

Unit 4

PRODUCTION

Unit Outcomes:

After studying this unit, you will be able to:

- define production.
- explain the terms input, process and output.
- identify the four kinds of factors of production.
- identify the role of entrepreneurship.
- explain variable and fixed costs of production.
- describe the use of considering different location of facilities.

Introduction

Production is an activity of people towards the creation of things, which they need or want. In more elaborative sense production refers to the economic process of converting inputs into outputs. Production uses resources to create a good or service. To produce a given product inputs are required. Inputs are the materials and services used in the production process. At the other end of the process we get outputs. The goods or services that a firm produces for sale are called outputs. The inputs required to produce manufactured products include labor, capital and intermediate inputs such as other manufactured products. In other words inputs to manufactured products include factors of production and purchased intermediate inputs that were originally produced with factors of production by other firms. The factors of production are natural and manmade resources such as land, labour, capital and entrepreneurship. In this unit, the concept of production, production function, factors of production, costs of production and various factors that influence the choice of location of business will be discussed.

Contents of the unit

In order to achieve the above objectives: you will learn the following topics:

- definition of production
- production function
- factors of production
- costs of production
- Location of facilities for production process

4.1 Definition of Production

? Have you visited any manufacturing plant?

Definition: Production is the process of converting inputs into goods and services, which people need or want.

Production is the process of blending and utilizing labor, machines and other inputs together to make goods and services available. The word production often is used in the sense of making things. In fact, for too many persons production is manufacturing. However, manufacturing is simply a special form of production by which raw and semi-finished materials are processed and converted into finished products needed by consumers. In a broader and more basic sense, production is the transformation of inputs (human and physical resources) into outputs desired by consumers. These inputs may be either goods or services. So, although a large restaurant is not considered as a manufacturing unit, it should be noted that it is engaged in production. In fact, there are many service companies engaged in production. Examples of service companies that are engaged in production are printing, cleaning and laundering, health care organizations. The production of services is often called **operations management**.

? Identify the production activities that you are observing in your locality.

Most things that people need or want are not at all available in nature or they are scarce. One does not find pairs of shoes, suits of clothes, loaves of bread, or radios growing in the woods. People do not go to the forest and collect the products mentioned. If people want these things, they must produce them. If needs or wants are to be satisfied, there must be production. Any activity, which helps to satisfy needs and wants, is defined as production. Production therefore, consists of those activities that provide goods and services, that satisfy needs or wants of individuals and for which they are prepared to pay money.

When we say business organization produces pens or cameras, we are not implying that it brought a new material into being. For example the things from which a

camera was made, existed before and will exist long after the camera is worn out. But the camera did not exist before. In this sense we can safely say that the camera was produced. Someone took existing materials (raw materials) and changed them to more useful goods than they had been before. Wood, leather, glass and metal are shaped and combined in such a way that they could satisfy needs or wants that could not have been satisfied by the raw materials taken separately.

The following example makes clear the explanation above. W/ro Konjit Degu, a house wife makes a piece of cake. When she makes the cake, she combines 1 ½ cups of water, 1 cup of raisins, 1 cup of sugar, ½ cup of shortening, ½ teaspoon of cloves, ½ teaspoon of cinnamon, and two bars of chocolate; boils the mixture for 5 minutes; cools and adds 2 cups of flour, 1 teaspoon of baking soda, and ¼ teaspoon of salt. She then bakes the mixture for an hour.



Figure 4-1 Production process

When she is through, she has produced cakes, and everyone who consumes it will agree that it satisfies needs or wants better than the ten ingredients taken separately. This is to say that the utility of the whole is not equal to the sum of the utilities of the separate parts. By combining the ingredients in the proper way there has been an actual creation of utility. Therefore, when we refer to production we mean creation of utility. **Utility** is the satisfaction that consumers receive from items they acquire, activities they engage in or services they use.

The most obvious way in which people add utility to material things is by changing their form. Producers change the forms of things that existed in nature, and put them into a form better able to satisfy wants in a more useful form. Such activities add **FORM UTILITY**.

After milk has been pasteurized and bottled or packed; it has been given the usual kind of form utility, it is still not usually ready for satisfying needs or wants. It must still be taken to a place where the consumer will get it and buy it. If the same milk can be shipped to big cities where the supply of milk is small in proportion to the population, it will be more useful. In big cities the milk can and will satisfy more wants. Thus we have created utilities in the milk, entirely different from any change in form, merely by taking it from one place to another. We would say that we have

created **PLACE UTILITY**. All transportation agencies-railroads, airlines, motor trucks, etc are engaged primarily in adding place utility to goods. Transportation agencies carry the goods from where they are less useful to where they are more useful.

Just as things may be more useful in one place than in another, they may also be more useful at one time than at another. For example Teff stored from a year of heavy crop to a year of crop failure is a case in which things have gained more utility or value without change of form or place. Putting things from time of plenty to time of shortage adds **TIME UTILITY**. Advertising and promotion increases the value of goods and services by increasing public demand for them. Since advertising and promotion stimulate the feeling or awareness of desire to possess and use, they are creating **UTILITY OF POSSESSION**.

Activity: 1

1. What is production?
2. Discuss how people add utility to a given material.
3. Define the following concepts. Support your discussion with examples drawn from your own observation of business practices.
 - Utility of form
 - Place utility
 - Time utility
 - Utility of possession

4.2. Production Function

To produce a given product, we need inputs. Inputs are the materials and services used in production process. Consider for example, a bakery. Inputs for a bakery include raw materials such as flour used to make bread, the land on which the bakery is constructed, the building that houses the bakery, the machines and equipment used to bake bread, the display cases to sell it, and the labour used including bakers, sales persons, and janitors.

At the other ends of the process are outputs (i.e.) the goods or services that the firm produces for sale. A loaf of bread can be an example of an output from bakery. Outputs can be also animal products from farm, leather from a tannery, manufactured shoes from a shoe factory, teff or wheat from a farm, education from a school or medical services from a hospital.

Some of these outputs, however, are intermediate inputs in another production process. For example, farm animal products (hide and skins) are used by a tanner to make leather. The leather is then used to make shoes, which in turn becomes the inputs required by the shoemaker. In this way, outputs become intermediate products in a production chain that may involve several businesses. The firm at the end of the process is then using intermediate inputs that can be traced back to their original sources, although this tracing sometimes requires several steps. These original sources are called **production function**.

Definition: The relationship between inputs and outputs in the production process is called PRODUCTION FUNCTION.

In large firms, the production function is a complex relationship among many combined inputs and outputs. As a production function is the relationship between inputs and outputs in the production process, it describes the maximum level of output associated with every possible combination of inputs in the production process, for a given technology. **Technology** is defined as all the tools and methods available for production.

