above raw data can be arranged in ascending order which starts from lowest number and goes towards highest number as shown in the following table:

Table 17.6 Arranged in ascending order (Marks out of 100)

35	47	50	60	75
40	48	55	70	80
40	50	57	73	80
45	50	60	75	90

The above data can also be arranged in descending order i.e. from highest number to lowest number as shown in the following table:

Table 17.7 Arranged in descending order (Marks out of 100)

90	75	60	50	45
80	73	57	50	40
80	70	55	48	40
75	60	50	47	35

Discrete Series: This type of series is designed to show variables with definite break with their respective frequencies. Frequency refers to the repetitiveness of a value or item. If a particular value (X) appear 4 times in a set of data X will have a frequency of 4. Theoretically this kind of series is prepared only for a discrete variable, however, in practice continuous and discrete variables are used interchangeably. Following is an example of discrete series.

Table 17.8

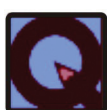
Marks	30	40	50	60	70	80	90	Total
Number of students (f)	4	6	10	20	10	6	4	60

Continuous Series: This kind of series is framed for placing frequency with corresponding group of variables which are classified in groups as shown below.

Table 17.9

x	0-10	10-20	20-30	30-40	40-50
f	7	13	20	13	7

This kind of series may be constructed using inclusive method or exclusive method. Above example is that of an exclusive series. In case of inclusive series frequency corresponding to the upper limit of group is included in the same group, while it is included in subsequent group in case of exclusive series.



INTEXT QUESTIONS 17.2

1. Identify whether the following items are variable or attributes?

- (i) Height of a student
- (ii) Beauty of a girl
- (iii) Intelligence level of a boy
- (iv) Mileage of a car
- (v) Weight of Mr X

17.4.2 Tabulation

After the data is collected and classified, it is always useful to put them into rows and columns in a table.

A statistical table may be a simple one or it may be a complex one, depending upon number of variable incorporated into it. Given below is a format of simple statistical table.

Table 17.10
Part of a table

Sub Heading	Caption		
	Column I	Column II	
Rows			
Rows			
Rows			
Source:			

Footnote



Notes

**Notes**

This table may be one way or two ways or manifold. Following illustration are simple example of tabulation.

Illustration 1

During 2010-11, there were three faculties with 840 students in commerce, 660 in science and only 50 students in management.

The percentage of males is 40%, 25% and 20% respectively in each subject stream.

This data can be tabulated as follows

Table 17.11

Faculty	Number of students		Total
	Male	Female	
Commerce	336	504	840
Science	165	495	660
Management	100	400	500
Total	601	1399	2000

17.4.3 Diagrammatic and Graphic Presentation of Data in Economics

Data relating to two variables may be shown with the help of a simple graph. It is usually in the form of line or curve. Data relating to a time series or a frequency distribution can be easily presented in a graph.

Diagrammatic presentation is a geometrical version of the data. Diagrams present the facts in such a manner that just by glancing at them one can understand the most complex data. Diagrams may be one-dimensional or two dimensional and even three-dimensional. Bar diagrams are usually one dimensional diagram, only height of the diagram is relevant and not the width.

Here we will discuss only about one dimensional diagram.

One dimensional diagrams

One dimensional diagrams are also called bar diagram which are most commonly used in practice. There are various types of bar diagrams but here we will study about simple bar diagrams only.

Simple Bar Diagram: They are very simple to present but only one type of variable can be presented. A simple bar can be drawn either on horizontal or vertical base. But vertical bars on horizontal base are more commonly used in practice. Bars must be of uniform thickness and they should be placed at equal distance.

Let us now explain how a simple bar diagram can be presented from the given data. The following table gives data on birth rate in India, according to census survey of different years. This information is presented in simple bar diagram as given below.

Table 17.12

Year	1931-40	1941-50	1951-60	1961-70	1971-80	1981-90
Birthrate	45	35	30	28	24	20

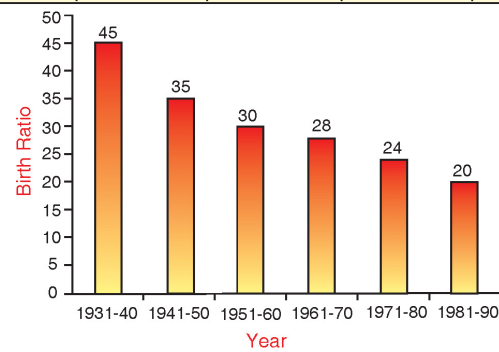


Fig. 17.1 Birth rate in India

Data may also be presented graphically. In economics and statistics the values may be of time, relationship, frequencies etc. In case of time series graph, x-axis represents time and y-axis the variable. It is necessary to decide a convenient scale for each axis to accommodate the complete data given. The scale of two axis can be different.

Illustration 2

The number of students in a school for five years is given below:

Table 17.13

Year	2007	2008	2009	2010	2011
No. of students	1000	2500	3800	4500	5200

We can present this data in the form of a graph

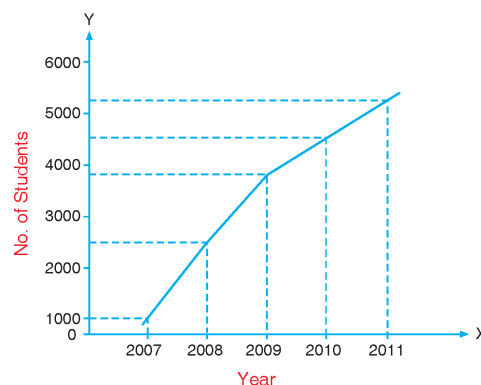


Fig. 17.2 Enrolment of student P (2007-2011)

Notes





Notes



WHAT YOU HAVE LEARNT

- Data means any quantitative information about income, population, prices etc.
- Statistics/Data are the aggregate of facts, affected to a marked extent by multiplicity of cause, numerically expressed, having reasonable standard of accuracy, collected for predetermined purpose and placed in relation to each other.
- Data are important in economic planning, for determination of national income, in forming fiscal and monetary policies and assist central bank of a country.
- Data which are originally collected for the first time for the purpose of the survey, are called primary data.
- When we use the data which have already been collected by others, the data are called secondary data.
- Primary data can be collected by: (i) Direct personal investigation (ii) Indirect investigation (iii) through correspondent (iv) by mailed questionnaire (v) through schedules
- Sources of secondary data may be in the form of published or unpublished data.
- Data can be presented in the form of classification individual series, discrete series and continuous series; graphs and diagrams.
- Data can be presented in the form of simple bar diagram



TERMINAL QUESTIONS

1. Define data. How are primary data collected?
2. What is the difference between primary and secondary data?
3. Distinguish between variable and a attribute.
4. Explain the following (a) Classification
5. Explain the following methods of presentation of data:
 - (a) Tabulation
 - (b) Diagram
6. Construct a simple bar diagram from the data given below:

State	Number of management colleges
Rajasthan	200
Punjab	400
Gujarat	150



ANSWERS TO INTEXT QUESTIONS

Intext Questions 17.1

- (i) No (ii) No (iii) No (iv) Yes

Intext Questions 17.2

- (i) Variable (ii) Attribute (iii) Attribute (iv) Variable (v) Variable



Notes



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ANALYSIS OF DATA

Economic data are usually studied with the help of statistical methods. Science of statistics is a method of collection, classification and tabulation of numerical facts, which help in explanation, description and comparison of phenomena.

Clearly in singular sense statistics is a scientific subject, which is descriptive as well as conclusive. In descriptive statistics we include a complete gamut of scientific enquiry. In all kinds of statistical enquiry the first step is to gather the facts through various methods. The facts collected from respondents are first edited. These facts are then presented with the help of tables, graphs and diagrams. Quantitative information is statistically analysed. Representative figures are interpreted in the context they have been studied.



OBJECTIVES

After completing this lesson, you will be able to:

- *understand the meaning of the term central tendency;*
- *use the concept of average in your day-to-day life;*
- *calculate arithmetic mean of various series;*
- *use alternate methods to calculate arithmetic mean.*

18.1 MEANING OF CENTRAL TENDENCY

After the data have been collected, organised and presented they need to be analysed. Analysis of data is a technique through which significant fact from the numerical data are extracted. One of the most important objects of statistical analysis is to get one single value that describe the characteristics of the whole data.

In statistics we deal with certain problems, which are largely affected by multiplicity of causes. Whatever conclusions we draw are based on combined effect of the various



Notes

causes and it is very difficult to trace out impact of all such causes separately. However, the first step in data analysis is to ascertain representative values from the raw data. It is known as average or measure of central tendency.

Raw data are first edited and then converted into frequency distribution. One of the basic purposes of descriptive statistics is to find out a most representative value or figure from the data. This representative figure is called average or mean. This is the value or single figure, which is typical to all. This is also known as measure of central tendency. Thus averages are the descriptive statistics, which measure the tendency called central tendency. It has been well established that there is a tendency of data to move towards a particular direction.

Tendency of data to cluster towards the central location or value is called central tendency.

The purpose for computing an average value for a set of data is to obtain a single value which is representative of all the items and which the mind can grasp simply and quickly. The single value is the point around which the individual items cluster.

We often use the term average in our day-to-day discussions. If one claims that his average marks are 76 out of 100 in 6 subjects. It shows that he succeeded in total of 456 i.e. 76×6 marks. For example, if actual runs scored by Sachin in five innings in a series are 59, 78, 100, 50 and 63 he scored 350 runs in total. His average score is $350/5 = 70$. It is important to note that Sachin never scored exactly 70 runs in any inning he played. However, on an average this figure is a good representative of his scores in five innings.

The purpose of computing an average value for a set of observations is to obtain a single value which is representative of all the items and which the mind can grasp simply and quickly.

18.2 PURPOSE AND FUNCTIONS OF AVERAGES

- to convert the collected information and raw data in brief
- to facilitate comparison between two or more groups
- to present a representative value from raw data
- to facilitate future policy and programme.

18.3 ARITHMETIC MEAN AS A MEASURE OF CENTRAL TENDENCY

There are various measures of central tendency. Arithmetic mean is one of them

Arithmetic mean is obtained by dividing the sum of the items by the number of items mathematically speaking:



Notes

$$\bar{X} = \frac{\Sigma x}{N}$$

where, x = item

Σx = sum of the item

N = Number of items and

$\bar{X}$ = Arithmetic mean

Arithmetic mean in common language is popularly known as average. It is very easy to calculate it, say for example there are 10 students in a class. They scored marks in economics out of 10 as follows

Student	A	B	C	D	E	F	G	H	I	J
Mark	2	7	10	8	6	3	5	4	5	0

Here 'x' is marks in economics. Let us start with the sum of the $2 + 7 + 10 + 8 + 6 + 3 + 5 + 4 + 5 + 0 = 50$, clearly 10 students secured 50 marks (Σx) in all. Number of students (N) is 10, the average of the marks scored by 10 students is thus $50/10 = 5$ in other words

$$\bar{x} = \frac{\Sigma x}{N} = \frac{50}{10} = 5$$



INTEXT QUESTIONS 18.1

1. Give an example of central tendency.
2. Give basic formula to calculate arithmetic mean.
3. If sum of items is 40 and mean is 4 find out "N" (number) of items.
4. Weekly consumption of sugar of Mr. Raja is 35 kg what is his average daily consumption?
5. If average marks of 10 students is 50 if one more student is added to group who secured 5 marks. What will be the new average?

18.4 CALCULATION OF ARITHMETIC MEAN IN DIFFERENT TYPES OF SERIES

As given in Lesson 17, data can be organized in different types of series. They are – Individual series, Discrete series and Continuous series. Calculation of arithmetic mean for different series of data is given below



Notes

- A. Individual series: Above formula for calculation of arithmetic mean or mean is valid under all circumstances. However, if shortcut method is to be used for complexed data, above formula is modified as follows:

$$\bar{x} = A + \frac{\sum dx}{N}$$

Here A is assumed mean, dx is deviating x from assumed mean and N is number of items.

