ICSE Board
Class X Economic Applications
Board Paper – 2017 Solution

PART I

Answer 1

(a) The law of demand states the inverse relationship between the price and the quantity demanded keeping other factors constant. This implies that the demand for a good increases with a fall in its price, and the demand decreases with a rise in its price.

(b) The state plays an important role in the development of an economy as follows:

i. Providing rural infrastructure and extending credit to the poor at a low rate of interest as an effective instrument to remove poverty.

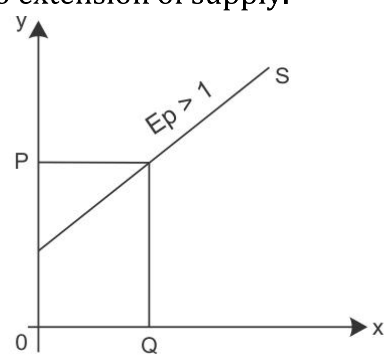
ii. Development of infrastructure such as transport, irrigation system, power and electricity and communication is required to promote agricultural and industrial development.

(c) When the demand for different complementary goods is created at one time, it is termed joint demand. For example, the demand for computer hardware and software is created jointly.

(d) Adverse effects of mining on the environment reshape the topography and generation of great volumes of waste.

(e) Perfectly elastic supply curve:

Supply is said to be elastic when $E_p > 1$. Elastic supply refers to a straight line, a positively sloped supply curve from the y-axis irrespective of the angle it makes. The diagram shows that the quantity supplied is elastic, i.e. an increase in the price of the commodity from OP will lead to extension of supply.



Answer 2

(a) Price elasticity of supply (Percentage method):

E_s= Percentage change in quantity supplied/Percentage change in price

E_s = 25/50= 0.5

Therefore, supply is less elastic as E_s < 1.

(b) Two factors determining capital formation in a country are

i. **Personal saving:** Personal saving is the difference between personal income and personal consumption. This difference is the main source of capital formation. Nearly 75% of the gross domestic savings in India have been contributed by the household sector.

ii. **Corporate saving:** Companies do not distribute all their profits as dividends paid to shareholders. Only a part of the profits is retained for the purchase of capital goods. These retained profits are called corporate savings.

(c) **Regressive tax:**

In regressive tax, the average tax rate decreases with an increase in the income of an individual. The absolute amount of tax collection increases with an increase in income.

Example:

Income per month	Rs 2000	Rs 4000
Tax rate	10%	7.5%
Tax collection	Rs 200	Rs 300

(d) Monopoly is a form of market where there is a single seller of a good with no close substitutes. Example: Railways in India

(e) Creeping inflation is inflation where the price level increases at a slow rate of 2–2.5% per annum.

Answer 3

(a) Monopsony refers to a market where there is a single buyer of a commodity or service but there are many sellers. An example of monopsony occurs when a certain individual has a liking only for some commodity or when a single large firm is the sole buyer of some commodity.

(b) The central bank acts as a custodian of the country's stock of gold and reserves of foreign exchange. This enables the central bank to exercise a reasonable control on foreign exchange. This helps the bank in stabilising the external value of currency.

(c) Division of labour increases efficiency of labour. Workers become more specialised if they are entrusted with only a part of the work in production. When efficiency of labour increases, it increases the quantity and quality of production. Society can produce goods at a lower cost of production.

(d) Money acts as a measure of value. It is the monetary expression of the market value of goods and services. This facilitates maintenance of business accounts.

(e) Demand deposits can be withdrawn at any time. There is no interest rate on demand deposits. These deposits are chequable and can be withdrawn through cheques.

Answer 4

(a) **True.** A moderate rise in price, i.e. ***creeping inflation*** has a favourable effect on producers particularly when there are underemployed resources in an economy. During inflation, a moderate rise in prices increases the profit expectations within the business community. This is because the price rises more rapidly than the cost of production.

(b) **False.** Buyers and sellers are completely aware of the existing price in the market. As they deal with homogeneous products, they will not be able to charge different prices from different buyers. If firms try to charge a higher price for their products, then sellers will immediately shift to firms selling at lower prices. Hence, firms cannot change their price and have to stick to or take the price determined by the industry. They are ***only price takers but not price makers.***

(c) **False.** If the percentage change in demand for a good is greater than the percentage change in price, then the demand for the good is ***elastic at that price*****,** i.e. $e_p > 1$.