Production function is based on a given level of technology, by which we mean the technical sophistication of machinery and the production process. As technology changes, the production function also changes to give a new relationship between inputs and outputs. A technological improvement means that output increases for the level of inputs.

A technological improvement is a change in the technical sophistication of production process that results in greater output for the same level of inputs.

As stated above a production function represents the relationship between inputs and outputs for a given level of technology. But technology does change. Historical observation proves that today's goods and services are far different from the goods and services produced century ago. Today we see digital watches, synthetic fibers, electronic computers, airplanes, electric lights, automobiles, and similar products that were unavailable a century ago. Indeed, it would be hard to find a product or production process that has not changed as technology changed. Invention of new products, improvements of old products, or changes in the processes of producing goods and services are what we mean by technological improvements.

Technological improvements occur when new or improved engineering and technical knowledge allows more output to be produced from the same inputs, or when the

same output can be produced with fewer inputs.

The following are examples of technological improvements:

- introduction of new hybrid seeds (mirt zer) increased productivity of corn, wheat and barley farming. The hybrid seeds have been obtained as a result of technological improvements.
- wide-body seats in passenger planes increased the number of passenger-miles per unit of input. If you extend this example to Ethiopian Airlines, Boeing 767 passenger planes have more seats than Boeing 707 passenger planes. This is true because of technological improvement too.

Activity: 2

1. What are inputs? List down examples of inputs.
2. What are outputs? Provide examples.
3. List the three categories of factors of production.
4. What is production function?
5. What is meant by technological improvement? Give some local examples.

4.3 Factors of Production



Can you identify factors of production before reading the next section?

Production cannot take place unless the necessary resources are available. These resources may come originally from nature or may be manufactured products. The manufactured resources that are used as inputs to the production process are called intermediate inputs. Intermediate inputs sometimes back in the chain of proceeding processes came from natural resources. There could be no production of goods of any kind without natural resources. They are basic to production. These natural resources such as land are called the first factors of production or agents of production. By this we mean that production cannot be carried out without the use of natural resources.

Even if natural resources are basic to production, they are not ordinarily sufficient. As we pointed out earlier in this unit most things that people want do not exist at all in nature or at least they are not in sufficient quantities to satisfy their needs. Therefore, if people are to get what they want, they have to work. We must have the input of human effort; otherwise we get no cloth, no pens, no radios, no clocks, etc. So labour could be recognized as a second factor of production.

In some cases, perhaps, products are produced by natural resources and labour alone; by human effort expended on natural resources without the help of any other factor. But usually people find it advantageous to use tools, machinery, and equipment of various sorts to facilitate the production process. Such tools and equipment increases the output tremendously. When the farmers use tractors and moving machines their output by far increases as compared to when they are using bare hands. On the other hand assume that farmer worked unassisted (merely land and labour) without his/her tractor or moving machine and even without rake, hoe, or spade-just himself/herself with his/her bare hands and his elbow grease. Contrast the products of these two farming situations. The tools and equipment with which people work are called capital, and we would list it as a third factor of production.

The factors of production are often divided into four categories:

- a) **Natural Resources**
- b) **Labour**
- c) **Capital**
- d) **Entrepreneurship**

Definition: Factors of production are the inputs of natural resources, LAND, LABOUR, CAPITAL, and ENTERPRENEURSHIP that a firm uses to produce output.

4.3.1 Natural Resources

Natural resources include land used as sites for production, natural resources that are used in crude form in production.

The first factor of production, natural resources include land used as sites for structures or farming, ports and other facilities as well as natural materials that are used in crude form in production. Example of land and other natural resources are farmland, industrial sites, deposits of minerals, navigable rivers, and sources of hydroelectric power, timber and the advantages of a regional climate. Natural resources refer to all natural resources that can be used as inputs to production, for example minerals, water, air, forests, oil, and even such intangibles as rainfall, temperature, and soil quality are possible inputs for given production process. The key distinction between natural resources and certain kinds of capital is that natural resources are not easily altered by labour or capital expenditure. For example pieces of land in Awash state farms that have been irrigated represent more than land. At present, in Ethiopia, the income payment for the factor of production land is called rent.



Identify the natural resources that are available in your surroundings. Discuss how it will be used for production process.

4.3.2 Labour

Definition: Labour represents the services of human beings in the production of goods and services. It includes both physical and mental effort of human being.

Labour is the factor of production with which you are most familiar. As defined above, labour is the physical and intellectual exertion of human beings. The efforts of a factory worker, a university professor, and carpenter are all considered as labour.

The number of workers, their general education, training and skills and their motivation to work are prime determinants of a nation's productive capability. The service of factory workers, truck drivers, sales people, college professors, police officers and physicians all are part of a nation's labour resources.

It is clear that some labour is valued (or paid) more than others. Why? One reason is that labour, like medical doctors are more valuable. This occurs when individuals devote money and time in increasing their labour skills. Individuals invest in their labour skills by going to college or attending special training. We also refer this development of labour skills as investment in human capital. **Human capital** is the accumulation of labour enhancing activities including health care that increases labour's productivity. Wages and salaries are the resource payments that are made for the use of labour. Salary is a fixed periodical payment paid to a person for regular work or services, whereas a wage is usually paid by the day or week for work or services which are of a more irregular nature.

WAGES and **SALARIES** are the return to the labour factor of production.

4.3.3 Capital

Definition: Capital is the equipment, tools, structures, machinery, vehicles, materials and skills created to help produce goods and services.

Capital is the equipment, tools, structures, machinery, vehicles, materials and skills created to help produce goods and services. The third factor of production, capital is composed of all manmade aids to production such as machines, tools, factory buildings, warehouses, stock of inventories, and the like are considered as a factor of production, refers to physical things. Capital is a man-made resource. Any product of labour and natural resources that are reserved for use in the production process is capital. Capital, like machinery could be purchased or leased. Capital also include interest which is a reward for capital.

4.3.4 Entrepreneurship

Entrepreneurs are key factors of production because they combine the other factors of production by buying or renting these factors to produce a saleable product. Hence entrepreneurs are individuals and organizations that combine natural resources, labour and capital to produce goods and services.

Profit is the return to the entrepreneurship factor of production. Profit is residual after all other factors have been paid.

The starting up of small businesses and adding them to an economy plays an important role in creating jobs, and brings about remarkable productivity and economic efficiency. Entrepreneurs have invented new products, developed the organizations and means of production to bring them to the market. They have introduced new technology and in some cases have made the utilization of resources different from existing ones. They have introduced new and more productive uses of resources. Much creativity of entrepreneurs has changed our pattern of living, and many services have been introduced to change or create new service industries. This situation therefore, made entrepreneurship play a major role in an economic system.

