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## CENTRAL PROBLEMS OF AN ECONOMY

Economics is about how people make decisions given their limited resources. The decisions are taken with regard to the basic economic activities such as production and consumption of goods and services and saving and investment. However, taking decision is not easy or simple. One must estimate the wants and the availability of resources while taking decisions on production of goods and services. Similarly distribution of the produced goods in the society needs to be done properly. The basic problems central to any economy, therefore, relate to production, consumption and distribution.



### OBJECTIVES

After completing this lesson, you will be able to:

- explain the causes of economic problems;
- identify the central problems: ‘what to produce’, ‘how to produce’ and ‘for whom to produce’;
- understand the concept of production possibility frontier curve;
- explain the concepts of opportunity cost and marginal opportunity cost; and
- describe the central problems of an economy by using the production possibility curve.

### 13.1 WHY DO ECONOMIC PROBLEMS ARISE

The economic problem arises in every economy due to

- (a) Unlimited wants
- (b) Limited resources
- (c) Alternative uses of resources.

**Notes****(a) Unlimited Wants**

Human beings are required to satisfy their basic needs for their survival. For example, a person needs food, water, clothing and shelter in order to survive. These are the basic needs of a person. However, no person would like to satisfy only his/her basic needs if he/she could improve his/her life. People, by nature, want more than what they just need for survival. If one want is satisfied, many others crop up and this goes on endlessly.

Let us understand this through an example. Suppose Neha wants some food, a blouse, utensil for her mother, sweets for her brother, and bangles. These may be only a few of the many things that Neha may like to have if she had some money. This example shows that an individual's wants are unlimited.

**(b) Limited Resources**

Let us say that all the things said above are available at some price. Now suppose that Neha has only ₹ 1000 with her to spend. Let food is available at ₹ 150, a blouse costs ₹ 200, value of utensil is ₹ 600, a packet of sweet costs ₹ 200 and a set of bangles is available at ₹ 50. All these taken together would cost Neha ₹ 1200. Since she has only ₹ 1000 with her, Neha has to adjust her purchases accordingly. Here, we say that the means to satisfy Neha's wants are limited to ₹ 1000. People may have high or low income but not unlimited income. Hence, resources (or income) available to consumers are scarce or limited.

Resources also include factors of production: land, labour, capital and entrepreneurship. These resources are not available in abundance in this world. They are scarce or limited. Scarcity means that the demand for the resources is greater than their availability.

**(c) Alternative Uses of Resources**

The above example also highlights another important fact that a resource can be used in different ways. In Neha's case, she can use her ₹ 1000 to buy some items. Once she chooses to buy something (for example utensil for her mother) then she can not satisfy her other wants. Similarly, all factors of production can be put to alternative uses. For example, a piece of land can be used to do farming, build a factory, develop a school or build a hospital. A labour can be used to plough a field, to make baskets or to sell vegetables. Hence, we see that resources have alternative uses.

From the above discussion we can see that wants are unlimited but resources (to satisfy the wants) are limited which happens to be the basic economic problem faced by all economies. We have also discussed that resources have alternative uses. This basic problem exists in every economy - whether rich or poor; developed or developing.

Scarcity of resources also leads to choice. In our example, Neha has only ₹ 1000 to spend but she wants to buy many things which was limited. So she must choose what she wants. In this way a consumer tries to solve the economic problem of unlimited wants and limited resources. Similarly producers also face the economic problem as they need to decide as to which alternative use should they put their scarce resources.

Suppose resources were not limited. Would it still lead to the economic problem? The answer to this question is that if resources were not scarce they could be used to satisfy all wants. Hence, the basic problem of scarcity and choice would not arise. Scarcity of resources results in people making decisions about how best they would like to use these limited resources. Making the best use of resources is termed as **economizing of resources**. Economizing of resources does not mean being miserly about using resources, but using resources judiciously so that maximum benefit can be obtained from the scarce resources.



### INTEXT QUESTIONS 13.1

State whether the following statements are true or false:

1. Resources are scarce.
2. Wants are limited.
3. Scarcity does not lead to choice.
4. Resources have alternative uses.
5. Every economy does not face the basic economic problem.
6. Economizing of resources means being miserly about using resources.
7. Land is a factor of production.
8. Human wants are unlimited.
9. Resources are scarce if demand is less than its availability.
10. Only producers face economic problems.





