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PRINCIPLES OF MICROECONOMICS-I

B.E.C.C.-131

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Sample Preview of the Solved Sample Question Papers

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QUESTION PAPER

June – 2024

(Solved)

PRINCIPLES OF MICROECONOMICS-I **B.E.C.C.-131**

Time: 3 Hours] ***[Maximum Marks: 100***

Note: *Attempt questions from each Section as per instructions given.*

SECTION-A

Note: **Attempt any two questions from this Section. Word limit does not apply to Numerical questions.**

Q. 1. ***(a)*** **Why does a production possibility curve concave to the origin? Give reasons.**

Ans. Ref.: See Chapter-1, Page No. 2, 'Production Possibility Carve'.

(b) **The demand and supply curves for tea are given by the following equations:**

$$Q^D = 2500 - 50\ P$$

$$Q^S = 500 + 150\ P$$

Find the price and quantity at equalibrium level. What would happen if price is raised to ₹ 15?

Ans. $Q^D = 2500 - 50P$

$Q^S = 500 + 150\ P$

At equilibrium $Q^d = Q^S$

$2500 - 50\ P = 500 + 150P$

$2000 = 200\ P$

$P = 10$ i.e. Price = ₹ 10

Quantity (Q) = 2000

It price is raised to ₹ 15, then

$Q^D = 1750$

$Q^S = 2750$

Thus Quantity demanded become less and Quantity supplied will be increased.

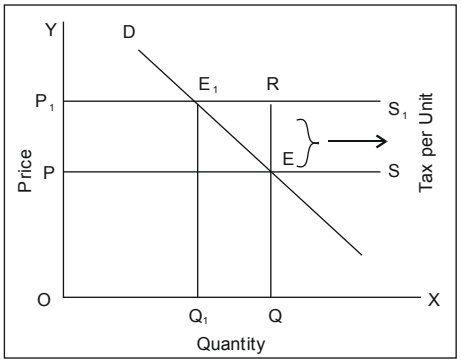
Q. 2. ***(a)*** **Who bears the tax burden under the following situations:**

(i) **When supply is perfectly elastic and demand is of normal shape.**

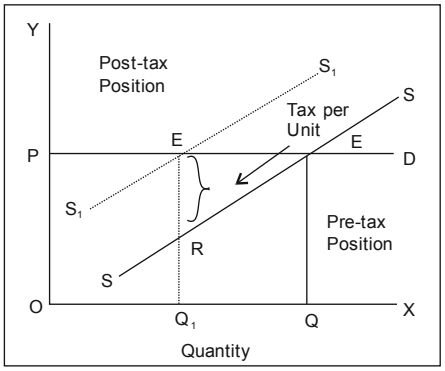
(ii) **When demand is perfectly elastic and supply is of normal shape.**

Ans. Ref.: See Chapter-4, Page No. 55, 'Sharing of Tax Burden'.

Also Add: When supply is perfectly elastic, the whole tax burden is borne by the consumer as illustrated in the Fig. Before imposition of tax, the equilibrium point is E giving equilibrium price as OP. After the imposition of tax, the equilibrium point shifts to E_1 showing equilibrium price as OP_1. Thus the whole tax burden is borne by the consumer.



When demand is perfectly elastic, the whole tax burden is borne by the producer himself as is illustrated in the Fig. Before imposition of tax, equilibrium point is E which gives equilibrium price as OP. After the imposition of per unit tax, the equilibrium point shifts to giving equilibrium price as OP which is same as before the imposition of tax. Hence, the whole tax burden is borne by the producer.



(b) **With the help of indifference curve analysis how does a consumer decide the optimal quantity of the commodity to buy at a given price?**

Ans. Ref.: See Chapter-6, Page No. 84, 'Consumer Equilibrium Through Indifference Curve Analysis'.

Q. 3. ***(a)*** **What are the 'Ridge Lines'? Explain why a producer always produces between these 'Ridge Lines'?**

Ans. Ref.: See Chapter-8, Page No. 113, 'Economic Region of Production and Ridge Lines'.

(b) **What is expansion path? Show the optimal expansion path in the short-run.**

Ans. Ref.: See Chapter-8, Page No. 114, 'The Expansion Path'.