Definition: Entrepreneurship is the process of bringing together creative and innovative ideas and actions with management skills necessary to assemble the appropriate people, money and operating resources to meet an identifiable need and create wealth. Entrepreneurship may also be defined as a purposeful activity resulting in starting, promoting and maintaining economic activities for the production and distribution of wealth. It is also defined to mean the willingness to exercise initiative and take considerable risk to operate one's own business.

4.3.4.1. Definition of an Entrepreneur

An entrepreneur has natural or acquired ability to develop products and processes and to organize production to make goods and services available. An entrepreneur is a person who uses personal initiative to organize a new business.

An entrepreneur is a person who develops a new product, a new market or a new means of production. The entrepreneur assumes responsibility and risk for a business operation with the expectation of making profit. He/she generally decides on the product, acquires the facilities and brings the labor force, capital and production materials either to come up with new product or new business.

Entrepreneurs put their ideas and money on the line by entering in some areas of business. In effect, they are working aggressively to earn a profit despite competition and other risks of operating a business.

Young persons who go into business for themselves as entrepreneurs find that there are many opportunities in their local communities. Even if there are difficulties associated with starting a new business, such as shortage of financial and non-financial resources, lack of some experience in the proposed line of business, many individuals start their own business. Entrepreneurs, who start their own businesses, are adventurers, risk-takers and profit-seekers. They gather capital, organize business and manage it.

An entrepreneur is a person who has the combined skill of strength in both creativity and management that are basic to the conception and launching of new business as well as to make it grow and succeed. The behavioral qualities of an entrepreneur can be identified as the five P's of entrepreneurship, which are:

1. **Purposeful:** sets goals and strives diligently to accomplish them.
2. **Persuasive:** Influences others, such as bankers, suppliers, and customers, to assist in reaching desired goals.
3. **Persistent:** Pursue goals continually and often against odds. Setbacks and disappointments do not halt the efforts toward goal attainment.
4. **Presumptuous:** Strikes out boldly and acts when others hesitate to do so. Is willing to take calculated risks and to accept innovative approaches.
5. **Perceptive:** Should be able to understand how each separate decision relates to accomplishing established goals.

From the behavioral qualities of an entrepreneur, we can conclude that an entrepreneur is a person who takes the risk necessary to organize and manage a business and receives the financial profits and non-monetary rewards. If entrepreneurs are successful, the return to entrepreneurship is high profit.



Can you name out some of the entrepreneurs that you know in your locality?

The Task of an Entrepreneur

What makes the entrepreneur different from other types of managers? To answer this question we have to see the seven tasks of an entrepreneur given below.

1. **Owning a business.** When the entrepreneur actually owns a business he/she plays two roles at the same time: that of an investor and that of a manager. He/she understands the operation of the business better than an employed manager. This will put the entrepreneur in better position to make better decisions than the employed manager.
2. **Establishing organizations.** The entrepreneur is a person who undertakes the task of bringing the different elements of an organization (Labour, capital, natural resources) and giving them a separate legal identity. However entrepreneurs also buy organizations that have been already established and then develop them, absorb them into existing organization. Entrepreneurs make major changes in the organizations they have bought. The changes they make differentiate them from managers who manage within existing organizational structures by making minor or incremental changes.
3. **Bringing Innovation to Market.** Innovation is the most important part of entrepreneurship. It is the process of wealth creation. Innovation in business means new product or service, but it can also include:
 - a) A new way of delivering an existing product or service
 - b) New methods of informing the consumers about a product and promoting it to them
 - c) New ways of organizing a company
 - d) New approaches to managing relationships with other organizations
 - e) The entrepreneur's task goes beyond simply inventing something new. It also includes bringing that innovation to the market place and using it to deliver value to consumers
4. **Identification of Market Opportunity.** An opportunity is a gap in a market where the possibility exists all the time, but they do not present themselves. If these opportunities are to be used to the utmost, they must be actively sought out and identified. Having identified them, the entrepreneur must follow them with a suitable innovation. (The meaning of innovation is something newly introduced. For example methods of doing something newly introduced are called innovation)

5. **Application of Abilities.** Entrepreneurs have special ability in deciding how to use resources in situations where information is limited. It is their ability that makes entrepreneurs valuable investors
6. **Giving Leadership.** Entrepreneurs need the support of other people to be able to introduce the new products and services they have innovated and market them. These people must, however, be supported and directed by (the leaders) entrepreneurs. To do this the entrepreneurs must show good leadership.
7. **The entrepreneur as a manager.** Finally the entrepreneurs are managers. What makes the entrepreneurs different from an ordinary manager is in the way they manage and their effectiveness, not the particular tasks they perform.

4.3.4.2 Entrepreneurial Traits



Can you identify some of the traits that differs an entrepreneur from others?

In small businesses, where there is no depth of management, the leader must be there. You may not be able to afford a support staff to cover all business functions, and therefore you will need to work long hours. We all know people who use part of their sick leave each year when they are not sick. Entrepreneurs are not found in this group. At the end of the eight-hour day, when everyone else leaves for home, the entrepreneur will often continue to work into the evening, developing new business ideas. The following are entrepreneurial traits.

a) **Self-Control**

Entrepreneurs do not function well in structured organizations and do not like someone having authority over them. Most believe they can do the job better than anyone else and will strive for maximum responsibility and accountability. They enjoy creating business strategies and thrive on the process of achieving their goals. Once they achieve a goal, they quickly replace it with a greater goal. They strive to exert whatever influence they can over future events.

In large, structured organizations, entrepreneurs are easy to recognize by the statements they make: "If they wanted that job done right, they should have given it to me." A dominant characteristic of entrepreneurs is their belief that they are smarter than their peers and superiors. They have a compelling need to do their own thing in their own way. They need the freedom to choose and to act according to their own perception of what actions will result in success.

b) Self-Confidence

Entrepreneurs are self-confident when they are in control of what they're doing and working alone. They tackle problems immediately with confidence and are persistent in their pursuit of their objectives. Most are at their best in the face of adversity, since they thrive on their own self-confidence.

c) Sense of Urgency

Entrepreneurs have a never-ending sense of urgency to develop their ideas. Inactivity makes them impatient, tense, and uneasy. They thrive on activity and are not likely to be found sitting on a bank fishing unless the fish are biting. When they are in the entrepreneurial mode, they are more likely to be found getting things done instead of fishing.