Illustration 1. Ascertain arithmetic mean from the following marks secured by 10 students out of 30.

x : 4, 3, 8, 9, 12, 10, 25, 10, 21 and 20

x = Marks

Solution

(a) Direct method

$$\sum x: 4 + 3 + 8 + 9 + 12 + 10 + 25 + 10 + 21 + 20 = 122$$

$$\bar{x} = \frac{\sum x}{N} = \frac{122}{10} = 12.2$$

(b) Shortcut method

x marks	$dx = x - A$ $A = 12 = x - 12$
4	-8
3	-9
8	-4
9	-3
12	0
10	-2
25	+13
10	-2
21	+9
20	+9
$\sum x = 122$	$\sum dx = 2$

Let us assume 12 as assumed mean (A)

$$\bar{x} = A + \frac{\sum dx}{N} = 12 + \frac{2}{10}$$

$$\bar{x} = 12 + 0.2 = 12.2$$



B. Discrete series: for ascertainment of arithmetic mean in discrete series following formulae can be used

(a) Direct method

$$\bar{x} = \frac{\sum fdx}{N}$$

where N = Sum of frequencies

(b) Shortcut method

$$\bar{x} = A + \frac{\sum fdx}{N}$$

Illustration 2. Calculate arithmetic mean from the data given below:

Number of children per family	0	1	2	3	4	5	6
Number of families	13	17	20	40	20	17	13

Solution.

(a) Direct method

x = number of children

f = number of families

x	f	fx
0	13	0
1	17	17
2	20	40
3	40	120
4	20	80
5	17	85
6	13	78
	140	420

$$\bar{x} = \frac{\sum fx}{N} = \frac{420}{140} = 3$$

Thus, average is 3, which indicates that there are 3 children per family on an average



Notes

(b) Shortcut method

x	f	dx = (x - A) A = 2	fdx
0	13	-2	-26
1	17	-1	-17
2	20	0	0
3	40	+1	40
4	20	+2	40
5	17	+3	51
6	13	+4	52
	140		+183
			-43
			140

$$\bar{x} = A + \frac{\Sigma fdx}{N} = 2 + \frac{140}{140} = 3$$

C. Continuous series: Following three methods are used for ascertainment of arithmetic mean in a continuous series

(a) Direct method

$$\bar{x} = \frac{\Sigma fdx}{N}$$

(b) Shortcut method without step deviation

x = mid value of a class

$$\bar{x} = A + \frac{\Sigma fdx}{N}$$

(c) Shortcut method with step deviation

$$\bar{x} = A + \frac{\Sigma fdx'}{N} \times c$$

Here c = common factor

Calculation of arithmetic mean for continuous series is explained in detail below with the help of an example



Notes

Illustration 3. The marks secured by 300 students in a school

x (marks)	0-10	10-20	20-30	30-40	40-50	50-60	60-70
f(no. of students)	23	27	40	120	40	27	23

Solution. First let us calculate mid value for each class. It is done by taking a sum of lower and upper limit of each group and dividing it by 2 i.e.

$$x = \frac{L_1 + L_2}{2}, \frac{0+10}{2}, \frac{10+20}{2}, \frac{20+30}{2}, \frac{30+40}{2}, \frac{40+50}{2}, \frac{50+60}{2}, \frac{60+70}{2} \text{ i.e. } 5, 15, 25, 35, 45, 55 \text{ and } 65$$

Here L_1 is lower limit while L_2 is the upper limit of each class

(a) Direct method

x	$x = \frac{l_1 + l_2}{2}$	f	fx
0-10	5	23	115
10-20	15	27	405
20-30	25	40	1000
30-40	35	120	4200
40-50	45	40	1800
50-60	55	27	1485
60-70	65	23	1495
		300	10500

$$\bar{x} = \frac{\sum fx}{N} = \frac{10500}{300} = 35$$



Notes

(b) Shortcut method

(i) Without step deviation

x	f	MV(x)	dx(x-A) A = 25	fdx
0-10	23	5	-20	-460
10-20	27	15	-10	-270
20-30	40	25	0	0
30-40	120	35	+10	1200
40-50	40	45	+20	800
50-60	27	55	+30	810
60-70	23	65	+40	920
	300			3000

$$\bar{x} = A + \frac{\Sigma fdx}{N} = 25 + \frac{3000}{300} = 25 + 10 = 35$$

(c) Shortcut method with step deviation

x	MV(x)	f	dx(x-A) A = 25	$35dx_{L=1}^1 = \left(\frac{dx}{10}\right)$	fdx ¹
0-10	5	23	-20	-2	-46
10-20	15	27	-10	-1	-27
20-30	25	40	0	0	0
30-40	35	120	+10	1	120
40-50	45	40	+20	+2	+80
50-60	55	27	+30	3	81
60-70	65	23	+40	4	92
		300			300

$$\bar{x} = A + \frac{\Sigma fdx'}{N} \times c = 25 + \frac{300}{300} \times 10 = 35$$

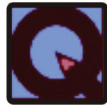


Notes

18.6 PRECAUTIONS OF USING ARITHMETIC MEAN

Let us provide two important precautions while using arithmetic mean.

1. It is important to note that arithmetic mean is a theoretical value, which may not be represented by actual fact. Say for example, if in all there are 27 children in 10 families. Average number of children per family would be 2.7 ($27 \div 10$). It is unrealistic. There can be either 2 or 3 children per family but not 2.7.
2. Arithmetic mean cannot be qualitative data such as honesty, bravery, loyalty and beauty etc.



INTEXT QUESTIONS 18.2

1. Calculate arithmetic mean from the following data: 4, 6, 3, 7, 8, 2 and 5
2. Calculate arithmetic mean from the following data:

Marks (out of 5)	0	1	2	3	4	5
Number of student	3	7	8	5	3	4

3. If sum of the deviation measured from assumed mean of a group 10 is +50 and assumed mean is 20, what will be the actual mean.



WHAT YOU HAVE LEARNT

- Tendency of data to cluster towards the central location or value is called central tendency.
- An average is a value which is representative of set of data.
- Arithmetic mean is a mathematical average and which is commonly used as a measure of central tendency.
- Arithmetic mean is obtained by dividing the sum of the items by the number of items mathematically speaking:

$$\bar{X} = \frac{\sum x}{N}$$

where, x = item
 $\sum x$ = sum of the item
 N = Number of items and
 $\bar{X}$ = Arithmetic mean

- Arithmetic mean can be calculated for Individual series, Discrete series and Continuous series by using different formulae.

**TERMINAL EXERCISE**

- What do you mean by analysis of data?
- What is meant by descriptive analysis?
- Discuss the concept of central tendency.
- What do you mean by arithmetic mean? How is it calculated?
- Define arithmetic mean. What does it reflect?
- What do you mean central tendency? How does arithmetic mean reflect it?
- From the following data find out mean: 7, 4, 17, 19, 11, 16, 15, 14, 9 and 11.
- If the following items are also added to above set of data, what would be the revised mean 18, 14, 14, 8, 10 and 21
- Calculate mean from the data given below:

x	f
0	1
1	13
2	20
3	40
4	40
5	13
6	7

- Calculate arithmetic mean from the data given below:

x	f
0-10	5
10-20	15
20-30	20
30-40	25
40-50	20
50-60	15
60-70	5

**Notes**



Notes

11. From the data given below find out mean

x	f
20-40	2
40-60	7
60-80	9
80-100	24
100-120	9
120-140	7
140-160	2



ANSWERS TO INTEXT QUESTIONS

Intext Questions 18.1

- 1
- $\bar{x} = \frac{\sum x}{N}$
- 45.9
- 7 kg
- 5

Intext Questions 18.2

- 5
- 2.33
- 18
- 25

MODULE-7
INDIAN ECONOMY

19. An Overview of Indian Economy
20. Sectoral Aspects of Indian Economy
21. Challenges before Indian Economy
22. Indian Economy in Global Context



20



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SECTORAL ASPECTS OF INDIAN ECONOMY

We consume various types of goods and services. They can be classified into two types- (i) food items and (ii) non-food items. To make food we need food grains, fruits and vegetables, edible oil etc. These things are produced by farmers in the rural area. There are countless non-food items which we use, such as, clothes, shoes, furniture, utensils, automobiles, pen, paper, book etc. These are produced by industries in towns and cities. Since production of food grains and production of non-food items take place in different environment we classify them as different sectors of the economy.



OBJECTIVE

After completing this lesson, you will be able to:

- *know the three major sectors of Indian economy which the households pursue to earn their living;*
- *understand the role and importance of each of these sectors in the economy;*
- *know the linkages among these sectors.*

20.1 TYPES OF OCCUPATION PEOPLE PURSUE

To earn livelihood people pursue different types of activities based on their education, skill, family tradition etc. Normally we classify them into three different sectors of the economy, such as (i) primary sector, (ii) secondary sector and (iii) tertiary sector.

20.1.1 Primary Sector

Take the scenario in rural areas of India. How do the people, who are living in villages, earn their livelihood? Many of them work on the fields to raise crops, which is known



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as cultivation. They are known as farmers and agricultural labourers and the occupation is called agriculture. There are different types of crops which are cultivated; such as food items and non food items. Food items include cereal, pulses, fruits and vegetables etc. and non-food items include cotton, jute etc.

Similarly people also earn their livelihood from forestry which refers to collection of forest products and selling them in the market. This occupation is called forestry. Forest products include- timber, firewood, herbal medicines etc. Many people work in mining area to extract minerals. There also people who are engaged in raising live stock such as poultry and dairy farming. Finally fishery is another occupation in which people catch fish in ponds, rivers or sea to sell them in the market. All these activities i.e. agriculture, forestry, mining, livestock and fishery are complementary to each other. We classify them as primary production and place them in primary sector.

So primary sector of our economy includes the following.

- (i) Agriculture and allied activities
- (ii) Fishery
- (iii) Forestry
- (iv) Mining and Quarrying

Villages have been existing from ancient days in India and agriculture and the allied activities are very traditional occupation of people. It comes naturally to them because food which comes from agriculture is the basic need of life. But with progress of time human settlements have expanded beyond villages. Towns and cities have come up in the process of development. These are called urban areas. Jaipur, Ahmedabad, Pune, Bhubaneswar etc. are examples of cities in India. Delhi, Chennai, Mumbai and Kolkata are called Metros because they are even bigger cities. These urban areas are known for its non-agricultural occupation. We can divide the non agricultural activities into two sectors.

- (i) Secondary Sector
- (ii) Tertiary sector

20.1.2 Secondary Sector

This sector includes the following production activities

- (a) Manufacturing
- (b) Construction
- (c) Gas, water and electricity supply

Manufacturing

This implies production of goods by using raw materials in manufacturing units called factories and industries. In terms of size and expenditure involved there are small and large scale industries. Examples of small scale units are: shoe factory, textile unit, printing, glass making, furniture etc. The large scale manufacturing includes steel, automobiles, aluminum, etc. Skilled people work in manufacturing business.

Construction

This activity includes construction of residential and non-residential buildings, roads, parks, bridges, dams, airports, bus stops and so on. It is a regular activity seen in urban areas.

Another occupation people pursue in secondary sector is gas, water and electricity supply. These are essential services.



ACTIVITY

- (i) Visit a poultry farm and note down the products it sells.
- (ii) Make a list of five forest products and note down their prices.

20.1.3 Tertiary Sector

People are also engaged in tertiary sector activities which are different in nature.

This sector is called service sector where following services are provided.

- (i) Trade, Hotels and Restaurants
- (ii) Transport, Storage and Communication
- (iii) Financial services such as Banking, Insurance etc.
- (iv) Real estate and Business services
- (v) Public Administration
- (vi) Others services.

Table 20.1 provides the percentage of working population in the above mentioned different sub sectors for the year 2009-10.