Q. 4. ***(a)*** **Explain the concept of returns to scale. Discuss the factors which account for increasing returns to scale.**

Ans. Ref.: See Chapter-9, Page No. 124, 'Concept of Return to Scale', Page No. 127, Q. No. 2.

(b) **'Long-run average cost curve envelops the short-run average total cost curves.' Explain with the help of a diagram.**

Ans. Ref.: See Chapter-10, Page No. 144, Q. No. 16.

SECTION-B

Note: **Answer any four questions from this Section.**

Q. 5. Distinguish between change in quantity demanded and change in demand. Give reasons for change in demand of a commodity.

Ans. Ref.: See Chapter-2, Page No. 22, 'Change in Quantity Demanded and Change in Demand'.

Q. 6. Dicuss the various degrees of elasticity of supply with the help of diagrams. What are the determinants of elasticity of supply?

Ans. Ref.: See Chapter-3, Page No. 40, 'Elasticity of Supply'.

Q. 7. What is price consumption curve? Show that the price effect is the sum of income effect and substitution effect.

Ans. Price consumption curve (PCC) is the curve which shows the optimal combinations of two commodities that consumer will buy at different prices of one commodity while holding income and price of other constant.

According to Ferguson and Maurice, "The price consumption curve is a locus of equilibrium points relating the quantity of X purchased in relation to its price, money income and all other prices remaining constant."

When the price of a commodity changes, it affects the consumer's well-being. A price decrease makes the consumer better off, shifting their equilibrium to a higher indifference curve, while a price increase makes them worse off, shifting equilibrium to a lower indifference curve. The Price Consumption Curve (PCC) illustrates this relationship by joining equilibrium points on different budget lines and indifference curves as prices change. The PCC shows how the consumer's optimal consumption bundle changes in response to variations in the price of a commodity.

Also Add: Ref.: See Chapter-6, Page No. 87, 'Price Effect as Combination of Income Effect and Substitution Effect'.

Q. 8. The following table gives information on total cost and total variable cost at different levels of output.

Output	**0**	**1**	**2**	**3**	**4**	**5**
TVC	**0**	**50**	**70**	**80**	**95**	**120**
TC	**100**	**150**	**170**	**180**	**195**	**220**

Find: ***(i)*** **TFC,** ***(ii)*** **AFC,** ***(iii)*** **AVC,** ***(iv)*** **ATC,** ***(v)*** **MC.**

Ans.

Output (Q)	**TVC**	**TC**	**TFC**	**AFC**	**AVC**	**ATC**	**MC**
0	0	100	100	–	–	–	–
1	50	150	100	100	50	150	50
2	70	170	100	50	35	85	20
3	80	180	100	33.33	26.67	60	10
4	95	195	100	25	23.75	48.75	15
5	120	220	100	20	24	44	25

(i) TFC = TC – TVC = 100

(ii) AFC = TFC/Q

(iii) AVC = TVC/Q

(iv) ATC = TC/Q

(v) $MC = \frac{\Delta TC}{\Delta Q}$

Q. 9. Explain why does a producer produce at the tangency point of isoquant and iso-cost line? How does a producer maximise output at a given cost?

Ans. Ref.: See Chapter-8, Page No. 118, Q. No. 7, Page No. 114, 'Maximisation of Output for a Given Cost'.

Sample Preview of The Chapter

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PRINCIPLES OF MICROECONOMICS-I

Introduction to Economics and Economy

1

INTRODUCTION

Economics is a social science concerned with the production, distribution, and consumption of goods and services. A society needs a number of goods and services in everyday life, such as food, clothing, shelter, transport facilities, railways and various other services but actually every person only has a few of the goods and services that he would like to use. So, the country's economic system or economy gives a set-up for meeting this imbalance between wants of the people and the means to satisfy them. Our economic activities include: production, exchange and consumption of goods and services and for this, the resources available are scarce and there is this problem of choice which society has to decide as to how to use these scarce resources. The fundamental problems of every economy are what to produce, how to produce and for whom to produce and the allocation of scarce resources and the distribution of the final goods. Thus, scarcity is a fact of life and an efficient use of these scarce resources is to be found. That is how we define economics as a science that deals with scarcity.