(d) **True.** Two factors determining capital formation in a country are personal saving and corporate saving. Nearly ***75% of the gross domestic savings*** in India have been contributed by the household sector.

(e) **False.** Tax rate which increases with an increase in income is known as ***progressive tax***. There is a different rate of tax at every income slab.

PART II

Answer 5

(a) Perfect competition is a form of the market where there are a ***large number of buyers and sellers of a commodity.*** A homogeneous product is sold in the market. An individual firm has no control over the price; it is a price taker.

Main features of perfect competition:

i. **Large number of sellers and buyers:** The number of firms selling a particular commodity is so large that any increase or decrease in supply by an individual firm hardly impacts the total supply. So, an individual firm fails to impact the price of the commodity in the market. It can sell any amount at the existing price of the commodity. Hence, a firm under perfect competition is a price taker. Even the number of buyers is large, and hence, an individual buyer is also unable to influence the price of the commodity.

ii. **Homogeneous products**: All sellers sell identical units of a product. The existence of identical product implies the same price for the product in a competitive market. Hence, buyers have no reason to prefer the product of one seller compared to that of another.

iii. **Free entry and exit of firms:** A firm can easily enter and exit any industry as there is no legal restriction. Whenever there are abnormal profits, new firms will enter the industry and whenever there are losses, few existing firms will exit the industry. This situation is possible only in the long run.

iv. **Perfect knowledge among buyers and sellers:** Both buyers and sellers have perfect knowledge about the product market. Sellers also have perfect knowledge about the input markets.

(b) Supply:

i. Supply of a commodity refers to the schedule showing various quantities of a commodity that producers are ***willing to sell at different possible prices*** of the commodity at a point of time.

Differences between **supply and stock**:

Supply	Stock
Supply refers to the quantity of a commodity which is brought into the market for sale.	Stock means the total volume of commodity which can be brought into the market for sale.
It indicates only the actual sale incurred in the market and is expressed in terms of flow of goods per time period.	It indicates potential supply in the market. It is not expressed in terms of flow of goods per time period.

ii. The ***law of supply*** states that other factors being equal, the quantity of a good supplied increases with an increase in its price level and decreases with a decrease in its price level. ***Assumptions of the law of supply:***

- Price of other goods is constant
- No change in the state of technology
- Prices of factors of production remain the same

iii. **Factors affecting supply other than price:**

- ***Technological condition:*** Technological progress creates a positive approach in the supply of a particular product. It decreases the cost per unit and increases the productivity of given factor inputs of production. This leads to making the production of a particular good more profitable. So, there is an increase in the supply of a product which causes a rightward shift of the supply curve.
- ***Government policy:*** An increase in taxes increases the cost of production and thus reduces the supply because of a lower profit margin and *vice versa*.

Answer 6

(a) Urbanisation: Urbanisation refers to the population shift from rural to urban areas. This leads to an increase of population in the urban cities. People usually migrate to urban areas in search of better jobs, education and health facilities.

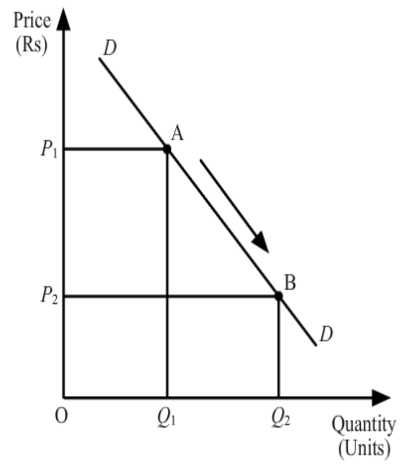
Impact of urbanisation on the environment:

- **Air pollution**: Urbanisation results in increase in number of factories and automobiles. Air pollution occurs due to the harmful emission of gases such as carbon monoxide, carbon dioxide, oxides of nitrogen and smoke from vehicles and factories.
- **Growing volume of urban wastes**: Thickly populated urban areas consumes large quantities of material and simultaneously release a lot of solid wastes. The solid wastes include municipal wastes, industrial wastes and hazardous wastes. Urban waste often ends up in illegal dumps on streets, open spaces, wastelands, drains. This not only pollutes the surrounding environment but can also result in the spread of diseases.