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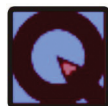


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Table 20.1 Occupational Distribution of working Population in India (percentage) in 2009-10

(i) Agriculture	50.19
(ii) Mining and quarrying	0.61
(iii) Manufacturing	13.33
(iv) Electricity, water etc	0.33
(v) Construction	6.10
(vi) Trade, Hotels etc.	13.18
(vii) Transport, storage etc	5.06
(viii) Financial, business services etc.	2.22
(ix) Other services etc.	8.97

Source: Economic Survey



INTEXT QUESTIONS 20.1

- (i) Which of the following is a part of primary sector?
 - (a) Fishery
 - (b) electricity
 - (c) banking
- (ii) Which is the largest sector in terms of share in working population in India?



ACTIVITY

Visit three households in your neighborhood and ask them about their occupation. Then categorize their occupation into different sectors.

Since people work in various activities under the above mentioned sectors and earn income we can analyse the contribution of these sectors to national product as well as their role and importance in the economy.

20.2 ROLE AND IMPORTANCE OF PRIMARY SECTOR

In the primary sector agriculture is the predominant occupation and has the largest share in national income. So let us concentrate on the role and importance of agriculture

in the Indian economy in terms of its share in the national income, providing employment food and raw materials. Let us take them one by one.

1. Share in National income

At the time of independence agriculture was contributing more than 50 percent to national income. In recent years its share has come down. In 2009-10 agriculture contributed around 15 percent to national income.

2. Providing employment to largest section of population

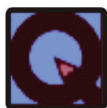
Agriculture is the mainstay of Indian economy. It is the occupation of the largest section of India's population. At the time of independence about 70 percent of our population depended on agriculture and allied activities to earn their livelihood. With development of manufacturing and service sector dependency on agriculture has slightly reduced. About 50 percent of India's population was working in agriculture in the year 2009-10.

3. Providing Food to Millions

Food is the most basic requirement of life. Without agriculture food production and supply would be non-existent. India's food requirement is not only very high but also increasing every year because of increase in its population. The total food grain production of India in 2008-9 was around 234 million tonnes. This includes wheat, rice and pulses.

4. Providing raw materials to industries

Industries such as sugar, jute, cotton textiles, vanaspati etc. get their raw materials from agriculture. Do you know how paper is made? It requires a special type of grass, bamboo etc. Without agriculture paper production is not possible. Look at the food processing industry which is supplying so many different varieties of packed food items such as pickles, fruit jam, juice, biscuits, bread, semi –prepared food etc. Food processing industry is operating because of agriculture only.



INTEXT QUESTIONS 20.2

1. How much was the food grain production of India in 2008-09?
2. Give three examples of products from food processing industry?
3. What was the share of agriculture in National income at the time of independence?
4. How much has agriculture contributed to India's income in 2009-10?



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20.3 ROLE AND IMPORTANCE OF SECONDARY SECTOR

In the secondary sector manufacturing industries form the major part. These industries are categorized into small scale industry and large industry.

What is a small scale industry? An industry which can be established by spending a minimum of Rs. 25 lakh on plants and machinery is called a small scale industry. These industries mostly use labour-intensive technology. i.e. production process of these industries use more labour force. Large scale industry, on the other hand needs huge amount of investment in the form of plant and machinery. It is also physically spread over many acres of land and employs large number of people. It also uses capital intensive technology in the form of big machines. Take for example an iron and steel plant. The Tata Iron and steel plant is the oldest in the country. It is situated in Jamshedpur over an area of about 37.31 km. square of land.

The importance of Industrial sector, both small and large, has been increasing after independence. Let us discuss them one by one.

(i) Share in national income

The contribution of industrial sector has been increasing slowly over time after independence. In 2009-10 the share of this sector was 28 percent in India's domestic product. At the time of independence it was only 14 percent. The increase is due to increase in number of manufacturing units and increase in industrial production.

(ii) Employment generation

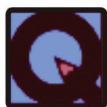
Industrial sector has also largely contributed to providing employment opportunities to India's population. Nearly 3 crores 30 lakhs people are engaged in both small and large scale industries combined. Out of this small industries provide nearly 3 crore 12 lakh jobs.

(iii) Creation of Infrastructure

Today it has become easier to travel to distant places because of existence of roads, highways, railways, airways. Think of the big Dam projects such as Hirakud and Bhakra-Nangal which provide electricity and irrigation. Look at the big buildings which accommodate offices, shopping centers, factories, institutions etc. and provide residences. Also see the Radio and Telephone towers which facilitate communication. These are all part of infrastructure. You can imagine, how impossible will it be to live without these facilities today? Infrastructure building is possible because of contribution of large scale industries which make the machinery and equipments needed build infrastructure.

(iv) Provision of consumer goods

The clothes you wear, the pen, the tooth brush, soap, shoes, cycle, scooter, car etc. you use are produced by manufacturing industries. Today the market is flooded with many goods of your choice. This is possible because of industrialization.

**INTEXT QUESTIONS 20.3**

1. Define small scale industry?
2. What was the share of industrial sector in national income in 2009-10?
3. Give two examples of infrastructure?

20.4 ROLE AND IMPORTANCE OF SERVICE SECTOR

Service sector of India has been expanding and growing very fast. Look around and you will see that number of trains carrying people as well as goods have increased significantly. You also find so many buses, cars and trucks moving on the roads from one place to another. This means that the transport services have grown over time. More number of people are having telephones including mobile phones. More number of schools have been built in the country to provide education. The number of study centers under open schooling has increased so that more students can be benefitted. You can also find hospitals; health centers etc are providing health services to people. Banks have also opened their branches so that people can open their account, withdraw money they want and take loans to purchase house, car, scooter etc. There are hotels and restaurants in almost all public places to provide food to people. These are examples of different types of services. It is difficult to think life in the economy without services. Hence it is important to know the role and importance of service sector which we will discuss below under the following heads.

- (i) Contribution of service sector to National income.
- (ii) Contribution of service sector in providing employment
- (iii) Attracting funds from foreign countries.
- (iv) Contribution of service sector in Exports.

**ACTIVITY**

Prepare a project on your local “transport service” in about 200 words.

**Notes**



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20.5 CONTRIBUTION OF SERVICE SECTOR

(i) Contribution to National Income

Among all the three sectors i.e. agriculture, industry and service, it is the service sector that has contributed maximum to the national income of India. If India's income is 100, then service sector contributed 55.20 in the year 2009-10 which is more than half of the total. We have presented the share of different services in table 20.2 below.

Table 20.2 Contribution of services sector in GDP (2009-10)

Trade, Hotels etc.	16.3
Transport, Communication	7.8
Finance, real estate, business	16.7
Community, social and others	14.4
Total service sector	55.2

Source: Economic Survey

You can see that financial, real estate and business services contributed 16.7 percent out of the total 55.2. Financial services include Banking and Insurance. Trade and hotel services contributed 16.3 percent. Community and social services which include public administration, defense etc. has contributed 14.4 percent while transport and communication contributed 7.8 percent to national income.

(ii) Contribution to Employment

Now a days more and more people are getting employment in service sector. Out of total employment level in the country, this sector has absorbed 29.4 percent of them in 2009-10. In times to come this figure is going to increase further. The main reason is that the number of educated people in India is increasing every year. They belong to various fields such as matriculates, graduates in arts, commerce, science, engineering, medicine and other professional and vocational streams. Service sector needs these people. In terms of wages and salaries, service sector, pays more than that of agricultural sector. Compared to agriculture, service sector provides more job opportunities. There is existence of large varieties of services which are provided round the year. But there are some seasonal activities in agriculture. So as people become more educated they move to service sector. So employment in service sector is increasing.

(iii) Attracting Funds from Foreign Countries

Looking at the growth of service sector of India people from foreign countries are showing more interest to invest money in this sector to earn profit. Banking, insurance,

trade, transport, hotel services combined have attracted more than 1 lac 18 thousand crores rupees from foreign countries in the form of direct investment. Recently computer service has grown many fold in India. This has attracted more than forty seven thousand crores of rupees from foreign countries. If investments are made then more job opportunities are created. This is advantageous for the nation.

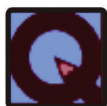


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(iii) Contribution of Service Sector to Exports

Exporting means selling goods and services to citizens in foreign countries to earn foreign exchange in the form of dollar, euro, yen, pound etc. In recent years India's service sector has contributed a lot in earning foreign exchange for the country through exports. Our business services which include—IT, consultancy, legal services, etc. have become world standard.

In the year 2009-10 India earned nearly 4.35 lakh crores of rupees from exports in services.



INTEXT QUESTIONS 20.4

1. What was the share of service sector in employment in 2009-10?
2. What was the share of service sector in national income of India in 2009-10?

20.6 LINKAGES AMONG THE THREE SECTORS OF THE ECONOMY

All the three sectors are interlinked. In fact they complement and supplement each other. We give you the following story to understand it.

Hari Singh is a farmer who cultivates wheat on his agricultural land in the village Rampur. Last year he had a good harvest due to good rain fall. So he could sell 10 quintals of wheat in the local mandi and keep another 10 quintals for his household consumption. This year there is no proper rainfall. The area is also having no irrigation facility. Then how to provide water to the wheat crop? Hari Singh decided to lift ground water. But for this he needs a diesel pump set. Who will provide a diesel pump set? It is produced by a manufacturing unit called Ravi manufacturers which is situated 200km away in an industrial area called Karim Nagar. Now going to such distant place is a difficult task. Ganga Singh, a friend of Hari Singh told that there is no need to worry. He took Hari Singh to the nearest township market called Shiv Mandi. In the market complex there is a shop called Pappu Hardware Store run by Ganga's brother-in-law named Pappu who sells pump sets. When Hari Singh asked for the pump set Pappu told him to wait for two hours because the truck carrying 50 Ravi pump sets and some spare parts for

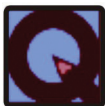


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tractors from Karim Nagar would reach his shop by that time. Pappu also talked to Ravi Khetrapal, who is the owner of Ravi pumps, over his mobile phone to confirm this. In the mean time Ganga and Hari took tea and snacks in the tea stall, went to enquire about admission into primary schooling for Hari's little daughter and brought medicines from the health center for Ganga's son who was having fever at home. After two hours when they came back to Pappu's shop they saw labourers unloading the pumpsets. Pappu told them that he had ordered 50 pumps from the factory in Karim Nagar. The truck would deliver the spare parts to another shop in the same market place which sells auto and tractor parts. Hari saw that Pappu gave a cheque of Rs. 100, 000 to the truck driver who received it on behalf of Ravi Khetrapal. "Since the amount is big, it is not safe to give cash. Cheque is a better option. Mr. Khetrapal can deposit the cheque in his bank account to get the money" Pappu said. He further said that this payment was made to settle some earlier dues. The payment for pumps would be made after he sells the pumps to the customers in the similar way. Hari Singh paid Rs. 7000 to Pappu and bought one pump set. "Due to bad monsoon this year pump sets are in great demand and will be sold quickly" said Pappu confidently. "What about the truck now?" asked Hari while returning back to village with Ganga Singh. "The truck will now carry wheat and vegetables from the mandi which would be sold to households in the Karim Nagar industrial area and township" replied Ganga.

From the story above you can easily establish the link between the agriculture, industry and service sectors. Like Hari Singh there are many farmers in the agricultural sector who need diesel pumps to irrigate their land. Besides pumps there are many other inputs such as fertilizer, pesticides, plough, tractor etc. are required for cultivation. These things are supplied by industry in the same way as the pump in the story. In return people working in industries and services get food supplied by the agricultural sector in the same way as Hari Singh had sold his surplus wheat in the mandi. What is role of service sector then? Its role is to facilitate and ensure these transactions between agriculture and industry. In the story the truck carrying pumps and spare parts from Karim Nagar to Shiv Mandi and food items on its journey back is a part of transport service. Use of mobile phone to keep track of the order as part of communication services. Cheque deposit in the bank is part of financial service. Pappu's shop provides business service of delivering the good. Note that all these activities are duly backed and supported by money flow. Here in the story Hari Singh sold wheat and got money. He used the money to buy a pump. Pappu got money from Hari and paid it back to supplier of pumps after keeping his profit. After receiving the money the pump supplier will pay the truck driver his due and give wages to people in the factory. These people will use the money to buy food in the local market transported by the truck from mandi.

From this simple story, now you can imagine how the whole of the economy is linked and connected internally.