CHAPTER AT A GLANCE

CONCEPT OF SCARCITY

Scarcity: Scarce means insufficient or limited. The resources available with every society are limited and so is the ability of the society to produce goods and services. Therefore, in the face of unlimited human wants, the society faces the problems of scarcity. The society can produce only a small part of goods and services it wants to produce and it has to make a choice regarding the type of goods and services to be produced along with the quantity thereof. This is called the problem of choice in which a decision is taken to produce one product and to abstain from producing another product. This involves sacrifice.

MEANING OF PRODUCTION

In the production process, resources are used to produce goods and services. Different methods and techniques are used in producing goods and services. Production creates utility, the items which are transformed are called inputs and the items of the services produced are the changed form of inputs, called the output. Utility, in economics is the want of satisfying capacity or the expected satisfaction that the consumers expect to derive by consuming the goods and services. Factors of production are the inputs or the resources which are used to produce goods and services. The resources that are required in producing goods and services can be classified as land (natural resources), labour (human resources), capital (man-made resources) and enterprise to bring these resources together to produce. Out of these capital and labour are active factors and land is the passive factor.

CENTRAL PROBLEMS OF AN ECONOMY

Allocation of the scarce resources and the distribution of the final goods and services are the fundamental problems of every economy, as given here under:

What to Produce?

An economy does not have sufficient resources to produce all the goods and services required and it has to decide what to produce and what not to produce. When some goods are not produced, some wants of the people remain unsatisfied. The decision involves allocation of resources. So, the economy chooses the product/service that brings highest benefits relative to its cost of production.

How to Produce?

This problem is concerned with deciding about how much resources to be used in the production of different goods and services. After deciding about the goods and services to be produced, the economy has

to decide as to in what quantities the chosen goods are to be produced. Different techniques/methods of production use different quantities of the different factors of production and the society has to choose the appropriate technique. Production can be alongside, every what and how to prodnce every economy has also to decide-how to distribute resources or how the total output will be divided amongst different consumers by using labour intensive techniques or capital intensive techniques.

For Whom to Produce?

After deciding what and how to produce, the next question is for whom to produce. Every economy has also to decide about how to distribute the production or the total output will be divided among different consumers. Distribution of national product depends on the distribution of national income and people having large incomes will get a larger share of the produce. In a free market economy, productive resources are privately owned and the question of who gets what is decided by who can afford what goods and services at the price decided by the demand and supply forces and the socialistic principle is from each according to his ability to each according to his needs.

The Problem of Growth

In order to generate income, every economy seeks to increase its production capacity. The generated income in an economy has two alternative uses, consumption expenditure (C) and saving (S). Thus:

$$Y = C + S.$$

There is a need to reduce the share of consumption expenditure (and thereby increase investment); this helps in capital formation.

Choice between Public and Private Goods

Private Goods : Goods which can be priced and whose use can be restricted to selected persons are called private goods. These goods need not necessarily be produced by private sector of the economy, it may be a product of the public sector or of a unit owned jointly by private and public sectors. A product may be priced so that only those who can pay and are ready to pay its price can have it and others are prevented, a characteristic which is called principle of exclusion.

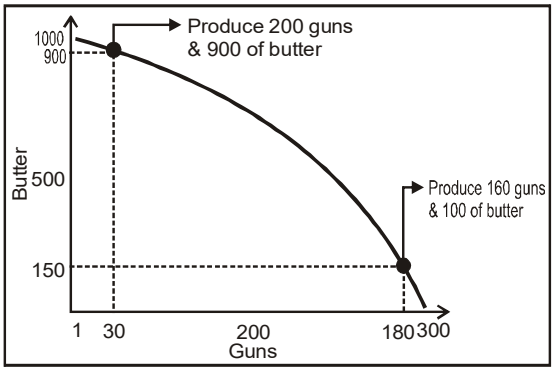
Public Goods: Public goods are goods which cannot be priced in way to prevent some persons from using. Example: Defence of the country from enemy attack, it cannot be said that only persons would be protected who pay a particular price and others would be left unprotected. However, it does not mean that every member of the public will also get equal share in it. Practically, there are no pure public or pure private goods and most of the goods available have a mixture of both in them. Goods which are pre-dominantly public in character, must be produced by the public sector and the private goods can be provided by both the private and public sectors.