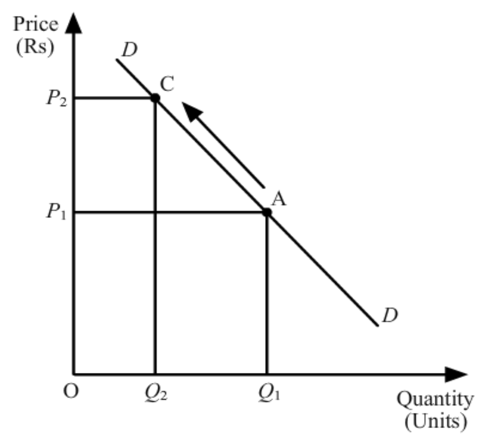
- Urbanisation can magnify the **risk of environmental hazards** such as flash flooding. Felling down of trees for building residences, making highways and dams to fulfill requirements of growing urban population may result in landslides and flash flooding.
- The unplanned construction of large buildings in urban areas tend to absorb solar radiation and in the afternoon, these emit heat radiations **increasing the temperature of a place.**

(b) Extension and contraction of demand:

i. **Extension of demand:** It refers to a rise in demand for a commodity because of a rise in its own price. Fall in price is the only factor which leads to extension of demand. Diagrammatically, it is depicted by a downward movement along the same demand curve.



ii. Contraction of demand: It refers to a decrease in quantity demand for a commodity because of an increase in the price keeping other factors constant. Increase in price is the only factor which leads to contraction of demand. Diagrammatically, it is depicted by an upward movement along the same demand curve.



Answer 7

(a) Land is defined so as to include not only the surface of the Earth but also all other gifts of nature.

Factors affecting the productivity of land:

i. The productivity of land is largely determined by its ***natural qualities***. In agriculture, some properties of the soil would be more suitable for the cultivation of wheat than for the cultivation of rice. Farmers need to identify the soil suitable for the cultivation of a particular crop. Thus, cultivation in suitable soil also increases land productivity.

ii. Farmers need to use high-yielding variety of seeds, adequate amount of chemicals or bio-fertilisers and pesticides, and improved agricultural implements such as power tillers or tractors. Thus, the ***scientific process of cultivation*** will help them increase the yield of crops per hectare.

iii. The productivity of land depends on the way ***factors of production are organised***. The productivity level can be increased with the help of trained workers, modern equipment and source of irrigation.

(b) A commercial bank is a financial institution which provides services such as accepting deposits, giving business loans, mortgage lending and basic investment products such as savings account and certificates of deposit.

Commercial banks provide credit facilities through

i. **Loans:** A commercial bank advances loans to business people, farmers and consumers against approved securities. Short-term loans, discounting of bill of exchange and money at call are loans advanced by commercial banks.

ii. **Cash credit:** Banks sanction cash credit according to the requirement of the borrower on the basis of the bank credit limit. Interest will be paid by the borrower only on the actual amount withdrawn from the bank.

iii. **Overdraft facilities:** For overdraft facilities, an account holder can withdraw money in excess of the amount deposited with the bank. However, the borrower will pay interest on the excess amount withdrawn from the bank.

Answer 8

(a) Monetary policy is a policy of the central bank to control money supply and credit creation in the economy. It helps control the situation of excess and deficient demand through qualitative and quantitative instruments.

i. **Bank Rate Policy:** Bank rate policy is used as the main instrument of monetary control during inflation. When the central bank raises the bank rate, it is said to have adopted a dear money policy. The increase in bank rate increases the cost of borrowing which reduces commercial banks borrowing from the central bank. Consequently, the flow of money from the commercial banks to the public reduces. Therefore, inflation arising because of bank credit is controlled.

ii. **Open Market Operation:** Open market operations refer to the sale and purchase of government securities and bonds by the central bank. While controlling inflation, the central bank sells government securities to the public through banks. This results in the transfer of a part of bank deposits to the central bank account and reduces the credit creation capacity of commercial banks.

(b) Producers try to differentiate their product in shape, packaging and brand name to attract consumers. This is called ***product differentiation.*** It is relevant to monopolistic competition in which there are many sellers of the product, but the product of each seller is different from the other. A monopolistic firm has partial control over price only through ***product differentiation***. Products are differentiated through the design and colour of packaging of the product. This attracts consumers to buy the product at a higher price. As there are many rivals and close substitutes of products in the market, a monopolistic firm cannot have full control over the price.