Entrepreneurs prefer individual sports, such as golf, skiing, or tennis, over team sports. They prefer games in which their own brawn and brain directly influence the outcome and pace of the game. They have drive and high energy levels, they are achievement-oriented, and they are tireless in the pursuit of their goals.

d) Comprehensive Awareness

Successful entrepreneurs can comprehend complex situations that may include planning, making strategic decisions, and working on multiple business ideas simultaneously. They are farsighted and aware of important details, and they will continuously review all possibilities to achieve their business objectives. At the same time, they devote their energy to completing the tasks immediately before them.

e) Realism

Entrepreneurs accept things as they are and deal with them accordingly. They may or may not be idealistic, but they are seldom unrealistic. They will change their direction when they see that change will improve their prospects for achieving their goals. They want to know the status of a given situation at all times. News interests them if it is timely, and factual, and provides them with information they need. They will verify any information they receive before they use it in making a decision. Entrepreneurs say what they mean and assume that everyone else does too. They tend to be too trusting and may not be sufficiently suspicious in their business dealings with other people.

f) Conceptual Ability

Entrepreneurs possess the ability to identify relationships quickly in the midst of complex situations. They identify problems and begin working on their solution

faster than other people. They are not troubled by ambiguity and uncertainty because they are used to solving problems. Entrepreneurs are natural leaders and are usually the first to identify a problem to be overcome. If it is pointed out to them that their solution to a problem will not work for some valid reason, they will quickly identify an alternative problem-solving approach.

g) Status Requirements

Entrepreneurs find satisfaction in symbols of success that are external to themselves. They like the business they have built to be praised, but they are often embarrassed by praise directed at them personally. Their egos do not prevent them from seeking facts, data, and guidance. When they need help, they will not hesitate to admit it especially in areas that are outside of their expertise. During tough business periods, entrepreneurs will concentrate their resources and energies on essential business operations. They want to be where the action is and will not stay in the office for extended periods of time.

Symbols of achievement such as position have little relevance to them. Successful entrepreneurs find their satisfaction of status needs in the performance of their business, not in the appearance they present to their peers and to the public. They will postpone acquiring status items like a luxury car until they are certain that their business is stable.

h) Interpersonal Relationships

Entrepreneurs are more concerned with people's accomplishments than with their feelings. They generally avoid becoming personally involved and will not hesitate to sever relationships that could hinder the progress of their business. During the business-building period, when resources are scarce, they seldom devote time to dealing with satisfying people's feelings beyond what is essential to achieving their goals.

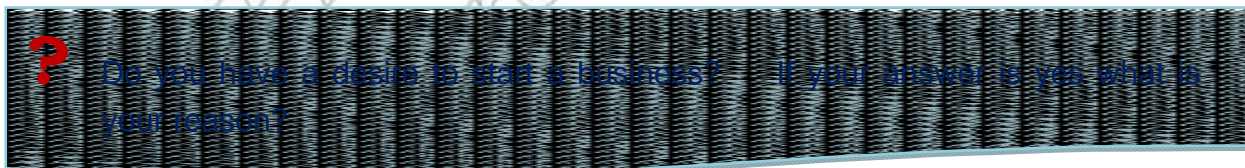
Their lack of sensitivity to people's feelings can cause turmoil and turnover in their organization. Entrepreneurs are impatient and drive themselves and everyone around them. They don't have the tolerance or empathy necessary for team building unless it's their team, and they will delegate very few key decisions. As the business grows and assumes an organizational structure, entrepreneurs go through a classic management crisis. For many of them, their need for control makes it difficult for them to delegate authority in the way that a structured organization demands. Their strong direct approach induces them to seek information directly from its source, by passing the structured chains of authority

and responsibility. Their moderate interpersonal skills, which were adequate during the start-up phases, will cause them problems as they try to adjust to the structured or corporate organization. Entrepreneurs with good interpersonal skills will be able to adjust and survive as their organization grows and becomes more structured. The rest won't make it.

i) Emotional Stability

Entrepreneurs have a considerable amount of self-control and can handle business pressures. They are comfortable in stress situations and are challenged rather than discouraged by setbacks or failures. Entrepreneurs are uncomfortable when things are going well. They'll frequently find some new activity on which to vent their pent-up energy. They are not content to leave well enough alone. Entrepreneurs tend to handle people problems with action plans without empathy. Their moderate interpersonal skills are often inadequate to provide for stable relationships. However, the divorce rate among entrepreneurs is about average.

4.3.4.3 Motivation for Starting Business



Ask any entrepreneur and they will openly tell you all the reasons **not** to start a business. All the frustrations, difficulties and painful times. But then they'll launch into all the reasons why you **absolutely must start a company, and do it right away**. Most entrepreneurs are like late night infomercial maniacs when it comes to promoting the startup life to others. Here's what they'll be pitching:

1. **Passion.** The passion you feel as an entrepreneur – for the startup life, for your company, for your vision – is all-encompassing. You're driven to succeed, to experience everything a startup has to offer, and to make things happen. Passion is a prerequisite to starting a business, and it's also a huge motivator, because through your startup you fuel your passion.
2. **Creating Value.** Entrepreneurs are creators. We need to produce “stuff” in order to succeed. And that “stuff” needs to create value. It's extremely motivating to know that something you've started has created value for others. And part of creating value is contributing to the entrepreneurial community on a whole. For me, this is a particularly motivating factor; I'm able to build a company, blog about it and communicate to others about my experiences.

3. **Changing the World.** Not every business has the potential to change the world, but many entrepreneurs take this mantra to heart. Lots of entrepreneurs believe their businesses will change the world. It's part of creating value. Starting a business and tossing yourself into it with unequivocal passion, gives you the chance.
4. **Being in Control.** Entrepreneurs are control freaks. We believe we can do things better than others, and off we go! Having that opportunity is on one hand motivating and on the other hand scary – you're in control, you're the boss, you better get out there and make things happen. Luckily, being in control feeds many of the other motivating factors, so it all comes together.
5. **Money.** There's no question that money is a motivating factor, although it belongs at the bottom of the list. The truth is that you can probably earn more money at a fairly high paying job, over enough years, than you can starting a business because of the likelihood of failure. But the only way to hit a financial home run is with a startup. You get to take your swing at the plate and aim for the fences.