The Problem of 'Merit Goods' Production

Merit goods, such as education facilities, are the goods and services that are regarded by the government as extremely important for the people, its use is promoted by the government because it wants people to consume these to ensure their welfare. The government provides these at free of costs or at subsidized prices because, if left to the private enterprises, it may not be provided to all the persons and a number of poor children may not be able to study which will adversely affect the people and the society. Consumption of merit goods help the entire society and also improve efficiency and well being of the people.

PRODUCTION POSSIBILITY CURVE

The scarce resources have alternative uses and the society decides about the extent of resources to be put to use in producing different goods and services and also determine the pattern of allocation of resources towards different goods and services. Such allocation of resources brings about a particular combination of different goods and services. Given the total resources, the economy can allocate them in a number of ways and get different combinations of all possible goods and services. Such a collection of the possible combinations of goods and services that can be produced from a particular part of the resources available is called the Production Possibility set of the economy. PPC explains the possible combinations of two goods that a society can produce in a particular time by efficiently utilizing its resources and it shows all the combinations of two goods that can be produced with the given resources. The PPC slopes downwards from left to right. This is because the production of one good is to be compromises when the production of the second product/service is to be increased. The second characteristic of PPC is that it is concave to its point of origin, which means that the opportunity cost of producing one additional unit of one product increases in terms of loss of producing the other unit.



Goods	Production Possibilities				
	A	B	C	D	E
Guns (No.)	10000	8000	6000	3000	00
Butter (Kgs.)	00	5000	9000	13000	15000

The above table shows that the combinations A, B, C, D and E give the production of the two commodities (butter and guns) by utilizing same amount of resources. The PPC curve shows different combinations of guns and butter that can be produced with the available resources.

ALLOCATION OF RESOURCES: SOLUTION OF CENTRAL PROBLEMS

Capitalistic economy and socialistic economy are two types of economic systems. All the countries in general have adopted a mixed economy system.

Resource Allocation in a Mixed Economy

Mixed economy has features of both capitalist economy and the socialist economy. In this system, the means of production are partly owned by the private and partly by the Government. (A mixed economy has both the public sector and the private sector). Economic activities are allowed to play freely in the market but at the same time, the Government regulates some of the segments of the economy. In India, we have both public sector and private sector and hence, mixed economy represents a mixture of capitalism and socialism. In some areas where there is no interference by the government, in some areas, the government regulates all the work and in selected areas all economic activities are reserved for government to encourage a balanced development of the economy.

ECONOMIC METHODOLOGY AND ECONOMIC LAWS

Economic methodology is the study of methods, usually scientific method, in relation to economics, including principles underlying economic reasoning. The term 'methodology' is also commonly, though incorrectly, used as an impressive synonym for method(s). Rather, methodology is the study of method(s).

The objective of economic modelling is to produce an abstract representation of a real economic context. Such a representation can be used to explain how the context works, to instruct about it, to forecast its behaviour and to stimulate policy in regard to its function.

Economists regard modelling as a form of scientific method. When the term "Scientific Method" is mentioned, people often think of experimentation within a laboratory setting. Such experimentation generates data which can serve as the basis for an inference about the validity of a scientific theory or hypothesis. Economists have only upon occasion undertaken experiments as a means of discerning the economic nature of the world.

Economic Laws

Economics, like all other sciences, has drawn its own set of generalizations or laws. Economic laws are nothing more than careful conclusions and inferences drawn with the help of reasoning or by the aid of observation of human and physical nature. In everyday life, we see man is always busy in satisfying his unlimited wants with limited means. In doing so, he acts upon certain principles. These principles or generalizations which an average man usually follows when he is engaged in economic activity are termed, "Economic Laws". Economic laws are the statements of general tendencies. In the words of Marshall, "Economic Laws are those social laws which relate to branches of conduct, in which the strength of motive chiefly concerned can be measured by money prices."