## Notes

### 13.2 CENTRAL PROBLEMS OF ECONOMY

As we have discussed above, every economy in the world faces the economic problem of unlimited wants and limited resources. This economic problem gives rise to people making choices about how they would like to use scarce resources. This economic problem gives rise to the central problems of an economy which are as following

- What to produce and in what quantities?
- How to produce?
- For whom to produce?

These are called central problems because every economy has to face them and seek solutions to them.

Collectively, these central problems are called **the Problem of Allocation of Resources**.

Let us discuss each of these central problems in detail

#### (a) What to produce and in what quantities?

The fact that resources are scarce leads to the problem of ‘what to produce’ and in what quantities to produce. An individual producer needs to decide on how to employ the sources that are available to her for production. For example, if Lata, a farmer has a piece of land, she needs to think about what crop she would like to produce on her land. Let us assume taht she can grow either sugarcane or wheat. Given that her land is limited, she needs to choose whether she wants to use the land to produce sugarcane or wheat or both. Once Lata has taken this decision she needs to think about the quantity of the crop that she would like to produce. For example, 10 quintals, 20 quintals or 50 quintals.

This problem of ‘what to produce’ and in what quantities to produce is faced by all economies. An economy needs to choose whether it wants to use its resources to produce consumer goods or producer goods. Alternatively, to what extent should luxury goods be produced in comparison to necessities or goods of mass consumption? An economy may also be faced with the question of how much of civilian goods to be produced and how much of defence goods to be produced. In other words, scarce resources require economies to decide the combination of goods and services they should produce.

The problem of what to produce and in what quantities to be produced can be solved by a government that decides the allocation of resources in different areas of production. Alternatively, it can be solved based on the preferences of people in an economy and on the price of goods and services in market.

**(b) How to produce?**

Choosing the technique of production relates to the problem of 'how to produce'. By technique of production we mean the different combination of factors of production that can be used to produce a good.

Generally all goods can be produced through different methods of production. Various methods of production require different combinations of factors of production. A technique of production could be either labour intensive or capital intensive. *In a production process when more units of labour are used in proportion to capital, it is termed as a labour intensive technique. Alternatively, when the proportion of capital used is more than labour, the production process is called a capital intensive technique.*

Let us understand this with the help of some examples. On Lata's farm, she has the choice of using different combinations of labour and capital to produce her crop. If she chooses to do the ploughing, sowing, harvesting and threshing with her bullocks and employing people, then she is using a labour intensive technique. On the other hand, if she uses machines such as tractor, harvester and thresher to do the same work, then she is using a capital intensive technique of production. Similarly, in cloth production the use of handlooms is a labour intensive technique to produce cloth whereas the use of powerlooms is a capital intensive technique of production of cloth.

The solution of the problem of how to produce is based on the extent of output that is produced for a given level of resources. Any producer would like to maximize the level of output from the available resources. At the same time cost of using a technique is equally very important. A producer will use that particular technology which is available at least cost.

**(c) For whom to produce?**

*The problem of 'for whom to produce' relates to how the value of the produced output of an economy gets distributed amongst different people. People do not receive the output they produce as their compensation. The output is sold and the money is earned in the production process. This money is paid as income to people for the work they have done in the production process. This income, in turn, is used by people to satisfy their wants. Hence, the problem of for whom to produce tells us how the different factors of production are compensated for their work.*

In our example, once Lata's crop is harvested and sold, she needs to pay the various factors of production for their services. The labour will be paid wages, land will be paid rent, capital (in the form of machinery) will be paid interest. Lastly, Lata will earn profit as an entrepreneur for organising the factors of production and undertaking some risk of running the production activity.