4.3.4.4 Success Factors for Entrepreneurs

Running a one-person business is a creative, flexible and challenging way to become your own boss and chart your own future. It is about creating a life, as it is about making a living. It takes courage, determination and foresight to decide to become an entrepreneur. From the relatively safe corporate world, where paychecks arrive regularly, you will be venturing into the uncharted territories of business. Is there a way to determine whether you can be a successful entrepreneur, or you are better off to work for somebody else? There is no formula for success. However, most successful entrepreneurs share these ten characteristics. Check if you possess any one of them:

- a. **Think success.** To attain the kind of success that you want, you need to dream big. Every success story starts with big dreams. You need to have big dreams for yourself - which you want to be somebody rich, famous or fulfilled. You need to have a clear vision of what you want to achieve. But it doesn't stop in dreaming alone. You should actively visualize success in your mind that you can almost feel it, touch it or it is within your reach. Play this image back at every opportunity. What does it feel to triple your current income? How will your life change? What will your business look like if you achieved the million-dollar mark?
Successful entrepreneurs possess an attitude of openness and faith that you can have what you want if you can simply envision it as the first step on the path of

action to acquiring it. Management gurus have taught us the power of visualization - seeing yourself in your mind as having accomplished your dreams. If you want to be a successful writer, envision yourself signing books for a mass of people who have lined up to have your autograph. If you want to be rich, picture yourself in luxurious surroundings holding a fat bank account. And the process of envisioning success for you should be a constant activity! You need to think that you are successful (or will be one) every single waking hour. A personal development coach shared me her secret to help her continuously visualize her goals for the moment: when climbing stairs, recite your goal with every step you take. So if you want more money, say "I will have money" in every step of the stairs. This technique will reinforce your goal and keep it fresh in your consciousness.

b. Be passionate with what you do. You start a business to change any or all part of your life. To attain this change, you need to develop or uncover an intense, personal passion to change the way things are and to live life to the fullest. Success comes easily if you love what you do. Why? Because we are more relentless in our pursuit of goals about things that we love. If you hate your job right now, do you think you will ever be successful at it? Not in a million years! You may plod along, even become competent at the tasks, but you will never be a great success at it. You will achieve peak performance and do what you have to do to succeed only if you are doing something that interests you or something that you care about. Entrepreneurs who succeed do not mind the fact that they are putting in 15 or 18 hours a day to their business because they absolutely love what they do. Success in business is all about patience and hard work, which can only be attained if you are passionate and crazy with your tasks and activities.

c. Focus on your strengths. Let's face it; you cannot be everything to everybody. Each of us has our own strengths and weaknesses. To be effective, you need to identify your strengths and concentrate on it. You will become more successful if you are able to channel your efforts to areas that you do best. In business, for example, if you know you have good marketing instincts, then harness this strength and make full use of it. Seek help or assistance in areas that you may be poor at, such as accounting or bookkeeping. To transform your weakness to strength, consider taking hands-on learning or formal training.

d. Never consider the possibility of failure. As an entrepreneur, you need to fully believe in your goals, and that you can do it. Think that what you are doing will contribute to the betterment of your environment and your personal self. You

should have a strong faith in your idea, your capabilities and yourself. You must believe beyond a shadow of a doubt that you have the ability to recognize and fulfill them. The more you can develop faith in your ability to achieve your goals, the more rapidly you can attain it. However, your confidence should be balanced with calculated risks that you need to take to achieve greater rewards. Successful entrepreneurs are those who analyze and minimize risk in the pursuit of profit. As they always say, "no guts, no glory."

e. Plan accordingly. You have a vision, and you have enough faith in yourself to believe that you can achieve your vision. But do you know how to get to your vision? To achieve your vision, you need to have concrete goals that will provide the stepping-stone towards your ultimate vision. Put your goals in writing; not doing so just makes them as intangible fantasies. You need to plan each day in such a way that your every action contributes to the attainment of your vision. Perhaps today, you need to see an artist to help you conceptualize the new line of hand-made linens that you hope to launch. Intense goal orientation is the characteristic of every successful entrepreneur. They have a vision, and they know how to get there. Your ability to set goals and make plans for your accomplishment is the skill required to succeed. Plan, plan and plan-because without which failure is guaranteed.

f. Work hard. Every successful entrepreneur works hard, hard and hard. No one achieves success just by sitting and staring at the wall every single day. Brian Tracy puts it out this way, "You work eight hours per day for survival; everything over eight hours per day is for success." Ask any successful businessperson and they will tell you immediately that they had to work more than 60 hours per week at the start of their businesses. Be prepared to say goodbye to after-office drinks every day, or a regular weekend get-away trip. If you are in a start-up phase, you will have to breathe, eat and drink your business until it can stand on its own. Working hard will be easy if you have a vision, clear goals, and are passionate with what you do.

g. Constantly Look for Ways to Network. In business, you are judged by the company you keep - from your management team, board of directors, and strategic partners. Businesses always need assistance, more so small businesses. Maybe the lady you met in a trade association meeting can help you secure funding, or the gentleman at a conference can provide you with management advise. It is important to form alliances with people who can help you, and whom you can help

in return. To succeed in business, you need to possess good networking skills and always be alert to opportunities to expand your contacts.

- h. Willingness to Learn.** You do not need to be a MBA degree holder or PhD graduate to succeed in your own business. In fact, there are a lot of entrepreneurs who did not even finish secondary education. Studies show that most self-made millionaires have average intelligence. Nonetheless, these people reached their full potentials achieved their financial and personal goals in business because they are willing to learn. To succeed, you must be willing to ask questions, remain curious, interested and open to new knowledge. This willingness to learn becomes more crucial given the rapid changes in technologies and ways of doing business.
- i. Persevere and have Faith.** No one said that the road to success is easy. Despite your good intentions and hard work, sometimes you will fail. Some successful entrepreneurs suffered setbacks and resounding defeats, even bankruptcy, yet managed to quickly stand up to make it big in their fields. Your courage to persist in the face of adversity and ability to bounce back after a temporary disappointment will assure your success. You must learn to pick yourself up and start all over again. Your persistence is the measure of the belief in yourself. Remember, if you persevere, nothing can stop you.
- j. Discipline Yourself.** Self-discipline is the key to success. The strength of will to force yourself to pay the price of success - doing what others don't like to do, going the extra mile, fighting and winning the lonely battle with yourself.

4.3.4.5 Kinds of Entrepreneurs



Can you identify kinds of entrepreneurs before reading the next section?

There are three kinds of entrepreneurs: inventors, modelers and marketers. All can be successful, but in many minds, only one kind of entrepreneur is on the surest path to building a business that survives... and thrives.

So what's the difference between the three? Well, keep in mind that the three terms 'innovators', 'modelers' and 'marketers' are just labels. Though, as you read the definitions, you'll get the distinction between each entrepreneurial type. And, generalizing - there are probably people who fit into each category in different situations.

- a) **'Innovators'** tend to come up with solutions to problems people don't know they have, or for things people don't know they want. They have a great idea for what they think people will love and want, and then, without any evidence that people will love and want what they have to offer, go ahead and build it. Many of the highest-profile Internet companies were started by innovators – eBay, Youtube, Skype, MySpace, Face book and many others.
- b) **'Modelers'** provide products and services for which there is a known and certain market. They work out what people are already buying and then seek to sell whatever that is. Their competitive advantage is to provide that product or service in a unique and better way than their competitors. A classic example of a modeler is a lawyer who decides to start a law firm.
- c) **'Marketers'**, like modelers, are market-driven. But they're not just interested in following the market. They want to lead the market as well. As business people they tend to begin as modelers and then, after achieving a degree of control of the market.