1. **Laws of economics are less exact:** The nature of economic laws is that they are less exact as compared to the laws of natural sciences like Physics, Chemistry, Astronomy, etc. An economist cannot predict with surety as to what will happen in future in the economic domain. He can only say as to what is likely to happen in the near future.
2. **Economic laws are essentially hypothetical:** Economic laws, writes *Seligman*, are essentially hypothetical. They are true under certain given conditions. If these conditions are fulfilled, the conclusions drawn from them will be true and exact as those of the laws of physical sciences. From this statement that laws of economics are hypothetical, we should not conclude that, they are useless or unreal. The hypothetical element is also there in the laws of physical sciences.
3. **Economic laws are qualitative and not quantitative:** Laws of economics are qualitative in nature. They are not exactly stated in quantitative terms. They tell the direction of change which is expected rather than the amount of change. For example, according to the law of demand, the quantity

demanded varies inversely with price. We do not say that 10% rise in price will lead to 30% fall in the quantity demanded.

4. **Applies on the average in normal conditions:** Economic laws do not deal with any particular individual, firm, commodity, etc. It takes an average economic unit and lays down its economic behaviour.

Inductive and Deductive Reasoning

Inductive reasoning, also known as induction or inductive logic, is a type of reasoning that involves moving from a set of specific facts to a general conclusion. It uses premises from objects that have been examined to establish a conclusion about an object that has not been examined. It can also be seen as a form of theory-building, in which specific facts are used to create a theory that explains relationship between the facts. Inductive reasoning is used when a sequence of individual pieces of information is generalized into a conclusion that relates to those pieces of information (e.g., after several cakes baked in the same cake pan came out burnt). Carl concluded that if he bakes a cake in that particular cake pan it will probably come out burnt).

For example: 3 + 5 = 8 and eight is an even number.

Therefore, an odd number added to another odd number will result in an even number.

Deductive reasoning, also called deductive logic, is reasoning which constructs or evaluates deductive arguments. In logic, an argument is deductive when its conclusion is a logical consequence of the premises. Deductive arguments are valid or invalid, never true or false. A deductive argument is valid if and only if the conclusion does follow necessarily from the premises. Logic is used to move from premises to conclusions. Each premise can be true or false. If the conclusion is invalid, then at least one of the premises must be false. And if a deductive argument is not valid then it is invalid. Deductive reasoning is used when a generalization relating pieces of information is known, and a conclusion about a specific piece of information is desired. (e.g., the baseball coach knows the opposing batsman hits fast-balls well, so she instructs her pitcher not to throw a fast-ball).

Equilibrium

Equilibrium is the condition of a system in which competing influences are balanced. In economics, economic equilibrium is simply a state of the world where economic forces are balanced and in the absence of external influences the (equilibrium) values of economic variables will not change. It is the point at which quantity demanded and quantity supplied are equal.

Equilibrium can be analysed in two forms:

1. Partial: In partial equilibrium analysis we concentrate on a single market in isolation from the rest of the economy.

2. General: In general equilibrium analysis, we analyse simultaneously all the markets in the economy on the basic premise that everything depends on everything else.

POSITIVE *VERSUS* NORMATIVE ECONOMICS

Positive economics is the branch of economics that concerns the description and explanation of economic phenomena. It focusses on facts and cause and effect relationship and includes the development and testing of economic theories. Positive economics as science concerns analysis of economic behaviour. Positive economics as such avoids economic value judgements. For example, a positive economic theory might describe how money supply growth affects inflation, but it does not provide any instruction on what policy ought to be followed.

Normative economics is the branch of economics that incorporates value judgements (normative judgements) about what the economy ought to be like or what particular policy actions ought to be recommended to achieve a desirable goal. Normative economics deals mostly with value judgements regarding the economy. It focusses on what a good economy should look like and what should be recommended to get there. Whereas, a positive economy focusses only on factual information, statistics, and scientific formula to determine what the economy should look rather than value of judgement discussion. Positive Economics (sometimes called Descriptive Economics) is the study of economic reality and why the economy operates as it does. It is purely biased on facts rather than opinions. This type of economics is made up of positive statements which can be accepted or rejected through applying the scientific method.

MICRO ECONOMICS AND MACRO ECONOMICS

Micro economics is the study of decisions that people and businesses make regarding the allocation of resources and prices of goods and services. This aslo means also taking into account taxes and regulations created by governments. Micro economics focuses on supply and demand and other forces that determine the price levels seen in the economy. For example, micro economics would look at how a specific company could maximize its production and capacity so it could lower prices and better compete in its industry.