Features of Monopolistic Competition

i. Under monopolistic competition, different producers try to differentiate their product in its shape, packing and brand name. This is done to attract buyers from rival firms in the market. This is called product differentiation.

ii. There is a large number of sellers and buyers. The size of each firm under monopolistic competition is small. Each firm has a limited share of the market.

iii. Firms are free to enter the industry and exit it. However, new firms have no absolute freedom of entry into the industry. Some firms have patent rights for a product. New firms cannot produce those products.

iv. Each firm has to incur selling costs on advertisements to promote its sales. This is because there is a large number of close substitutes in the market.

v. Sellers and buyers of products do not have perfect knowledge about the market price. Because of product differentiation, it is not possible to compare the price of different products.

Answer 9

(a) Money is a thing which is commonly accepted as a medium of exchange. Money is an instrument which serves as a medium of exchange, a measure of value, a store of value and a standard for deferred payments.

Contingent functions of money:

i. **Assisting production decisions:** Producers have to decide the amount of factors of production to make a profit. They have to make factor payments to those factors of production in terms of money. Thus, the money prices of those factors help the producer to make necessary decisions.

ii. **Assisting consumption decisions:** The consumption of the consumer depends on the income level and money-prices of the commodities in the market. Thus, the income of the consumer and money-prices of the commodities influence the consumption decision of individuals.

iii. **Assisting distribution of national income:** Owners of various factors of production sell their factors at market prices. They receive money wages, interest, rent and profits as factor incomes. All these incomes constitute the national income of a country. Hence, the distribution of national income among the owners of different factors is determined by the money prices of those factors.

(b) Privatisation refers to any process which discourages the participation of the state public sector in the economic activities of an economy. Its main objective is to make the best possible use of privately owned resources for collective welfare of the people.

During the last ten years, several public sector enterprises have been suffering huge losses because of certain problems and shortcomings. ***Problems of public sector undertakings in India:***

i. **Lack of incentive:** There is a difference between the performance of a government servant and a person working in a private enterprise. Promotion is awarded by seniority and not by merit for government servants. Promotion in public sector undertakings may not be concerned with the profit of the enterprises.

ii. **Delay in completion:** Many projects could not be completed within the stipulated period. Delay in completion of the project is an unnecessary burden on the economy.

iii. **Capital-intensive industries:** To establish basic and key industries in the country, public sector enterprises were directed to adopt large-scale techniques of production which have shown to be capital intensive. As a result, priorities to generate employment and to encourage small-scale industries lagged.

iv. **Price policy:** Private sector enterprises are operated solely with the aim of profit maximisation, and prices are determined at a level which would cover total cost and provide sufficient net returns. However, for public sector enterprises, they are not guided by the principle of profit maximisation.

Answer 10

i. Characteristics of labour:

- **Labour cannot be separated from the labourer:** A landowner as a person and the land owned by her/him can be considered different entities. Likewise, a capitalist as a person is distinct from the capital owned by her/him.
- **Labour is an active factor of production:** Land and capital are passive factors, but labour is an active factor of production. Land and capital cannot produce anything without labour.

- **Labour is mobile:** Labour can move from one place to another place and from one occupation to another occupation.
- **Labour has alternative uses:** Any labourer can engage in different fields of work. An unskilled labourer can work as a hawker or peddler.
- **Labour cannot be accumulated:** Labour cannot be accumulated by a labourer; however, a capitalist can accumulate capital and a landowner can accumulate more land.

ii. Classification of labour:

- Skilled labour comprises individuals trained for a particular occupation and those who have gained practical experience for a job. They are highly paid.
- Semi-skilled labour comprises individuals who have part of a professional training of a particular trade and have sufficient experience in that line. They are paid comparatively lesser than skilled labours.
- Unskilled labour comprises individuals who are employed for carrying out certain work where any specialised skill is not required. They are poorly paid as their number is large in a developing economy like India.

iii. ***Efficiency of labour*** is the productive capacity of a worker. It indicates the ability of the worker to do more or better work during a given period of time. With modern and advanced technology, the working efficiency is more and the productivity capacity increases.