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**Notes****INTEXT QUESTIONS 13.2**

Choose the correct answer:

1. The problem of how to produce relates to:
  - (a) distribution of income
  - (b) technique of production
  - (c) choosing the goods to produce
  - (d) choosing the quantities to produce
2. The problem of what to produce is solved by:
  - (a) preferences of people
  - (b) market prices
  - (c) government allocation of resources
  - (d) all of the above
3. The income earned by labour in the production process will be part of the problem of:
  - (a) what to produce and what quantities
  - (b) how to produce
  - (c) for whom to produce
  - (d) none of the above
4. Labour intensive technique of production means:
  - (a) the use of only labour in production
  - (b) production unit is owned by labour
  - (c) the technique used for producing necessities
  - (d) the use of more labour than capital in producing goods
5. The central problems facing an economy relates to:
  - (a) the allocation of resources
  - (b) what to produce
  - (c) how to produce
  - (d) for whom to produce

**13.3 OTHER CENTRAL PROBLEMS OF THE ECONOMY**

In addition to the central problems discussed in the previous section, every economy faces two other problems. These are:

- (a) The problem of optimum utilization of resources
- (b) The problem of growth of resources

Let us discuss each of these problems in detail.

### (a) Optimum Utilization of Resources

Resources are scarce they must not be wasted. They must also be used judiciously to give the maximum output. Thus, optimum utilization of resources has the following implications:

- (i) All resources must be utilized and
- (ii) Resources must be used efficiently

These two issues are discussed below:

#### (i) *All resources must be utilized*

If resources are not utilized/employed or are lying idle, it means that they are being wasted. Wastage of resources results in low output. For example, people may be unemployed. This means that human resources are being wasted. Similarly, when workers in a factory go on strike, capital resources lie idle and are wasted. If these resources are utilized, the output that can be produced in the economy shall rise. Thus, every economy must ensure that scarce resources are utilized and not left idle or unemployed.

#### (ii) *Efficient Utilization of resources*

Since resources are scarce, they should not be under utilized. Under utilization of resources means that resources are not being used to their fullest capacity. For example, if a person finds a job in which he works only for 4 hours a day, but his capacity to work is 8 hours a day, then his labour is under utilized. In other words, the person is not being employed efficiently. If he had a job for 8 hours a day, the output would increase. Under utilization of resources also results in wastage of resources. Hence, every economy must try and adopt techniques of production that ensure efficient utilization of resources.

### (b) Growth of resources

We have studied earlier in the chapter that wants are unlimited. This means that people continuously want more and more goods. However, these ever increasing wants can not be satisfied unless the resources that produce goods and services are increased. Thus, resources must grow to satisfy the constantly increasing wants in an economy. So, how can resources grow in an economy? Resources can increase if:



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### Notes

#### (i) *There are quantitative changes in the resources*

Quantitative increase in resources occurs when the actual quantity of resources that is available in the economy increases. For example, when the population increases, then the quantity of human resource increases. Similarly, when more natural resources are found, it increases the availability of resources in an economy.

#### (ii) *There are qualitative changes in resources*

Qualitative changes in human capital occur due to better training and skill development. Qualitative changes in man made capital occur when there is an improvement in technology. Under qualitative changes, the amount of resources available does not change but their productivity increases. Productivity is defined as the output per unit of input. For example, if labour gets trained, then the output from the same person can increase. Productivity improves due to better skill and training.

To conclude our discussion, growth of resources occurs when the physical availability of resources increases and/or there is technological upgradation or an improvement in the quality of resources.



### INTEXT QUESTIONS 13.3

Choose the correct answer:

1. Under utilization of resources means that resources are being used ..... (efficiently/inefficiently)
2. Technological ..... (backwardness/improvement) leads to growth of resources.
3. Resources should remain ..... (idle/fully utilised).
4. If a person is ..... (employed/unemployed), it means that the resource is being wasted.
5. Quantitative change in resources means that ..... (there is more labour available/ labour gets more skill and training).

### 13.4 CONCEPT OF PRODUCTION POSSIBILITIES

In deciding 'what to produce' and how much, an economy has to take decisions regarding allocation of resources among different possible alternatives. Let us assume that the economy is producing only two commodities, rice and bicycles. With the limitation of the total resources, if all the resources are utilized in the production of rice, let 20 quintals of rice can be produced and no production of



bicycle will take place. If more and more resources are being diverted towards the production of bicycles, little amount will be left for the production of rice. Similarly if all the resources are being used in the production of bicycles, say 150 bicycles can be produced and no resources will be left for the production of rice. Therefore, the scarce resources are employed in various combinations to get alternative production possibilities.