**INTEXT QUESTIONS 20.5**

1. Give one benefit of making payment by cheque?
2. “Transporting food grain” is a part of which sector?
(a) agriculture (b) industry (c) service

**ACTIVITY**

Visit your local market and make a list of some services you get there. Also make a list of five agricultural and industrial products you see there and find out their place of origin?

**WHAT YOU HAVE LEARNT**

- There are three sectors in the economy, namely, primary (agriculture and allied activities), secondary, (manufacturing etc.) and tertiary (services).
- All these sectors contribute towards generation and growth of national income, creation of employment opportunities, supply of goods and services and creating infrastructure.
- All the three sectors are interlinked by complementing and supplementing each other.

**TERMINAL EXERCISE**

1. Name the sub sectors of primary sector?
2. Name the sub sectors of secondary sector?
3. Name the sub sectors of tertiary sector?
4. Explain the role and importance of primary sector?
5. Explain the role and importance of secondary sector?
6. Explain the role and importance of tertiary sector?
7. How are the three sectors of the economy interrelated?

**Notes**

**Notes****ANSWERS TO INTEXT QUESTIONS****Intext Questions 20.1**

1. (a)
2. Agriculture

Intext Questions 20.2

1. 234 million tonnes
2. bread, fruit jam and pickles
3. more than 50 percent
4. 15 percent

Intext Questions 20.3

1. An industry which can be established by spending a minimum of Rs 25 lakhs on plants and machinery is called a small scale industry.
2. 28 percent
3. Telephone tower, Hirakud Dam

Intext Questions 20.4

1. 29.4 percent
2. 55.2 percent

Intext Questions 20.5

1. safety (reaches the person through bank amount)
2. service



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INDIAN ECONOMY IN THE GLOBAL CONTEXT

You know that India is one among many countries in the world. Countries do interact with one another and keep relationship in various areas of interest. Citizens of one country travel to other countries as tourists, to seek jobs, to do business, to study, to do charity and on some government assignments etc. In this lesson the major focus is on economic relationship between India and rest of the world.



OBJECTIVES

After completing this lesson, you will be able to:

- *understand the meaning of economic relationship between countries;*
- *understand the importance of Trade;*
- *know the exports and imports of goods and services by India;*
- *understand the meaning of globalization;*
- *know a brief over view of two most important economies, USA and China so that you can have an idea about India's comparative position in the world.*

22.1 MEANING OF ECONOMIC RELATIONSHIP BETWEEN COUNTRIES

If you are in need of money you can borrow it from a friend or from a bank. If you want to buy a book you can pay money to your local book shop and get the book. If you are a seller of goods such as stationery or garments or shoes etc. then you sell them to consumers who pay you. If you want to produce any good, you can invest some money and start a factory and give jobs to people who can provide their labour. All these are examples of economic activities inside your country in which

**Notes**

the citizens of your country participate. But when such activities take place between the citizens of two or more countries then we call it economic relationship between these countries. Take the example of India. Since we are citizens of India, we call India our domestic country and rest of the world consists of foreign countries. So when there is economic relationship between India and other countries then we mean that Indian citizens are exchanging goods and services (both buying and selling) with citizens of foreign countries and going to foreign countries to do jobs and business. Similarly, foreign citizens are coming to India to do jobs and business etc. Accordingly some examples of Economic relationship can be given as follows:

1. Selling of goods and services by the domestic citizens to citizens in a foreign country. This is called exports.
2. Buying of goods and services by domestic citizens from the foreign countries. This is called imports.
3. Sending gifts to some body in a foreign country and receiving the same from foreign countries.
4. Sending money to and receiving money from foreign countries respectively.
5. Visits made by tourists, business persons and government delegation.

When a country has economic relationship with other countries, then it is called an open economy.

22.2 IMPORTANCE OF TRADE

Examples (i) and (ii) above are part of “trade”. People buy and sell goods and services through markets inside the country. When the same thing takes place between citizens of various countries, we called it international trade.

Exports and imports are international trade in goods and services.

Trading activities are integral part of the economy. It is very difficult to look at life without trade in the economy. Goods are constantly transported from one place to other by trains, trucks, etc inside the country. Similarly aero planes, ships are used to transport goods between countries.

The aim is to provide the goods or service to the person who wants to pay for it, no matter, wherever the buyer resides. It means that distribution of goods or service is possible because of trade. That is why trade is so important. We can think of many other advantages of trade as given below.

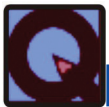
1. Through trade people get a lot of varieties of goods and services. During summer you would always like to have cold drinks. Some of the cold drinks available in the market are coca cola, pepsi cola etc. Do you know from where coca cola came to India first? It was manufactured in USA which is far away from India. Now of course coca cola plants are established in India. But it is still a foreign



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company. Similarly Indian pickles are sold abroad in many countries by Indian business men. There are many examples of Indian goods being consumed by foreign people and foreign goods consumed by Indian people for satisfaction of wants.

2. Trade encourages production of new goods and services. Through trade sellers and buyers interact with each other. So sellers know the choice and preferences of the buyers and accordingly provide the goods and services for consumption.
3. People of different countries meet and interact through trade. Accordingly people of one country can know the culture, tradition, language etc. of another country.
4. Because of international trade it is possible to produce the goods more efficiently because it leads to specialization. This means goods can be produced at lower cost so that people will get them at lower prices. How? A good may be produced in more than one country. But one country may have better raw materials and technology to produce it. Take for example the case of India. In India spices and cotton etc. are easily cultivated due to climatic and soil conditions. Because of its rich customs, tradition and culture India's handicrafts are world famous. So they are easily produced in India at less cost. Accordingly India can specialize in the production of these goods. Hence other countries can buy these goods from India at cheaper price. Similarly in South Africa diamond are easily available because of the mines existing there. You can get many other such examples. The main thing is that if a country can produce a good with better quality and at lower cost, the country will become efficient in the production of that good and gain by exporting the good to other countries.



INTEXT QUESTIONS 22.1

1. Give one advantage of international trade?
2. What do you mean by export?
3. Define import?

22.3 EXPORT AND IMPORT BY INDIA

India is having economic relationship with many countries in the world. As a result India exports many commodities to foreign countries and imports many commodities from the foreign countries. The countries with which India is engaged in export and import activities are called India's trading partners.

(a) India's Exports

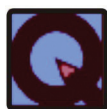
The major items that India exports to different countries are engineering goods, handicrafts, chemicals and allied products, readymade garments, cotton yarn, iron

**Notes**

ore, leather, fish, rice, fruits and vegetables etc. Some of the countries where Indian exports reach, are : France, Germany, UK, USA, Iran, UAE, China, Hongkong, Singapore and some African and Latin American countries.

(b) India's Imports

Petroleum and lubricants are the most important items that India imports from the Oil and Petroleum Exporting Countries (OPEC) such as Iran, UAE, and Saudi Arabia etc. India also imports non-ferrous metals, capital goods and fertilizer. Capital goods include electrical and non-electrical machinery and transport equipment. India's imports come from most of the countries to which it exports its goods and services.

**INTEXT QUESTIONS 22.2**

1. Name two main items of India's exports?
2. Name two items of India's imports?
3. Name two major trading partners of India?

22.4 MEANING OF GLOBALIZATION

Now a days the word globalization is commonly used. The reason is obvious. Today television and internet and mobile phones become easily available. People in remote areas can now talk and keep in touch through mobile phones. Today you can watch India-West-Indies cricket match live on television. You can talk to your friend in USA or Europe through mobile phone. There is no need of sending letters if you want to say something in detail. Getting a letter in USA from India takes at least 3 to 7 days. But through internet you can send e-mail which can reach your friend in seconds.

You can order a new good produced in Germany or Japan through internet and it will reach you in India. Because of these developments we think that the world has become very small and looks like various households staying in one village. We should not forget that this development has not taken place in a few days. The process has been there from a long time. In earlier days individuals or groups used to travel to different countries through sea routes to trade goods and services. Travel and sending of goods became easier with the invention of aero plane and ships. Then governments of different counties started interacting with one another in order to minimize any obstacle that may arise so that citizens of all nations can exchange things without any problem. Technological and scientific developments in the field of transport and communication that you see today have made this process of interaction among citizens of different countries easier now. So we are no longer separate in the world even if we are living separately in different places in different countries. Rather people

have come closer to each other through trade, transport and communication systems. People can consume both domestic and foreign goods, go to foreign countries to do jobs and exchange ideas with foreign citizens, export goods and services to different countries etc.

The different countries of the world seem to be coming closer. This process is known as globalization in simple term.

**Notes**

22.5 COMPARISON OF ECONOMIC DEVELOPMENT IN INDIA, CHINA AND USA

USA is world's one of the most – developed economies. The common thing between India and USA is that they are the two largest democracies in the world i.e. both the countries are governed by the elected representatives of people. The common thing between India and China is that both are part of the Asian continent and are neighbors. Some time back the level of economic development both in India and China was almost similar. Both were developing nations. But in the last few years Chinese economy has been developing very fast. So it is worthwhile to compare these economies. You have already studied Indian economy in previous three lessons. Here, do have a bird's eye view of the economies of USA and China respectively.

22.5.1 Brief account of USA economy

One of the most important features of USA economy is that the private sector plays a major role in production of goods and services. The government does not interfere much in business activities. There are 30 million small business in USA. Out of 500 largest companies in the world, 139 are in USA. About 40 percent of world's richest people stay in USA. American businessmen and corporations have got influence and presence all over the world. Multinational corporations such as ford motors, general electric, coca cola, wall mart etc. have emerged from USA.

USA's agriculture is also very advanced. It is one of the biggest exporters of food grains, such as wheat, corn, fruits and vegetables.

In terms of manufacturing, USA manufacturing output was greater than that of China, India and Brazil combined. Only recently i.e in 2010 China is said to have over taken USA. Petrolueum, steel, automobiles, construction machinery, and agricultural machinery are some of the major manufacturing industries in USA.

Education and health care services are of high quality in USA. 85 percent of children enter public schools in USA AS AGAINST 15 percent in India.

USA is one of the top three exporters of goods and services in the world and biggest importer from rest of the world. Every one knows its currency called US dollar (\$) which is an international currency as it is circulated almost everywhere because of USA's dominance in world trade.



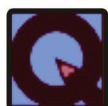
Notes

In spite of its richness USA does have poverty and unemployment. About 16 percent of its population did not have access to good food in 2008. Its unemployment rate in 2010 was 9.9 percent.

22.5.2 The Economy of China

It is said that Chinese economy is now the second largest after USA in the world. Till the 1980s China was not very important in terms of its economic power. Its position was the same as that of India. But after 1980s, China's economy grew very fast because of the economic reforms it pursued. You should know that unlike India and USA China does not have democracy or rule of people. In China one party rules and people do not enjoy freedom of expression. But Chinese government slowly allowed private sector to establish business and produce goods and services in large quantities. As a result China could export large quantities to different countries and earn large amount of foreign money.

Like India China has also adopted a five year plan strategy. Its twelfth five year plan has started recently and its duration is 2011-2015. The first plan period of China was 1953-57. Through planning and strict implementation of economic reforms China is achieving faster economic development. Now China's national income and per capita income are growing faster than India's. During the first half of 2010 China has 10 percent share in the total world exports as compared to only 1.4 percent for India. In the area of controlling its population, China is performing better than India. It is said that India will even overtake China in population in future. Because of its better economic environment China is attracting more money than India from foreign countries towards its industrialization and development of services. Today China's standard of living has improved so much that its poverty ratio fell from 51 percent in 1981 to 2.5 percent in 2005 while India had 27.5 percent of poor population at that time.



INTEXT QUESTIONS 22.3

1. Tell one common economic feature of India and China.
2. Compare India, China and USA with regard to poverty.



WHAT YOU HAVE LEARNT

- Meaning of economic relationship and benefits of international trade between countries.
- Which commodities India exports and imports.

- The meaning of globalization at elementary level.
- The status of the economies of USA and China respectively so that you can compare them with India which is given in earlier lessons.