4.4 Production/Operation Management

Production/operations management is the process, which combines and transforms various resources used in the production/operations subsystem of the organization into value added product/in a controlled manner as per the policies of the organization. Therefore, it is that part of an organization, which is concerned with the transformation of a range of inputs into the required products having the requisite quality level. The set of interrelated management activities, which are involved in manufacturing certain products, is called as **production management**. If the same concept is extended to services management, then the corresponding set of management activities is called as **operations management**.

Activity: 3

1. What are the sources of resources used in production?
2. Describe factors of production.
3. List the major categories of factors of production.
4. Explain labour as a factor of production.
5. What is the return of land as a factor of production?
6. Explain entrepreneurship as a factor of production. Give example of entrepreneurs in your localities.
7. What is the return to the entrepreneurship as a factor of production?
8. List the seven tasks of an entrepreneur.
9. Give a brief explanation of each task of an entrepreneur.

4.5 Cost of Production



Define the concept of cost. Compare your answer with the next elaboration given for the concept of cost.

To produce goods, firms must utilize various resources (materials, labour, machinery, and building). To respond to a change in demand, firms must change the amount and/or type of resources used. To change resources, they must have time. We can identify two production periods the short run and the long run-to reflect the time required in order to change resources.

In the short run, a firm can change only variable, not fixed resources. **Long Run** is the period of time in which a firm can change all its resources. A period of time in which a firm cannot alter all its resources is called **Short Run**. In the long run, a firm can change all resources. In the short run a firm is unable to change all the resources it uses. For example, if a firm is deciding how much to offer for sale next week it will be unable to change the size of its factory and the number of machines it is using in time to affect quantity supplied. But with sufficient time, the firm could buy additional machines (or sell some) and build a large or smaller factory. Thus in the long run, a firm has enough time to change all the resources it uses. How long is a long run? The answer depends on the industry engaged in. For example a new gasoline service station can be opened for only a few months, but a new plant to generate electricity takes years to build.

For short run decisions we must recognize that a firm will have some fixed resources, which it cannot change. Machinery and buildings are typically among the firm's fixed resources. To change the output it produces, a firm must use more or less of its variable resources. Materials and labour can generally be considered as variable resources which can be changed in a relatively shorter period of time.

Variable Inputs are resources that vary directly with output; that is, any increase in output requires greater use of variable resources.

Fixed Inputs are resources that in short run do not vary directly with output; that is, output can be increased (within limits) without using more fixed resources.

Just as some resources are fixed and others are variables, so some costs are fixed and others are variables. A cost is defined as an expenditure usually of money,

required for the purchase of input used in the operation of business.

Fixed Costs are costs, which do not vary as output varies.

Fixed costs are obviously associated with fixed resources, and include such items as rental payments on buildings, interest payments on loans, property taxes, depreciation costs etc.

Total fixed costs are constant, regardless of output, because in the short run a firm cannot change the quantity of its fixed resources. For example a firm has the same cost for rent of a building (say, birr 2000 a month) whether it produces 500 or 500,000 books in a month.

Variable Costs are costs, which vary as output varies.

Variable costs are associated with variable resources; they increase or decrease directly with total production in the short run. In contrast to total fixed costs, total variable costs are not constant because the amount of variable resources increases as total production increases and decreases. The total variable costs equal the quantity used multiplied by the unit cost of the variable resource. For example, if the material and other variable costs per book is 0.20 cents, the total variable costs of producing 500 pens is 100 (birr 0.20 x 500) and the total variable cost of producing 5000 books is birr 1000 (birr 0.20x5000).

Total costs are the sum of total variable and fixed costs. For example if a firm produces 5000 pens in a month, the total costs are birr 3000 – (or birr 1000 variable costs plus birr 2000 fixed costs).

When output is zero, total costs will be equal to fixed costs since variable costs will be zero. When production commences, total costs will begin to rise as variable cost increase. Total costs will continue to rise as production increases, because there must be some increase in variable costs as output increases.

Average cost is cost per unit- Average cost is computed by dividing total costs by the output. When output is small, average cost will be high because fixed costs will be spread over a small number of units of output. As output increases, average cost will tend to fall as each unit is carrying a smaller element of fixed cost.

The extra cost necessary to produce one more unit of output- the last unit-is called marginal cost. Marginal cost is the increase in total cost or variable cost as output rises by one unit. In practice, of course, many units are produced rather than by adding one units at time. Under such circumstances, the marginal cost is measured by the change in total cost divided by the change in the number of units produced.

The following table summarizes the nature of production costs, based on different units of output and the above assumptions of costs:

Variable cost per unit (pen) = birr 0.20

Fixed cost per month =birr 2000.00

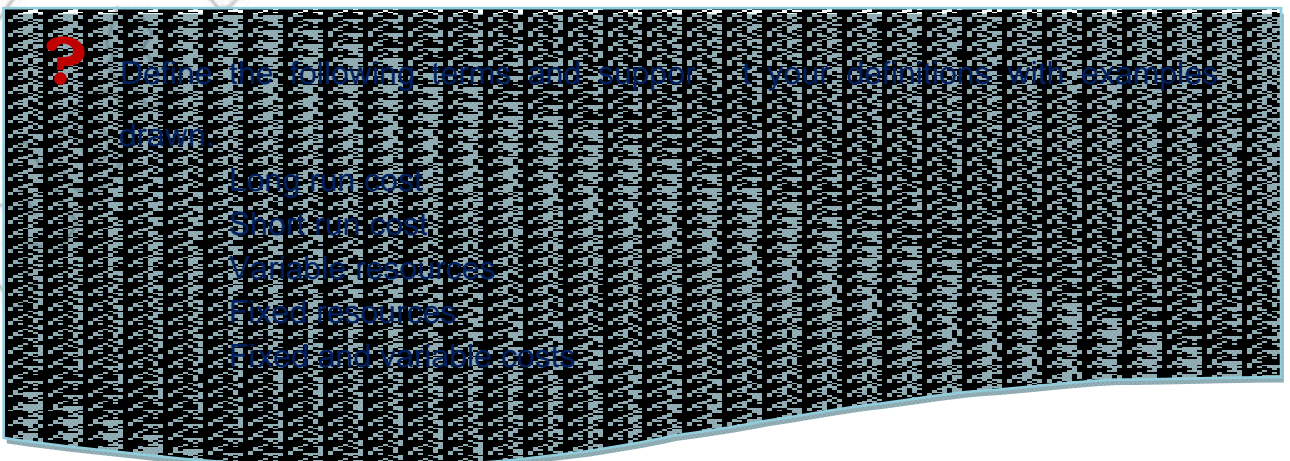
Table 4.1 Costs of Production (In Birr)