The production possibilities curve is a graphical medium of highlighting the central problem of 'what to produce'. To decide what to produce and in what quantities, it is first necessary to know what is obtainable. The curve shows the options that are obtainable, or simply the production possibilities. What is obtainable is based on the following assumptions:

- The resources available are fixed.
- The technology remains unchanged.
- The resources are fully employed.
- The resources are efficiently employed.

The resources are not equally efficient in production of all products. Thus, if resources are transferred from production of one good to another, the cost of production may increase.

### 13.5 PRODUCTION POSSIBILITY SCHEDULE

To simplify, let us assume that only two goods are produced in an economy. Let these two goods be guns and butter. The example given by a famous economist Samuelson who won nobel prize in economics in the year 1969. The example, symbolizes the problem of choice between war goods and civilian goods. Given the extremes and the in-between possibilities, a schedule can be prepared. It can be called a production possibilities schedule. A Production Possibilities Schedule (or Table) is a set of numbers in tabular form that illustrates different possible combinations of two goods that can be produced if all available resources are efficiently used during a given time given technology of production. Suppose if all the resources are engaged in the production of guns, there will be a maximum amount of guns that can be produced per year. Let it be 15 units. At the other extreme suppose all the resources are employed in production of butter only. Let the maximum amount of butter that can be produced is 5 units. These are the two extreme possibilities. In between the resources can also be partly used for the production of guns and partly for production of butter. Given the extremes and the in-between possibilities, a schedule can be prepared. It can be called a production possibility schedule (PPS). Let the schedule be given as follows.



## MODULE - 5

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### Central Problems of an Economy

Possibilities	Guns (units)	Butter (units)	MRT
A	15	0	–
B	14	1	4
C	12	2	2
D	9	3	3
E	5	4	4
F	0	5	5

### 13.6 PRODUCTION POSSIBILITIES CURVE/FRONTIER

The central problems of an economy are explained by modern economists with the help of Production Possibility Schedule (PPS) or Production Possibility Curve (PPC). PPS shows alternative production possibilities of two sets of goods with the given resources and techniques of production. PPC is a graphic representation of PPS. It is also called Production Possibility Frontier (PPF). This curve is also called Transformation Curve since it indicates that if more of butter is to be produced, then factors will have to be withdrawn from the production of guns and transferred towards the production of butter.

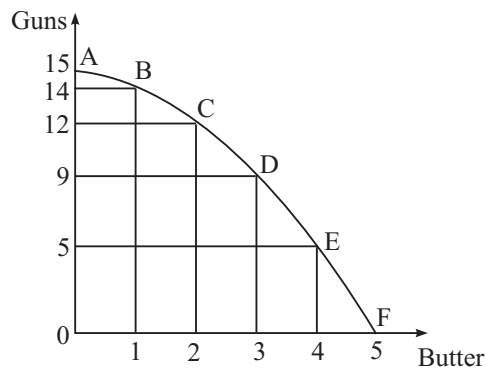


Fig. 13.1

In Fig. 13.1 the curve AF is called PPC. As shown in the diagram, when all the resources are used for production of guns only the economy produces 15 units of guns and no butter. This is marked as point A. When some resources are transferred to increase production of butter from 0 to 1 unit, then production of gun fall from 15 to 14 so that the economy reaches at point B on PPC and so on. Finally all resources are transferred from guns to produce only butter, then the economy reaches at point F, where it produces 5 units of butter and no gun. This way the

locus ABCDEF gives the PPC. So PPC is a graphical representation of the alternative combinations of the amounts of two goods or services that an economy can produce by transferring resources from one good or service to the other. This curve helps in determining what quantity of a nonessential good or a service an economy can afford to produce without jeopardizing the required production of an essential good or service. PPC has two following properties:

- (a) PPC slopes downward: This means that more of a good can be produced only by sacrificing some quantity of the other good.
- (b) PPC is concave to the point of origin: You can see that some amount of gun has to be reduced to produce one unit extra of butter. This is done by transferring resources from the production of gun to that of butter. The rate at which the units of a good is reduced to increase a unit of another good is called marginal rate of transformation (MRT). MRT is measured along PPC when the economy moves from one point to another. In Fig. 13.1, movement from point A to B to C and so on gives the idea of MRT. When the economy moves from point A to B, 1 unit of gun is reduced (from 15 units to 14 units) to produce extra unit of butter (from 0 to 1 unit). When the economy moves from point B to C, 2 units gun are given up (from 14 to 12 units) to produce another unit of butter (from 1 to 2 units). This way some units are guns are reduced to gain one unit of butter. So MRT measures the change in one good (here gun), due to change in another good (here butter).