**TERMINAL EXERCISE**

1. Explain the benefits of international trade?
2. Give examples of India's trading partners and some of the commodities it trades?
3. Write a short note on USA economy?
4. Write a short note on Chinese economy?

**ANSWERS TO INTEXT QUESTIONS****Intext Questions 22.1**

1. International trade leads to specialization and efficient production of goods and services.
2. Selling goods and services to rest of the world is called export.
3. Buying goods and services from rest of the world is called import.

Intext Questions 22.2

1. engineering goods, handicrafts
2. Petroleum, electrical machinery
3. USA, UAE

Intext Questions 22.3

1. Five year planning
2. In 2005, India's poverty ratio was 27.5 percent while that of China was only 2.5 percent. In USA 16 percent of its population did not have access to food in 2008.

**Notes**

MODULE-8

CONTEMPORARY ECONOMIC ISSUES

- 23. Environment and Sustainable Development
- 24. Consumer Awareness



23



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ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

In the earlier lessons, you have learnt about economic development and how it can improve the quality of life of people. Goods and services are produced to satisfy human wants. The production of various goods and services requires resources- both man-made and natural. As more goods are produced, more resources are used up. The process of production not only uses up resources, but also causes other problems. For example, when goods are produced in factories, the factories emit smoke which pollutes the air we breathe. Similarly, sewage discharged into rivers pollutes our drinking water. As the demand for goods and services keeps increasing, so does the demand for resources. As a result, resources are getting depleted and also being damaged irreparably. As we cut down forests, pollute the air and rivers, and mine minerals from the earth, we destroy nature. Such a destruction of nature is adversely affecting human life.



OBJECTIVES

After completing this lesson, you will be able to:

- *know the definition and significance of environment;*
- *understand the various environmental problems such as pollution, degradation, depletion of resources;*
- *explain the meaning of sustainable development;*
- *tell the ways to achieve sustainable development.*

23.1 THE ENVIRONMENT: DEFINITION AND SIGNIFICANCE

The **environment** encompasses all living and non-living things occurring naturally on Earth or some region thereof. It includes all the biotic and abiotic factors that



influence each other in nature. All the living elements like birds, animals, plants, forests, etc. comprise the **biotic** elements. On the other hand, everything non-living like air, water, rocks, sun, etc. are examples of the **abiotic** component of the environment. A study of the environment is thus a study of the inter-relationship between the abiotic and the biotic components of the environment.

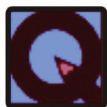
Significance of the Environment

1. The environment provides various resources to man-both renewable and non-renewable. Renewable resources are those resources which are replenished easily over time, and hence can be used without the possibility of the resource becoming depleted or exhausted. Examples of **renewable** resources include trees in the forests, fishes in the ocean, etc. **Non-renewable** resources, on the other hand, are those resources which can get exhausted or depleted over time as they are used up. Examples of non-renewable resources include fossil fuels and minerals like petroleum, natural gas, coal, etc. Thus these resources need to be used carefully, while keeping in mind the requirements of the future generations.

Do you know?

Based on current projections, within around 50- 75 years, all the world's extractable coal, oil, natural gas, and uranium-235 deposits- that is, all our current energy sources-would have been used up.

2. The environment is also an absorber of harmful wastes and byproducts, that is, it assimilates waste products. The smoke from chimneys and exhaust pipes of vehicles, sewage from cities and towns, industrial effluents are all absorbed by the environment. These harmful wastes and byproducts are absorbed, cleaned and recycled by various natural processes.
3. The environment also sustains life by providing bio diversity. The genetic variations created by the pressures exerted by the environment on various life forms allows those life forms to adapt, evolve and produce genetic variations which can survive in harsh environments. Hence the environment produces and maintains relationships between different life forms and the abiotic components and sustains life. It is therefore important to preserve these life forms by preserving the environment.
4. Apart from the biological significance of the environment, the environment is also important from the aesthetic point of view. It provides scenery and landscapes to us which are priceless to us, and often play an important role in man's culture around the world.

**INTEXT QUESTIONS 23.1**

1. What is meant by 'environment'?
2. Name two main components of environment.
3. Name two renewable and two non-renewable resources.

23.2 ENVIRONMENTAL PROBLEMS

With the advance of human civilization, human wants have expanded and diversified. This has led to a rapid depletion of natural resources. Many resources are being used up at a rapid rate, which has caused over-utilization and depletion of many resources. With the rapid use of resources, a lot of accompanying environmental problems has cropped up. These include pollution of air and water, degradation of natural resources like soil and forests, and the depletion of non-renewable resources like fossil fuels and minerals. In the sections below you will read about these environmental problems and understand the significance of their impact on the economy and the planet earth.

23.2.1 Pollution

The term **pollution** refers to an undesirable change in the quality of a natural resource or the natural ecosystem. The change may be harmful to life immediately or over a long period of time. Thus, pollution adversely affects the health of living beings.

Pollution is caused by a pollutant. A **pollutant** is a waste material or substance which causes an undesirable change in a natural resource or ecosystem. Smoke, dust and poisonous gases in the atmosphere and industrial effluents and sewage from cities in water are some common examples of pollutants. Further, human activities also generate heat and create noise or harm living beings in a multitude of other ways.

23.2.1.1 Air pollution

Air pollution is the introduction of chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or cause damage to the natural environment or built environment, into the atmosphere. Major air pollutants include sulphur oxides, nitrogen oxides, carbon monoxide, carbon dioxide (which is also a major greenhouse gas), toxic metals, and particulate matter.

Do you know?

The World Health Organization states that 2.4 million people die each year from causes directly attributable to air pollution. Worldwide more deaths per year are linked to air pollution than to automobile accidents.

**Notes**



Notes

Effects of air pollution:

The health effects caused by air pollution may include difficulty in breathing, wheezing, coughing and aggravation of existing respiratory and cardiac conditions. These effects can result in increased medication, increased doctor or emergency room visits, more hospital admissions and premature death.

Sources of Air Pollution

Major **artificial sources** (caused by human beings) of air pollution include:

- Smoke from power plants, factories, incinerators, furnaces, etc.
- Exhaust of vehicles and automobiles like cars, buses, bikes, airplanes, ships, etc.
- Chemicals like pesticides and fertilizers and dust from farming and other agricultural practices.
- Fumes from paint, hair spray, varnish, aerosol sprays and other solvents.
- Waste deposition in landfills, which generates methane, which also contributes to global warming.

Major **natural sources** of air pollution include:

- Dust from natural sources, usually barren land.
- Methane, emitted by the digestion of food by animals, for example cattle.
- Smoke, particulate matter and carbon monoxide from wildfires.
- Volcanic activity, which produce sulphur, chlorine, and ash particulates.

23.2.1.2 Water pollution

Water pollution is the contamination of water bodies (example lakes, rivers, oceans and groundwater) by pollutants discharged directly or indirectly into water bodies without adequate treatment to remove harmful compounds. Major sources of water pollution include industrial chemicals and effluents, nutrients, waste water, sewage, etc.

Effects of water pollution:

A number of waterborne diseases such as cholera, typhoid, diarrhea etc. are produced by the pathogens present in polluted water, affecting human beings and animals alike. Water Pollution affects the chemistry of water. The pollutants, including toxic chemicals can alter the acidity, conductivity and temperature of water. It also kills life that inhabits water-based ecosystems like fish, birds, plants, etc. and hence disturbs the natural food-cycle, which causes instability in ecosystems.



Notes

Sources of Water Pollution

Major **sources** of water pollution include:

- Discharge from sewage treatment plants and sewage pipes from cities and towns.
- Industrial effluents released by factories into water bodies.
- Chemicals like pesticides and fertilizers from agricultural farms which constitute runoff from farms.
- Contaminated storm water from storm water drains in cities.
- Release of heated or radioactive water by power plants into water.
- Oil spills and leakages from tankers and oil rigs.
- Growth of algae in water bodies.

23.2.1.3 Noise pollution

Noise pollution is an excessive and displeasing environmental noise that disrupts the activity or balance of human or animal life.

Effects of noise pollution:

Noise pollution in the form of unwanted sound can damage physiological and psychological health. Noise pollution can cause annoyance and aggression, hypertension, high stress levels, hearing loss, sleep disturbances, and other harmful effects. Chronic exposure to noise may cause noise-induced hearing loss. People exposed to significant occupational noise demonstrate significantly reduced hearing sensitivity compared to non-exposed people. High and moderately-high noise levels can contribute to cardiovascular effects, a rise in blood pressure, and an increase in stress thus affecting the physical and mental health of people.

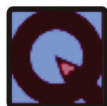
Sources of Noise Pollution

Major **sources** of noise pollution include:

- Vehicular traffic, like cars, buses, airplanes, trains etc.
- Industrial processes like stone crushing, making of steel plates, sawing, printing, etc.
- Construction work on roads, bridges, buildings, etc.
- Various noises from houses like stereos, televisions, etc.
- Consumer products like air conditioners, refrigerators, etc.



In the above section you have read about different types of pollution, their sources and effects. Think of different kinds of pollution which affect you and your family and make a list of them. What are the measures you or your family and community can take to reduce the harmful effects of pollution?



INTEXT QUESTIONS 23.2

1. What is a pollutant?
2. Name any two sources of air pollution.
3. Name two harmful affects of water pollution.
4. What is meant by noise pollution?

23.2.2 Degradation

In the following sections you will read about two different kinds of degradation- soil and habitat degradation.

23.2.2.1 Soil degradation

Soil degradation refers to an undesirable or deleterious change or disturbance in the quality of the soil. It leads to a change in the species of plants and animals in an area, and often leads to a loss of quality and productivity of the soil in an area. The soil loses its natural nutrients, minerals and organic matter (known as **humus**) and disrupts the natural balance of the natural ecosystem. The soil hence becomes unfit or unsuitable for growing plants and crops.

Causes of Soil Degradation

Major **causes** of soil degradation include:

- Excessive use of chemical fertilizers and pesticides, which causes soil acidification, increases salinity and alkalinity of the soil, reduces organic matter, and increases levels of organic pollutants and toxins and heavy metals (like Cadmium, Lead, etc.).
- Waterlogging caused by excessive irrigation and failure to subsequently drain the water from the fields causes an increase in salt content of the soil, making it unfit for growing plants, as well as serves as a breeding ground for mosquitos.
- Overgrazing by animals in fields, which reduces plant cover and leaves the soil prone to erosion.

**Do you know?**

Damage from soil erosion worldwide is estimated to be \$400 billion per year (around Rs 20 lakh crores per year). As a result of erosion over the past 40 years, 30 percent of the world's arable land has become unproductive.

Effects of soil degradation

Soil degradation can significantly reduce the yield potential of soil for growing crops. The presence of pollutants in soil also leads to pollution of groundwater, which has increased levels of nutrients, organic toxins, and heavy metals. Also, degradation of soil causes the soil to lose its green cover, and hence reduces biodiversity in that region, as the growth of plants in an area is essential for animals to survive and for the food chain to function normally. This also leads to extinction of plant and animal species. Soil degradation also leads to desertification, that is, the land gradually gets converted into a desert which becomes unfit for cultivation or habitation.

23.2.2.2 Habitat degradation

Habitat degradation refers to the process in which habitats lose their normal functioning or quality to support native life due to human activities. Habitat degradation leads to a reduced **carrying capacity** of that area, that is, the number of animals or plants of a particular species the area can support. This leads to a reduced population of various species in that area (or habitat) which in turn leads to an imbalance in the natural food chain and ecosystem. This imbalance can lead to the mass extinction of many plants and animals on our planet.

Causes of Habitat Degradation

Major **causes** of habitat degradation:

- Deforestation and wood extraction for the timber industry.
- Conversion of forest land into agricultural land
- Urban expansion of natural habitats
- Soil erosion and desertification, which can lead to whole forests degenerating into deserts.
- Slashing or slash-and-burn agricultural methods, where forests are burnt and crops grown using the ashes as a natural fertilizer.