Unit of Output (pen)	Fixed Cost (In Birr)	Variable costs (In Birr)	Total Costs (In Birr)	Average cost (In Birr)	Marginal cost
0	2000.00	0	2000.00	-	-
500 pens	2000.00	100.00	2100.00	4.20	Birr 0.20
1000 pens	2000.00	200.00	2200.00	2.20	Birr 0.20
1500 pens	2000.00	300.00	2300.00	1.53	Birr 0.20
2000 pens	2000.00	400.00	2400.00	1.20	Birr 0.20
2500 pens	2000.00	500.00	2500.00	1.00	Birr 0.20
3000 pens	2000.00	600.00	2600.00	0.867	Birr 0.20

Fixed costs are usually related to a fixed input and tend to remain unchanged when the volume of business activity changes. Therefore fixed costs are represented by a horizontal line in graph to show that they remain constant as output varies.

Variable costs are the most important and most controllable costs. As explained earlier variable costs change in response to changes in the volume of business activity.

The variable cost line in the graph passes through the origin point '0' since there is zero cost incurred when zero unit of output is produced. In this illustration the variable cost line slopes upward to show the change as output increases.



4.5.1 Break-Even Analysis

The break-even point is the volume of sales needed to cover the company's total variable and fixed costs. It is a point where there is neither profit nor loss. When sales move beyond the break-even point, profits begin to generate rapidly and vice versa. Let's see how the breakeven point works in determining the profit of a business. It is assumed that variable costs vary proportionally with sales and that fixed costs will not vary regardless of sales volume. In the example, the following assumptions are made. Selling price of a unit is birr 100; variable costs 50 percent of selling price (birr 50) and the monthly fixed costs are birr 60,000. By using the following formula we notice that the business arrives at a breakeven point when it produces 1200 units or realizes sales of birr 120,000. If the company produces less than 1200 units, it suffers a loss. When more than 1200 units are sold the company makes profit. The formula is given below.

$$\text{Break-even point} = \frac{\text{Fixed Cost}}{\text{Unit Price} - \text{Variable cost per unit}}$$

$$\frac{\text{Birr } 60,000}{100 - 50} = 1200 \text{ units}$$

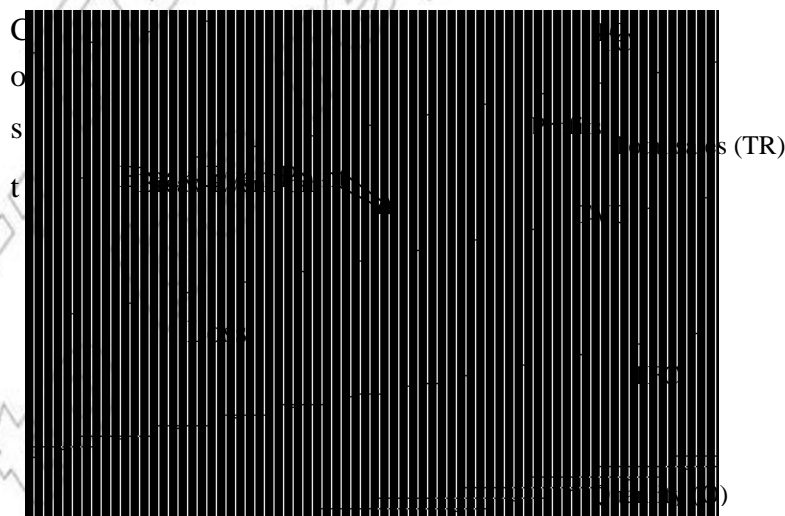


Figure 4.2 Graphical representation of cost of production

Activity: 4

1. Describe short run costs that are related to change of resources of a firm.
2. What can a firm change in the short run as far as its resources are concerned?
3. In the long run, a firm can change all resources. Explain.
4. What is a breakeven point? Let us assume that you started producing shirts of high quality to be exported to Kenya. Your monthly fixed cost is 18000 birr. The unit price of the shirt is 150 birr. Your variable cost per shirt is 40 percent of the unit price. How many shirts do you have to produce to make profit? To break-even or to incur a loss.

4.6 Location of Facilities and Infrastructure for Production Process

Business owners or managers today face many possibilities and complexities. They must balance numerous factors in the environment, i.e., markets, resources, utilities, site, in choosing a location for their business. The basic facilities, services, and installations needed for the functioning of a community or society, such as transportation and communication systems, water and power lines, and public institutions including schools, post offices, banks and prisons are called infrastructure.

Modern transportation and communication systems have broadened the range of potential business sites. At one time, it was nearly impossible to produce iron at any distance from ore deposits and charcoal sources because means of moving materials in any quantity did not exist. Today many such barriers can be overcome if there is sufficient reason to do so. In selecting a location, for the facilities for production process now managers or owners must balance a number of sometimes-conflicting needs. The major considerations are:

The availability of:

- transportation
- markets
- resources
- utilities
- site

4.6.1 Transportation

Transportation is defined as the movement of goods and persons from place to place and the various means by which such movement is accomplished. The growth, the ability, and the need to transport large quantities of goods or numbers of people over long distances at high speeds in comfort and safety has been an indicator of civilization and in particular of technological progress.

At present our world has seen remarkable advancements in transportation: by air, by sea, and by land. Trucks and automobiles, ships, trains and jet airplanes made communication over long distances much easier and quicker than ever before. New transportation lines also led to the development of remote areas throughout the world. Now a days, it is common to see pipelines, (used for transporting water and petroleum) included in the list of modes of transportation.



Can you identify how transportation affects the operation of business?

4.6.2 The availability of Markets

Nearness to markets has an important influence on the location of facilities. Areas with high concentrations of people, such as Addis Ababa and Dire Dawa continue to attract number of business organizations. This is because of many buyers who can be reached with low shipping costs.

Moving close to markets is particularly important for producers of perishable products such as dairy products that are difficult and expensive to ship. Businesses that are required to provide services for their products, such as the producers of computers almost always select locations mainly on the basis of easy access to markets.

4.6.3 Resources

The availability of the resources a business uses often affects the choice of location of facilities for production. Being close to the sources of raw materials is important for many industries. Some industries use huge amounts of water and must establish their operations in areas where water is available. Industries that use partially processed materials, such as lumber, sheet metal, or component parts in their operations may benefit by locating their firms near these sources.