Hence MRT measures the rate of change of PPC or simply the slope of PPC. On a concave shaped PPC as in Fig. 13.1, we see that when we increase butter by one unit, we have to decrease gun by more units than before. So on a concave PPC, MRT increases.

$$\text{Here MRT} = \frac{\text{Change in Guns}}{\text{One unit change in Butter}}$$

The curve is based on the following assumptions:

- (a) quantity of factors of production is fixed
- (b) full employment
- (c) technology is given
- (d) There are two goods produced in the economy.

PPC can be a straight line if production is obtained under law of constant returns or when marginal rate of transformation of both the commodities is same. For e.g. to produce one more unit of commodity X if only one unit of commodity Y is sacrificed through out then PPC becomes a straight line. However, this is only a conceptual possibility. The significance of this curve lies in the interpretation of the central problems and help in finding solutions to them. This is done through



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analysing the output with changing combination of resources. Situation of economic growth can also be analysed through the shifts in PPC as observed after growth in capital stock, changes in investment and improvement in technology.



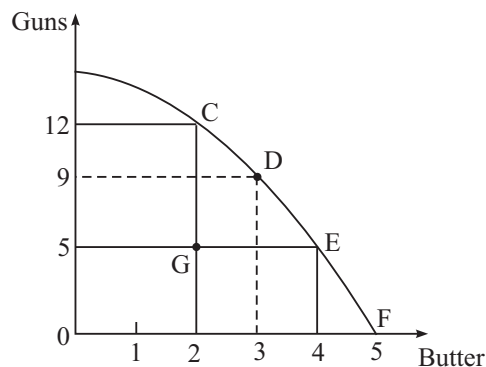
**INTEXT QUESTIONS 13.4**

State whether the following statements are true or false:

1. A point on the PPC implies that resources are fully utilised.
2. A point inside the PPC implies existence of under employment.
3. A PPC is drawn on the assumption that resources of the economy are increasing.

**13.7 UNDERUTILISATION OR INEFFICIENT UTILIZATION OF RESOURCES**

We have seen above that any point on the production possibility curve represents full and efficient utilization of resources. If, however, the economy functions at a point inside the production possibility curve, then it shows that there exists either underutilization or inefficient utilization of resources.



**Fig 13.2 : Underutilisation or inefficient utilization of resources**

Refer to our schedule of PPL given earlier.

Let us understand this point with the help of a diagram given in Fig. 13.2. In Fig. 13.2, we see that at point G, the economy is producing 2 units of butter and 5 units of guns. Through a re-allocation of resources, the economy can do one of the following:

- (a) increase the production of guns to 12 units and keep the production of butter at the same 2 units as at point C on PPC.

(b) increase the production of butter to 4 units and keep the production of guns same at 5 units as shown at point E on PPC.

In both (a) and (b) above, we see that the economy has been able to increase the production of the one of the goods if it moves towards point C or E on PPC from the point G which is inside PPC.

(c) In fact the economy can produce more of both the goods on any point on PPC (e.g. at point D) as compared to point G.

Therefore, we can conclude that at point G the economy was not using its available resources in the best possible manner. So any point inside the PPC shows unemployment of resources.



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### 13.8 GROWTH OF RESOURCES

We have studied earlier that resources in any economy need to grow to satisfy the ever increasing wants of people. Growth of resources occurs when the physical quantum of resources increases or when there is a rise in the productivity level of resources. This implies that with growth in resources, the output produced in an economy will increase. We can use the diagram in Fig. 13.2 to show growth in production capacity.