Effects of habitat degradation:

Habitat destruction vastly increases an area's vulnerability to natural disasters like flood and drought, crop failure, spread of disease, and water contamination. Agricultural land too suffers from the destruction of the surrounding landscape.



Over the past 50 years, the destruction of habitat surrounding agricultural land has degraded approximately 40% of agricultural land worldwide through erosion, nutrient depletion, pollution, etc. Habitat degradation has also led to the loss of many valuable ecosystem services like the nitrogen, phosphorus, sulphur and carbon cycles, which in turn has increased the frequency and severity of acid rain, algal blooms, and fish kills in rivers and oceans and contributed tremendously to global climate change. It also leads to loss of biodiversity and species extinction, which upsets the natural balance and may alter the ecosystem. Aesthetic uses such as bird watching, recreational uses like hunting and fishing, and ecotourism are also affected adversely by habitat degradation, as most of them rely upon virtually undisturbed habitat.

Do you know?

If the current rate of deforestation continues, there will only be 10% of the world's tropical forests left by 2030, and another 10% in a degraded state.

23.2.3 Depletion of Resources

Resource depletion is an economic term referring to the exhaustion of raw materials in an area or region. Resource depletion is most commonly used in reference to farming, fishing and mining. Today's economy is largely based on fossil fuels, minerals and oil. The value of these resources has increased over time as demand for them has increased rapidly, while at the same time the supplies of these resources have decreased considerably due to over-exploitation.

Many resources which are so essential in our lives—example petroleum, natural gas, coal, uranium-235, and gold—are becoming increasingly difficult to find. The reserves of many natural resources have been diminishing rapidly in the last 100-150 years, as the human population has been increasing significantly and hence the demand for the resources has been increasing. The search for new reserves of these resources is expensive, and often does not yield any new mines. The earth is quickly running out of resources, as we are putting too large a burden on it, caused due to overpopulation.

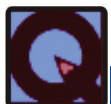
Alongside the depletion of the resources, many environmental effects are also caused by the over-exploitation of mineral resources. Global warming, air, water and soil pollution, loss of biodiversity all accompany mining and drilling projects and extraction and purification procedures for these resources.

To stop the harmful effects of resource depletion and other environmental problems, we need to carefully monitor resources usage and check the environmental effects of resource depletion. Many agencies around the world like UNEP (United Nations Environment Programme), EPA (Environment Protection Agency), IPCC (Intergovernmental Panel on Climate Change), and in India the MEF (Ministry of Environment and Forests) along with many NGOs worldwide actively advocate the



protection of the environment throughout the world, and implement acts and laws to protect the environment and prevent the overexploitation of resources.

The careful usage of the limited resources available to human beings, which is now being advocated as an essential solution to the worldwide environmental crisis that threatens our very existence, is also referred to as **sustainable development**, which is explained in detail along with its significance in the following pages of this chapter.



INTEXT QUESTIONS 23.3

1. What is meant by degradation of soil.
2. What are two different kinds of degradation of environment?

23.3 SUSTAINABLE DEVELOPMENT

Sustainable Development is a pattern of resource use that aims to meet human needs while preserving the environment so that these needs can be met not only in the present, but also for generations to come. Sustainable development has been defined in many ways, but the most frequently quoted definition is from *Our Common Future*, also known as the *Brundtland Report*. According to this definition, “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

This definition emphasizes two important things. One, that natural resources are vital to every one of us- even to the unborn future generations. Two, that it is a long term concept. It does not narrowly focus only on the present economic growth but it also takes into account the future economic growth.

In the above section you have read about different resources like air, water, minerals etc. which are essential to meet our needs. If we pollute the air and water sources and deplete the non-renewable resources like coal, petroleum, natural gas etc. then future generations would suffer. The concept of sustainable development therefore emphasizes that we have no right to deny the right to life to future generations. The world’s stock of resources is not only meant for present generation but also for future generations. That is why it is our responsibility to use the environment judiciously to meet our needs of today, then bequeath them to our children and grandchildren (the future generations) so that they are able to meet their own needs as well.

Sustainable development, is, therefore, a kind of development that takes into account the needs of the economy, and the environment without compromising either of the aspects. If the economic development is **sustainable** then the present use of natural resources will not limit us from their use in the future. Thus sustainable development tells us that development must be of a kind which can take care of our needs as well as the needs of future generations. That makes it a long term concept.



Notes

23.4 HOW CAN WE ACHIEVE SUSTAINABLE DEVELOPMENT?

In this chapter we have learnt about how the growth of population and mankind's quest for economic development and a better quality of life in the last two centuries has caused a lot of problems to our environment and the planet earth. The problems we focused on were pollution, degradation and depletion of resources.

We also learnt about the meaning of sustainable development and how important it is to keep in mind the development and wellbeing of future generations. But how do we **achieve** sustainable development? The environmental crisis we face is serious and pressing. However, by taking swift and decisive action, we can tide over the crisis.

All definitions of sustainable development require that we see the world as a whole. You have already understood that the concept of sustainable development is a long-term concept that gives equal importance to development of future generations also. Sustainable development also emphasizes that actions and measures taken in one part of the world has consequences for people in other parts of the world. For development to be sustainable we must think of development not only for our community or village or country but for the world as a whole. To give an example, if factories emit smoke in North America, then that air pollution from North America affects air quality in Asia. Similarly, pesticides sprayed in Bangladesh could harm fish stocks off the coast of West Bengal.

Measures for sustainable development therefore focus on policies that must be adopted in the whole world. Some of these policies are implemented at the level of governments of individual countries while others require coordination at the international level.

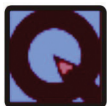
Some examples of ways in which we can contribute to sustainable development are given below.

- **Resources**- finding substitutes for nonrenewable resources and using renewable resources judiciously. Solar energy, wind energy, hydropower, tidal energy and biofuels (like gobar gas) are being widely and increasingly used as substitutes for energy sources like coal, oil and natural gas that are being depleted rapidly. In many villages of India, solar energy appliances like solar cookers, solar lanterns and solar heaters are being encouraged and promoted by the government. In coastal areas the wind energy harnessed by windmills is being used to generate electricity.
- **Recycling** - to use again, to re-process. To make paper we need wood pulp which comes from trees. Therefore by recycling used paper we can contribute to saving trees from being cut down. Water is a scarce resource yet we do not use water judiciously. We can reuse rainwater by rainwater harvesting.



- **Reduce** - to use less or economize. Our consumption should be restrained to meeting our basic needs. We can walk instead of driving to the local market or climb using stairs instead of taking a lift, switch off fans and lights that we don't need.

As an exercise, consider how you could promote sustainable development in your local community. What can you do to improve your local environment? Write down how your actions can help improve the environment and the lives of people who live in other parts of the world.



INTEXT QUESTIONS 23.4

1. What do you mean by sustainable development?
2. Give one example of recycling of products for sustainable development of the environment.



WHAT YOU HAVE LEARNT

- The environment includes all the biotic and abiotic factors that influence each other in nature.
- Resources may be renewable like forests, and non-renewable like petroleum.
- Pollution is an undesirable change in the quality of a natural resource or natural eco-system.
- Air pollution causes difficulty in breathing, coughing etc. water pollution causes water borne diseases like cholera, typhoid, diarrhea etc.
- Noise pollution can cause hypertension, hearing loss, etc.
- Soil degradation reduces the yield potential of soil for growing crops.
- Resource depletion refers to the exhaustion of raw material in an area or region.
- Sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
- We can contribute to sustainable development
 - (i) By finding substitute for non-renewable resources and using renewable resources judiciously.
 - (ii) By recycling the used products
 - (iii) By restraining our consumption.



Notes



TERMINAL EXERCISE

1. Distinguish between renewable and non-renewable resources. Give at least two examples of each.
2. With the advance of human civilization many environmental problems have cropped up. Do you agree? Give reasons for your answer.
3. What is meant by air pollution. Name any three major sources of air pollution. What are its harmful effects?
4. What is water pollution? Mention major sources of water pollution. What are its harmful effects.
5. What is noise pollution? Name its major sources. Describe its harmful effects.
6. What is meant by soil degradation? What are its major causes? Write two harmful effects of soil degradation.
7. What do you mean by habitat degradation? Mention its major causes. What are harmful effects of habitat degradation?
8. What is meant by depletion of resources? Give two examples of resources whose reserves have been diminishing rapidly in the last 100-150 years.
9. What is meant by sustainable development? Suggest two ways by which we can contribute to sustainable development.



ANSWERS TO INTEXT QUESTIONS

Intext Questions 23.1

1. The environment encompasses all living and non-living things occurring naturally on earth or some region thereof.
2. (i) Biotic element (ii) Abiotic elements
3. Renewable resources: Forest, water
Non-renewable : Petroleum, coal

Intext Questions 23.2

1. A pollutant is waste material or substance which causes an undesirable change in natural resource or eco-system.

**Notes**

2. (i) smoke from factories
(ii) Exhaust of automobiles
3. (i) Causes diseases like cholera, typhoid etc.
(ii) kills aquatic life
4. Excessive and displeasing environmental noise that disrupts the activity or balance of humans and animal life, is noise pollution.

Intext Questions 23.3

1. Soil degradation refers to a undesirable or deleberious change or disturbance in the quality of soil.
2. (i) Soil degradation
(ii) Habitat degradation

Intext Questions 23.4

1. Sustainable development is a pattern of resource use that aims to meet human needs with preserving the environment so that these needs can be met not only in the present, but also for generations to come.
2. We can reuse rain water by rain water harvesting



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24

CONSUMER AWARENESS

To satisfy various wants people purchase goods and services by paying price. But what to do if the goods and services bought are found out to be bad in quality or unreasonably priced or measured less in quantity etc. In such situations the consumers, instead of getting satisfaction, feel cheated by the sellers who have sold the goods and services. They also feel that they should be properly compensated for the loss. So there should be a system to redress such issues. On the other hand consumers should also realize that they do have responsibilities not just rights.



OBJECTIVES

After completing this lesson, you will be able to:

- *know the meaning of a consumer, goods and services and consumer awareness;*
- *understand the need for consumer awareness;*
- *explain the consumer redressal system in India;*
- *realise the rights and responsibilities of consumers;*
- *understand the procedures for filing the complaints in the consumer courts;*
- *know the challenges of consumers' movement in India.*

24.1 SOME DEFINITIONS

First let us know the meaning of - a consumer, goods and services and consumer awareness.

- **Who is a consumer?**

To begin with, let us know the definition of a consumer. A consumer is the buyer of goods and services. The user of goods and services with the permission of the buyer is also treated as a consumer. But a person is not a consumer if he/she purchases goods and services for resale purpose.



Notes

- **What are goods and services?**

Goods are those products which are manufactured or produced and sold to consumers through wholesalers and retailers. Service means service of any description which is made available to the potential user with respect to the provision of facilities in connection with banking, finance, insurance, transport, supply of electrical or other energy, housing, construction, water supply, health, entertainment, amusement etc. It does not include any service rendered free of charge or under a contract of personal service.

- **Consumer Awareness**

Consumer awareness refers to the combination of the following :

- The knowledge of the product purchased by the consumers in terms of its quality. For example the consumer should know whether the product is good for health or not, whether the product is free of creating any environmental hazard or not etc.
- The education about the various types of hazards and problems associated with marketing of a product - For example, one way of marketing a product is advertisement through news papers, television etc. Consumers should have proper education about the bad effects of advertisement. They must also verify the contents of the advertisement.
- The knowledge about 'Consumer Rights' - This means that, first, the consumer must know that he/she has the right to get the right kind of product. Secondly, if the product is found out to be faulty in some manner, the consumer should have knowledge of claiming compensation as per the law of the land.
- The knowledge about consumer's own responsibilities- This implies that consumers should not indulge in wasteful and unnecessary consumption.