Labour is another resources that affects the location of facilities for production. Business that provide services often need highly skilled workers who are hard to find except in areas with concentrated populations. The same is true of many manufacturing processes that require laborers with highly developed skills. Businesses that use workers with skills that are easily taught are often attracted to areas with low average pay scales.

4.6.4 Utilities

Most industries today rely on large amounts of power for their operations. If coal or oil is used, it may be beneficial for the industries to locate near their sources. Prices are usually lower there because transportation costs are minimal. The cost of electric power purchased from the supplier (Ethiopian Electric Power Corporation-EEPC) also varies in price from place to place.

Some industries need places for disposal of solid or liquid wastes. In some places there are facilities capable of handling these problems. In other cases, a natural resource, such as a large body of water, may be needed for the disposal of treated liquid wastes.

Transportation is important to most business organizations. The availability of major highways, railways, airports or other transportation facilities play a role in business

location. Communication facilities such as telephone, telex, etc are also important.

4.6.5 Site Availability

The other requirement of a good location of facilities for production process is availability and suitability of an appropriate building or site. A good site must be large enough for proposed operation. Space for parking and future expansion must be considered. The land itself should be suitable for building neither so soft as to require deep pilings for support nor so rocky as to require blasting. Finally, the price of the land or the right to use the land must be affordable.

Activity: 5

1. What are the major considerations in choosing location of facilities for the production process?
2. How does the distance from markets influence location of facilities?
3. Explain how utilities affect the choice of location of facilities.
4. Indicate the modes of transportation you would prefer to use to transport each of the following goods and explain why?
 - a) 100 tons of hides and skin
 - b) 2000 cubic liters of crude oil
 - c) 20 tons of electronic equipment
 - d) 1000 automobiles from the port of Djibouti
 - e) 2000 quintals of Teff from Beshoftu to Addis Ababa

Summary

- The needs and wants of people never stop. Most things that people need or want do not appear in nature at all. If needs or wants are to be satisfied, there must be production. Any activity which helps to satisfy needs and wants is defined as production. Production is the creation of utility. The most obvious way in which people add utility to material things is by changing their form. This is called form utility. By carrying products (goods) from where their supply is great to where the supply is small place utility is added to the goods. Storing goods from times of plenty to times of scarcity adds time utility.
- Production is the making of goods and services. Goods are the material things, which we use, in our everyday lives. Services on the other hand are non-material things that help to satisfy our needs and wants. The purpose of economic activities is the satisfaction of needs and wants. Economic activity results in the output of a variety of goods and services. The composition of total output is classified into consumer goods, producer goods and services.
- To produce a given product we require inputs. Inputs are the materials and services used in the production process. At the other end of the process are outputs, the goods or services that the firm produces for sale. The relationship between inputs and outputs in the production process is called production function.
- Production cannot take place unless the necessary resources are available. Factors of production are the inputs (resources) and, labour, capital and entrepreneurship that a firm uses to produce outputs. Labour is physical and intellectual exertion of human beings in the production process. Wages are the return to the labour factor of production. Land refers to all natural resources that can be used as inputs to production. Rent is the return to the land factor of production. Capital is the durable, but depreciable, input to the production process. Interest is the return to the capital factor of production. Entrepreneurship is the input to the production process that represents innovation and risk taking. Profit is the return to the entrepreneurship factor of production.
- To produce goods firms must utilize various resources. In the short run, a firm can change only variable-not-fixed resources. In the long run, a firm can change all resources. Variable resources vary directly with output, while fixed resources; in short run do not vary directly with output. As some resources are fixed and others are variable, so some costs are fixed and others are variable. Fixed costs do not vary as output varies but variable costs vary as output varies.
- Business owners or managers face many possibilities and complexities. They must balance numerous factors in their business environment. In selecting a location for facilities for the production process they must meet a number of conflicting needs. The major considerations are: the availability of markets, resources, utilities and site.

Review questions

Part I. Choose the best answer from the given alternatives.

1. _____ is an activity of people towards the creation of things.
 - a) Cost
 - b) Function
 - c) Output
 - d) Production
2. Which of the following denotes the production of services?
 - a) Operations management
 - b) Materials management
 - c) Productivity
 - d) Variability
3. The movement of goods and persons from place to place is referred to as _____.
 - a) Facility
 - b) Production
 - c) Entrepreneurship
 - d) Transportation
4. Identify an item that cannot be considered as a capital.
 - a) Tools
 - b) Machineries
 - c) Vehicles
 - d) Labour
5. A person who develops a new product, a new market or a new means of production is termed as:
 - a) Capitalist
 - b) Worker
 - c) Entrepreneur
 - d) Owner

Part II. Answer the following questions.

1. Explain the difference between fixed inputs and variable inputs?
2. Define production activities and support your definition by an example?
3. Your classmate Hawine said, "Production is the creation of wealth". What is your reaction to this statement? Do you support her or do you oppose the idea.
4. Define costs of production and give a list of the points that should be taken into consideration when costs of production are discussed.
5. Discuss about the following terms and provide an example for each.
 - a. Natural resource
 - b. Labour
 - c. Capital
 - d. Entrepreneurship
6. Ojulu and Abebe, classmates of Grade 11B were debating over a point of starting a business. Abebe said to Ojulu "to start a business, all that it takes is to have capital and land. The rest is not that much important". Ojulu said, "No, the two alone will not be adequate to start a business, risk taking alone and labour are the other factors of production that enable us to start a business."
 - a) What are the points missed in the statement of each student?
 - b) Whose statement is wrong or correct?

7. Define the following terms and provide a mathematical example to support your definitions.
 - a) Variable cost
 - b) Total Cost
 - c) Fixed Cost
 - d) Marginal Cost
8. What are the factors that influence the choice of a location for the facilities of production process? Provide an example for each factor.
9. Explain each of the following terms and provide an example for each.
 - a) Utility of form
 - b) Utility of Place
 - c) Utility of time
 - d) Utility of possession
10. Identify a common product in your locality and explain how the following utilities are added to it.
 - a) Form utility
 - b) Place utility
 - c) Time utility
11. Describe the production function of a product that is available in your school.
12. Visit a near by organization that produces product and identify its factors of production?

Part III. Short Problems

To produce a pair of shoes, a shoemaker incurs birr25.00. The shoemaker also incurs birr500.00 of fixed costs per month.

Instruction: Based on the data given above, answer the following questions:

1. Compute
 - a. Total Variable Costs
 - b. Total Fixed Costs
 - c. Total Costs
 - d. Average Cost

Assuming the shoemaker can produce, "0", 1, 10, 100, 200, 300, 400, 500, 600, 700, pairs of shoes in a month.
2. How many pairs of shoes have to be produced to incur birr 25.50 of average cost?