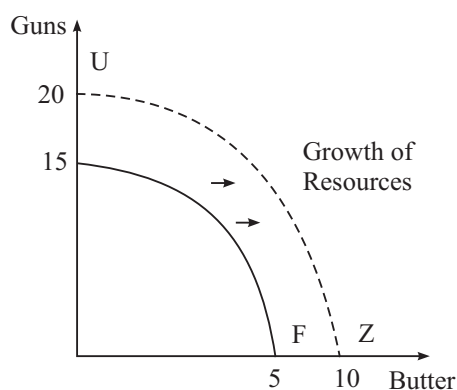


Fig. 13.3 : Production Possibility Curve showing Growth of Resources

In Fig. 13.3, we see that AF is the same production possibility curve as in Fig. 13.1. As resources grow, the economy can now produce more of both guns and butter. This is depicted by the curve UZ. At point U, the economy produces only guns which has increased to 20 units. This is more than the output of gun at point A. Similarly, at point Z, when the production of gun is zero, the output of butter is 20 units. This is greater than the output of 5 units when resources had not grown. All other output combinations show that the output of both guns and butter are higher on the production possibility curve UZ than on the curve AF. This shows that



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*growth of resources results in an outward shift of the production possibility curve, which results in higher levels of output.*



**INTEXT QUESTIONS 13.5**

1. Choose the correct answer:  
A point on the production possibility curve shows:
  - (i) Growth of resources
  - (ii) Inefficient utilization of resources
  - (iii) Unemployment of resources
  - (iv) Full and efficient utilization of resources
2. State whether the following statement, are true or false:
  - (a) A point inside the production possibility curve shows underutilization of resources.
  - (b) Unemployment of labour means that resources are not being fully employed.
  - (c) Better technology will lead to an inward shift of the production possibility curve.
  - (d) A production possibility curve can depict more than two goods in an economy.
  - (e) An economy needs to choose the point at which it wishes to operate on the production possibility curve, as all points are equally efficient.



**WHAT YOU HAVE LEANT**

- Scarcity of resources leads to the problem of choice.
- The basic economic problem is faced by both consumers and producers.
- The economic problem gives rise to the central problems in an economy. These are also termed as the problem of allocation of resources.
- The problem of what to produce and in what quantities to produce looks at the different combinations of goods and services that an economy could produce given the available resources which must be used efficiently.
- The problem of how to produce looks at choosing the best technique of production. This could be either labour intensive or capital intensive.
- The problem of ‘For whom to produce’ looks at how is the output produced in the economy distributed amongst the owners of different factors of production which have helped to produce the output.

## Central Problems of an Economy

- The production possibility curve shows the different combinations of two goods that can be produced with full and efficient utilization of given resources and a given state of technology.
- Any point on the PPC shows resources are being fully and efficiently used.
- Any point inside the PPC shows that resources are being underutilized or are unemployed or are lying idle.
- A growth of resources is reflected by an outward shift of the PPC.



### TERMINAL EXERCISE

1. How do economic problems arise? Would there be any economic problem if resources were unlimited?
2. Explain how scarcity leads to choice.
3. Using examples explain the problem of what to produce and in what quantity.
4. Discuss the problem of 'how to produce'?
5. Explain the problem of fuller utilization of resources.
6. How can resources grow in an economy?
7. What is a production possibility curve? Using a production possibility curve show the problem of inefficient utilization of resources.
8. Draw a production possibility curve that shows growth of resources. How does growth of resources affect the output of an economy?
9. Discuss the problems of what and how to produce?
10. Draw a concave PPC by drawing a schedule?
11. Using a PPC explain inefficient utilisation of resources?
12. Using a PPC explain growth of resources?
13. Using a PPC explain efficient utilisation of resources?
14. Give three examples each about microeconomics and macroeconomics?



### ANSWERS TO INTEXT QUESTIONS

#### 13.1

1. True
2. False
3. False
4. True
5. False
6. False
7. True
8. True
9. False
10. False

## MODULE - 5

### Introduction to Economics



### Notes

## MODULE - 5

### Central Problems of an Economy

Introduction to Economics



Notes

### 13.2

1. (b)
2. (d)
3. (c)
4. (d)
5. (a)

### 13.3

1. inefficiently
2. improvement
3. fullyutilized
4. unemployed
5. there is more labour available

### 13.4

1. True
2. True
3. False

### 13.5

1. (iv)
2. (a) True (b) True (c) False (d) False (e) True