24.2 NEED FOR CONSUMER AWARENESS

The market today is flooded with very large number as well as varieties of goods and services. The number of producers and final sellers of the commodities have also increased many folds. So it has become very difficult to know as to who is a genuine producer or seller? It is practically not possible for consumers to personally come in contact with a producer or seller. Moreover in the age of advanced information technology the physical distance between consumer and producer/seller has also increased, since consumers can get their commodities at door step by booking orders over telephone or through internet etc. Similarly from among large varieties of commodities, it has become very difficult to know as to which one is genuine? People think that a product which has appeared in some advertisement must be good or the



producer whose name is known through advertisement must be selling the right product. But this may not be true always. Much information is deliberately hidden in certain advertisements to mislead the consumers.

In case of packed food products and medicines, there is an expiry date which implies that the particular product must be consumed before that date and not at all after that date. This information is very important because it involves the health of the consumer. Some times it so happens that either such information is not provided or the seller deliberately did not give the information since the consumer did not ask for it or notice the inscription written on the product.

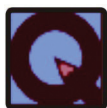
It also happens many times that a consumer buys goods and services without taking the bill or the seller does not provide the bill. This is done to avoid paying tax on the product to the government. Such a tax is value added tax (VAT) i.e. a type of tax that is place on a product whenever value is added at a stage of production and at final sale. If this tax is included then price of the product will be higher because of the tax and accordingly it will be acknowledged by providing the bill. But in order to attract the consumer by selling the product at a lower price, the seller deducts the tax and so does not provide the bill. Just because the price is less the consumer also does not bother to ask for the bill. Such practice creates two serious problems. One, the government is deprived of its tax revenue and two, the consumer may suffer if the product comes out to be faulty and he/she cannot even return the product or file a complaint since there is no bill to give proof of purchase.

Another major issue is that the consumers are not united. Producers have become stronger and organised because there are Producers' and Traders' Associations to protect their interest. But the buyers are still weak and unorganised. As a result the buyers are duped and deceived quite often.

Because of the above arguments it is very important for consumers to protect themselves from the unfair trade practices of the traders and service providers. They need to be aware of their rights as consumers and use them promptly.

It should be noted that consumer awareness is not just only about consumers' rights. It is a well known fact that many consumers around the world have been indulging in mindless and wasteful consumption because of their money power. This has divided the society into rich consumers and the poor. Similarly many consumers are also not bothered about the safe disposal of wastes after consumption is over which causes environmental pollution. By agreeing to pay a lower price for the product without asking for the bill, many consumers indirectly help the sellers to avoid paying tax to the government. Hence there is also need for consumer awareness to educate the consumers about their responsibilities.

Consumers also need to act more responsibly and join hands with the government.



INTEXT QUESTIONS 24.1

1. Who is not a consumer?
2. Why must the consumers take the bill on purchase of a product?
3. What is VAT?



Notes

24.3 CONSUMER REDRESSAL SYSTEM IN INDIA

There is legal and administrative machinery working in the field of consumer education in our country. It is important for you to understand it.

Consumer redressal system is a system under which the consumers can file a complaint in a consumer court and demand justice when they are cheated by the sellers or manufacturers of the commodity or service they buy. **It comprises of the Laws to protect the interest of the consumers and the Institutions to enforce the laws to uphold consumers' rights.** Thanks to the government, we have consumer laws made through legislations in our country with a special focus on consumer education. The purpose is to help the people understand their rights and responsibilities as consumers and to redress their grievance. There is also existence of Institutions in the form of government departments and consumer courts to deal with the grievances of the affected consumers. Let us discuss them below.

24.3.1 Government Legislations

We have had several government legislations in our country even before independence to protect the rights of the consumers. But Consumer Protection Act 1986 (CPA) is the most important one and gives you as a consumer all the support and guidance against violation of your rights. CPA is specifically designed to protect consumer interest.

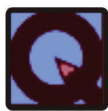
There are a couple of other legislations aimed at providing consumer protection, enacted after independence, like Prevention of food adulteration Act (PFA) 1954, the Essential Commodities Act, 1955 (ECA) and the Standard of Weights and Measures Act (SWMA) of 1976.

The CPA was enacted with the objective of providing 'cheap', 'simple' and 'quick' justice to the millions of consumers in the country. It ensures justice which is less formal, involves less paperwork, cuts delays and is less expensive. CPA applies to all goods and services, unless specifically exempted. It covers the private, public and cooperative sectors. It also empowers a consumer to haul up municipal authorities in consumer courts if they fail to provide all the services ranging from street lighting and drinking water to drainage and health.



Among other measures included in CPA some recent ones are:

- Consumers are allowed to decide where they want to seek redressal.
- A company cannot insist on being liable to be tried only in a court of its choice.
- Consumers are allowed to sue service providers of a company for passing on their personal information to salespersons e.g. banks, insurance company etc.
- Real estate developers are classified as traders and liable to be tried in a consumer court.
- Oversees agencies operating through e-commerce sites on the internet or telemarketing are not allowed to sell their products unless they maintain an office in India. They have to organise the inspection of goods prior to purchase, or refund goods within 30 days.
- Officials and stakeholders like state government departments of post and telecom, passport offices, municipal services, Central Government Health Scheme (CGHS) and railways are demanding exemption from the Act fearing, they will have to face a barrage of litigation.



INTEXT QUESTIONS 24.2

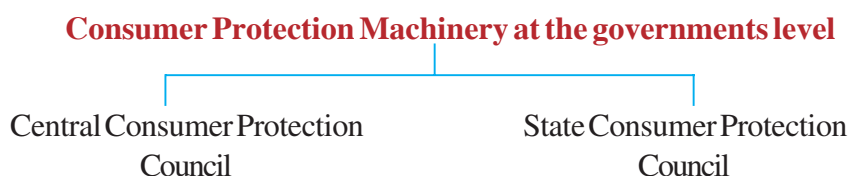
1. Give the full form of CPA, ECA and SWMA?
2. How can a foreign agency sell its product in India?

24.3.2 Institutions to Deal with Consumers' Grievances

The citizens of India have an Institutional machinery, to deal with consumers' grievances, working at all levels: national, state and district. There are two types of institutions- (i) Government Councils and (ii) Consumer Courts. Besides this there are also several Non-Governmental Organizations (NGOs) registered under the government law which provide various kinds of support to the aggrieved consumers.

(i) Government Councils

Read the following flow chart to know the government councils working at national and state levels.

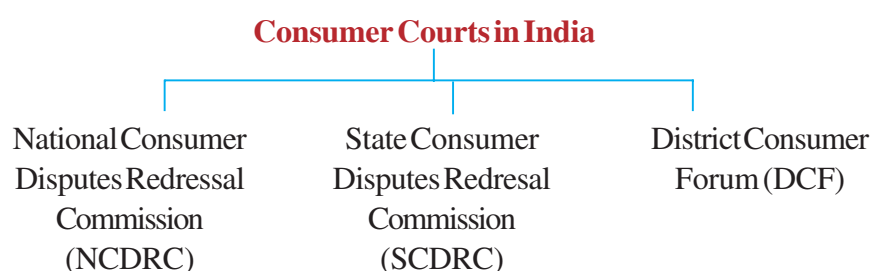




As shown in the chart there is a Central Consumer Protection Council (CCPC) at the National Level which is headed by a Central Minister in-charge of the Consumer Affairs in the Central Government at New Delhi. At the State Level there is a State Consumer Protection Council (SCPC) in each state of India which is headed by a State Minister-in-charge of the Consumer Affairs in the State Government.

Consumer Courts

Read the following flow chart to know the types of Consumer Courts working at national and state and district levels.



As given in the chart, there are three layers of Consumer Courts in India. At the bottom is the District Consumer Forum (DCF) at the district level in the state. There are 604 District Forums in the country now.

At the mid level there is State Consumer Disputes Redressal Commission (SCDRC). There are 35 State Commissions in the country.

Finally at the top there is an apex body known as National Consumer Disputes Redressal Commission (NCDRC) working hand-in-hand to provide cheap, speedy and simple redressal to consumer disputes in the country.

A Consumer Court is quasi-judicial in nature and is directly accountable to the people. The central and the state governments are responsible for making policies with respect to the working of these courts.

24.3.3 Redressal Mechanism

Now the question arises- How a consumer who feels cheated can get justice or relief in the form of compensations? For this he or she can approach any consumer court by filing a written complaint on his/her own or through a lawyer. The particular court that he/she must approach depends on the value of the commodity. In case of any product or in respect of a service valuing up to Rs. 20 lakhs the affected consumer can file a written complaint before the District Consumer Forums. If the value is up to Rs. 1 crore, then he/she has to approach the State Commission. Finally, for value above Rs. 1 crore, the consumer should approach the National Commission for grant of relief. According to CPA the relief should be given within 90-150 days and if a consumer is not satisfied by the decision of the District Forum he/she can challenge the same before the State



Commissions. If still not satisfied with the order of the State Commission, the consumer can go to the National Commission.

24.3.4 What You Need To Do? How to file a Complaint?

For filing a complaint, the aggrieved consumer must always keep the cash memo, receipt or bill of the product he/she has purchased. The format to file a complaint is located on the booklet provided by consumer protection Act. Then the person must select the proper category under which he/she is filing the complaint. These categories are - unfair trade practice, deficiency of service etc. Then the nature of the complaint needs to be explained in simple words. The consumer should be clear about the fault and what he/she wants as a remedy i.e a replacement or a refund or compensation in case of a service. The documents like the receipt or other evidences must be attached along with the complaint. There has to be three copies of the entire set; one for the complainant, one for the other party against whom the complaint has been made and one for the consumer court. Some nominal filing fees have to be paid to the court by the complainant in the form of a demand draft.

It should be noted that a complaint should be filed within 2 years of the date on which the defect occurs. This is not dependent on the purchase date. The affected consumer can either appear in person, send a representative or a lawyer or even a letter. In case, a complainant has died, his legal heirs can go to the court. If not satisfied with decision of the lower court, the person must appeal to a higher court within 30 days of the lower courts' order. Remember, however, that the court can fine you up to Rs. 10,000/- if it thinks that the consumer has filed a frivolous complaint. Check the latest rules by visiting local consumer rights officer or online at the web sites - ncdr.nic.in and core.nic.in.

Now a days communication through internet has become a way of life. So a person can also mail the complaint. The e-mail ID/Website is printed on the cover of the product.

24.3.5 Role of NGOs

In case the producer/company/seller gives the aggrieved party a cold shoulder then the role of non- governmental organisations i.e NGOs becomes very important. One can lodge complaints with some NGO's like Consumer Grievance (www.consumer-grievance.com), Consumer Guidance Society of India (www.cgs_india.org), Common Cause (www.commoncauseindia.org) and Consumer Forum (www.consumer.org.in). NGOs not only help in filing a case but also they provide logistic, manpower and other supports. NGOs also conduct various programmes to educate consumers about their rights and responsibilities.

One can also approach consumer help organisation called Jago Grahak Jago. Almost every newspaper provides complete information about it through advertisement. The online grievance form can be had by visiting the site.

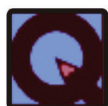


Some other web sites for banking, insurance, tax and telecom related problems are:

- www.banking_ombudsman.rbi.org.in
- www.irdaindia.org
- www.incometaxindia.gov.in
- www.trai.gov.in

24.3.6 The Grounds for Filing a Complaint

The deficiency in a service is one of the grounds for filing a complaint under the Act. The term deficiency has been defined as any fault, imperfection, short coming or inadequacy in the quality, nature and manner of performance which is required to be maintained by or has been undertaken to be performed by a person in pursuance of a contract or otherwise in relation to any service. Compensation has to be paid by the wrong doer for their faulty or defective goods and services.



INTEXT QUESTIONS 24.3

1. Name the government councils which deal with consumer grievances at national and state levels?
2. Name the consumer courts at national and state and district levels?
3. When a complaint can be filed in the consumer court?

24.4 CONSUMERS' RIGHTS

The purchase of goods and services entitles you to certain rights as a consumer. They are as follows.

24.4.1 Right to Information

This right states that sellers and producers should always provide consumers with enough and appropriate information regarding the price, weight, company brand, manufacturing & expiry dates, quality identification marks, ingredients, contact links of the company and so on, to make intelligent and informed product choices. Here is an example from the services sector.

When a customer was trying to find the lowest fare to travel from Delhi to Bangalore, the results of the search indicated airfares from Rs. 1450 onwards. He chose a flight that costed Rs. 1500/- plus taxes. He has no idea what the tax component was. As



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he proceeded with the booking, he got to know that Rs. 1500 is the basic fare and on that, taxes and other fees cost another Rs. 3445 and the final fare will be Rs. 4995.

Now why can't the airlines and portals be more honest and transparent and mention the actual fare clearly at the beginning? Why should they mislead consumers into paying three times more than what they first see? You have to be cautious and get full informations from such service providers who are concealing part of the informations on the basis of which they would later harass the consumers.

24.4.2 Right to Choose

The consumers have the Right to Choose regarding what to buy and what not to buy. Sometimes when you receive a service or purchase a good you cannot do so because you are forced to buy things that you may not wish to. The shopkeeper puts a condition and you are left with no choice. You as a consumer lose your right to choose. Read the case below:

“When Senthil applied for a new gas connection, little did he realise it would be the first step towards a troublesome journey. He walked into the Kumaran Gas Agency for a Bharat Gas cylinder, assuming he would have to pay Rs. 1500/-. Instead he walked out poorer by Rs. 7000/- after being forced to buy products he did not really need such as a pressure cooker, gas lighter; even a packet of detergent. The reason; the agency insisted that it was mandatory for a new customer to acquire the whole ‘kit’. Senthil complained to the Consumer Online Resource and Empowerment Centre (CORE) which sent a mail to the agency. Within a week he was refunded about Rs. 5000/-. Contrary to general belief, this customer is a proof that resolving a grievance need not be long and financially draining”. (India infoline News Service, Mumbai, April 2, 2009)

24.4.3 Right to Safety

This right provides protection against the marketing of goods that are unsafe to the health and life e.g. adulteration in food, medicines, electronics and so on.

24.4.4 Right to be Heard

This right ensures that consumers' interest will be given due consideration in the appropriate forums. This right also empowers the Indian consumers to fearlessly voice their complaints against the defective products and the erring producer/company/seller.

24.4.5 The Right to Seek Redressal

In case of cheating, fraud or any other injustice as explained above the consumer can get compensation for the damage caused by the unfair and exploitative trade practices.



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The redressal courts through their intervention help consumers get justice.

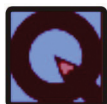
Let us look into some cases where the retailers violate consumer's right to redressal particularly in respect to goods bought during sale.

"A busy doctor bought 3 pairs of trousers at a discounted price of Rs. 2000/- each, during a sale from a well known retail brand from a particular outlet. However to his utter surprise, the fabric just gave way within a few wears, even before it was washed. On his complaint a person in-charge of the company showroom took back one pair and said, it would be sent to the company's quality cell for testing. A year has passed and he has neither heard from the company, nor got back his trousers.

Should the doctor not ask for his money and also for compensation for all the discomfort undergone in purchasing the trousers? The doctor has the right to seek redressal as a consumer."

24.4.6 The Right to Consumer Education

It means to have access to programs and information that help consumers make better decisions before and after purchase. Instructions and guidelines for consumers are issued by the government departments and NGOs. This helps the consumers to take right decision with regard to purchase of a commodity. to bring Trademarks and Logos authentication marks such as ISI, AGMARK, BIS and other educational campaigns done in public interest.



INTEXT QUESTIONS 24.4

Mention the appropriate consumer right to file a complaint with regard to the following

1. A person falling sick after consuming a packaged food item.
2. A seller forcing a buyer to purchase a certain brand of goods and not showing other varieties of goods.
3. Samir wants to buy a computer and wants to know the exact configuration from the seller.
4. Rekha was cheated by a seller and wants to file a complaint.
5. Reshma has gone to a district consumer forum against the local hospital to seek compensation for wrong diagnosis for which she had to spend Rs. 2 lakhs unnecessarily.
6. You have requested the concerned department of Delhi Government to give you booklet on consumer protection act.



24.5 CONSUMERS' RESPONSIBILITIES

Consumer education is not always about rights of the consumers, but also about responsibilities and shouldering them honestly and sincerely. Let us highlight some of the issues here.

24.5.1 Dealing with Advertisements

Advertisements have become a part and parcel of our lives and even if we try we cannot avoid them. Companies are trying to sell their products by making attractive audio-visuals, publishing only that part which may be eye catching and hiding other crucial information and so on. Consumers need to be cautious of such deceptive advertisements. Children are the worst victims. They need to be guided properly.

24.5.2 Buying Quality Certified Products

There are lot of products which are certified by recognised agencies as safe to consume and good in quality. For example the Indian Standard Institute (ISI) conducts quality testing of many consumer goods. If found proper the product is labelled with ISI mark on it. For many food products the quality assurance is certified by seal called AGMARK. Consumers should choose products with ISI mark and AGMARK.

A very important thing before purchasing food products or medicines etc is that the consumer must see the expiry date.

24.5.3 Demanding Bill of the Purchase

Every consumer must demand the bill after purchase of goods and services. The bill is the proof of purchase and can be used to seek justice if the consumer feels cheated after buying the commodity. Through the bill the consumer also ensures that the government receives tax on the product because it is mandatory for the seller to mention the tax amount on the bill. Such act of the consumer makes him/her a responsible citizen of the country.

24.5.4 Being a Green Consumer

A consumer must consume those products which do not cause damage to our environment. Plastic bag is one example which has caused serious damage to the environment. People should use biodegradable products which can easily mix with soil and water after they are disposed off. Similarly people should save electricity, gas etc by judicious use. Consumers are also responsible for automobile pollution in town and cities. They should use public transport system and eco-friendly vehicles.

24.5.5 Consumers as Managers

Consumers can unite together to provide themselves and the community at large of a locality or village some basic needs such as drinking water supply, health, education etc.



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It is the government who acts as the manager for delivery of services. But the government departments are often blamed for inefficient and erratic delivery of such services. So consumers can unite to provide such services. Read the following story:

Consumers as Managers

(A true story from Gujrat)

Gujrat has more than 13000 village 'Pani Samitis' which are acting as managers of service delivery at the village level. The village 'Pani Samitis' are formed in Gram Sabhas through consumers. They manage their in-village systems for water supply service upto the household level, with a strong sense of ownership. They are also testing the quality of water and providing quality assurance upto the consumers' level.

Community engagement for making people as managers has resulted in reducing the cost of delivery, timely and efficient delivery of water, efficient repairs of water supply system, efficient utilization of water resource, innovative tariff mechanisms measures for sustainability of water resources like developing 'check dams', ponds for recharging of ground water leading to conservation of water resources in the area.

In a vast country like India consumers have a responsibility to stand by the government. You can also play a constructive role by joining hands with your local water, electricity, sanitation boards, through the local federations of your locality or Gram Sabhas of your village.

24.6 MAJOR CONCERNS OF CONSUMER MOVEMENT IN INDIA

For successful consumer movement people need to be educated. India is not only highly populated but also culturally diverse and has vast number of illiterates. So bringing consumer awareness is a big task. It is slowly picking up and lots to be done in this regard. Two major concerns are (i) spreading consumer awareness in rural area of India and (ii) timely delivery of justice. Let us briefly discuss them below.

24.6.1 Consumer Awareness in Rural India

On account of the globalization and liberalisation, increase in middle income and high income population in the villages our rural markets are also expanding. So companies are reaching with their products to our rural markets as well. But the rural consumers in India are generally ignorant and illiterate. So they are exploited by the manufacturers, traders and service providers. Rural consumers face problems like fake brands, spurious products, lack warranties and guarantees, imitation, unreasonable pricing, lack of varieties and so on. There is a need for spreading consumer awareness in the rural areas more seriously.



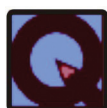
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24.6.2 Timely Delivery of Justice

You know that justice delayed is justice denied. Unlike the civil courts, the consumer courts are quasi-judicial bodies that need to follow a simple, summary procedure for quick disposal of complaints. However repeated adjournments, delays on the part of the state government to fill up the posts of judges and unnecessary technicalities slow down the process of justice for the consumers. Delays often take away the essence of the law. Read the following case that illustrates these points.

Following loss of yield during the sowing season of 1993 due to defective hybrid cotton seeds sold to them, 130 farmers from Maharashtra filed a class action suit seeking compensation. Eventually, they won the case, but it took 14 years during which time ten farmers had died.

The Government amended CPA in 2003 to eliminate such delays. Accordingly, consumer courts are not to give adjournments at all. In exceptional circumstances where it is given, the court has to record the reasons for it in writing and justify it.



INTEXT QUESTIONS 24.5

1. What should you do as a responsible consumer in the following cases
 - (a) To purchase an electric iron from among several brands available
 - (b) You are purchasing bread and fruit jam.
 - (c) The seller gives you the items in a polythene packet.
2. Give two reasons of delay in delivery of justice with respect to consumer grievances?



WHAT YOU HAVE LEARNT

- Consumer awareness includes knowledge of the products purchased along with their effects on health and environment and consumers rights and responsibilities.
- Need for consumer awareness arises due to several reasons such as- bad quality of goods and services sold, selling without providing bill, misleading advertisement, lack of complete information about the product and producer/seller, environmental pollution due to mindless and wasteful consumption etc.
- Consumer redressal system comprises of the Laws to protect the interest of the consumers and the Institutions to enforce the laws to uphold consumers' rights.



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- Consumer Protection Act 1986(CPA) is the most important legislation to protect interest of the consumers.
- Central Consumer Protection Council (CCPC) at the National Level and State Consumer Protection Council (SCPC) at the State Level are government institutions which deal with consumer issues. NGOs also provide help.
- For redressal of grievances there are three layers of Consumer Courts in India with the District Consumer Forum (DCF) at the bottom, State Consumer Disputes Redressal Commission (SCDRC) at the mid level and an apex body known as National Consumer Disputes Redressal Commission (NCDRC) at the top.
- A complaint can be filed by the affected consumer concerned or through a representative or through a letter in a prescribed form giving the nature of complaint and the bill within 2 years of purchase. A nominal fee must also be paid in the court.
- Consumers Rights in India include- Right to Information, Right to Safety, Right to Choose, Right to be Heard, , Right to Redressal and Right to Consumer Education.
- Consumers' Responsibilities include- not to be misled by advertisement, seek complete information for empowerment, checking the expiry date, quality assurance seal, demanding bill, avoiding wasteful and mindless consumption, protecting the environment etc.

**TERMINAL EXERCISE**

1. Why there is a need for consumer awareness?
2. What you must do as an aggrieved consumer to file a complaint?
3. Describe the consumer redressal system in India?
4. Give the provisions of Consumer Protection Act?
5. Discuss in brief the rights of consumers in India?
6. What you must do as a responsible consumer?
7. Explain two major challenges facing consumer movement in India?

**ANSWERS TO INTEXT QUESTIONS****Intext Questions 24.1**

1. A person is not a consumer if he/she purchases goods and services for resale purpose.



2. Because the bill is required to be produced before the consumer court if consumer finds the product to be faulty for which he/she wants to file a complaint. Bill also ensures that tax on the product has been paid to the government.
3. Value Added Tax.

Intext Questions 24.2

1. CPA- Consumer Protection Act
ECA- Essential Commodities Act
SWMA- Standard of Weights and Measures Act
2. By opening an office in India.

Intext Questions 24.3

1. Central Consumer Protection Council (CCPC) at the National Level and State Consumer Protection Council (SCPC) at the State Level.
2. National Consumer Disputes Redressal Commission (NCDRC) at the National Level, State Consumer Disputes Redressal Commission (SCDRC) at the State Level District Consumer Forum (DCF) at the District Level.
3. Within 2 years from the date of purchase of the commodity.

Intext Questions 24.4

1. Right to Safety,
2. Right to Choose
3. Right to Information
4. Right to be Heard
5. Right to Consumer Education.

Intext Questions 24.5

1. (a) look for quality assurance seal such as ISI mark.
(b) Check the expiry date before purchase.
(c) say no to plastic bag and demand a cotton or jute bag.
2. Repeated adjournments and delay in appointment of judges by the government.