ICSE Board
Class X Economics Applications
Sample Paper – 2 Solution

PART I

*Attempt **all** questions from this part.*

Answer 1

a) Qualitative or selective credit control refers to discriminatory policy of the Central Bank in favour or against certain sectors of the economy. In the priority sectors, the flow of credit may be encouraged to stimulate production in those sectors. This is a positive approach of selective credit control. On the other hand, the Central Bank may refuse to provide credit to the priority sectors. During the inflationary situation, the availability of credit for speculative activities is discouraged. This is a negative approach of selective control.

b) Income effect: It is a change in the quantity demanded when real income of the buyer changes as a result of change in the price of a commodity.
Substitution effect: It is the substitution of one commodity with other commodities, when it becomes relatively cheaper.

c) Supply curve is a graphical representation of supply schedule, indicating positive relationship between the price of a commodity and its quantity supplied. There are two types of supply curves- individual supply curve and market supply curve.
Market supply curve is derived by the horizontal summation of supply curves of all the firms in the industry.

d) Two important sources of tax revenue of the central government are:
   i. Union excise duties, i.e. taxes on the production of various goods except on alcoholic and other drugs which are sold within the country.
   ii. Custom duties which are imposed by the central government either on imported or exported items.

e) Medium of exchange and measure of value are the two primary functions of money. Money acts as a medium of exchange. The major function of money is to facilitate the process of exchange by removing the defects of the barter system.
Money is the measure of value. It is the monetary expression of the market value of goods and services.

Answer 2

a) Price elasticity of demand measures the responsiveness of the quantity demanded for any commodity due to one percent change in the price of that good.

e_p = Percentage change in quantity demanded/Percentage change in the price

The income elasticity of demand shows the tendency in quantity demanded for any commodity due to one percent change in the money income of the consumer.

e_d = Percentage change in quantity demanded/Percentage change in money income

b) Differences between supply and stock:

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

c) Differences between tax on income and tax on commodity:

Tax on Income	Tax on Commodity
A tax on income is paid directly to the government by the person on whom it is imposed. Hence, the tax on income is known as direct tax.	A tax on commodity is paid to the government by one person but the tax burden is borne by another person. Hence, the tax on commodity is known as indirect tax.
It cannot be shifted onto any other person.	It can be shifted on to the other person.
These taxes are levied according to the ability of taxpayers.	Ability of the taxpayers is assessed indirectly in this taxation.

d) A monopolist is a price maker. A monopolist has full control over its price. He can fix whatever price he wishes to fix for his or her product because a monopolist is the only seller of the product in the market as competition does not prevail in the market. There are no close substitutes of the monopoly product. There will not be a shift in consumer preferences from one product to another. The market supply will not increase as there is no entry and exit of new firms.

e) Functions of the Central Bank:

i. Issuing of notes
ii. Banker, agent and advisor to the government
iii. Banker to banks, supervisor, and lender of the last resort
iv. Custodian of the cash reserves of commercial banks
v. Custodian of foreign exchange reserves
vi. Controller of credit
vii. Promoter of economic development

Answer 3

a) Bandwagon effect can be defined as the effect by which a consumer's demand for a commodity may be influenced by the taste and preference of the social class to which he/she belongs.

b) When a firm's demand curve slopes downwards, AR > MR. As AR decreases, MR also decreases but faster than AR and therefore the MR curve lies below the AR curve. Here, MR is concerned only with one unit while AR is concerned with all the units.

c) Non-tax revenue of the central government are:
   i. Interest receipts on loans provided to the states and union territories.
   ii. Dividend and profits received from public enterprises such as postal, railway etc.

d) Demand pull inflation means an inflation generated by the pressure of excess demand in the economy. If there is an excess of aggregate demand over aggregate supply, the general price level tends to increase, which leads to an inflation in the economy.

e) When a commercial bank fails to get financial accommodation from any other source, it approaches the Central Bank as a last resort. The Central Bank advances a loan to the commercial bank against approved securities.

Answer 4

a) The practice of shifting cultivation is an extravagant and unscientific form of land use. The effects of shifting cultivation are devastating and far-reaching in degrading the environment and ecology of a region. The previous 15–20 year cycle of shifting cultivation on a particular land has now been reduced to 2–3 years as it resulted in large-scale deforestation, soil and nutrient loss and invasion by weeds and other harmful species. Also the indigenous biodiversity of a region has been affected to a large extent.

b) Tax is a compulsory payment to the government by the various income groups. Therefore, it increases the revenue of the government. It increases the price of a good and reduces the income of the taxpayer.
   Subsidy is a payment to taxpayers by the government to enable them to sell certain goods at a low price. Thereby it reduces the revenue of the government. It reduces the selling price of a good and increases the income of the taxpayer.

c) A tax is said to be progressive when the rate of tax increases with an increase in the taxpayer's income. Under this system, the tax liability increases not only in absolute terms but the proportion of income tax also increases. In India, the income tax rates are progressive in nature as the tax rate increases from 20 to 30 percent when an individual earns more than Rs. 8 lakh per year.

d) Deflation is a situation of continuous decrease in the general price level of an economy. It implies that the supply of goods exceeds the demand for those goods. This occurs when there is an overproduction of goods and services, and a fall in the purchasing power of the public, due to a fall in income and employment opportunities in an economy.

e) To control the deflationary condition, the Central Bank uses the following two qualitative credit control measures:
   i. Reduction of margin money requirements is a measure which induces the borrowers to avail more loans from commercial banks.
   ii. Relaxation in credit authorisation is a measure where the Central Bank can reduce the ceiling on the amount of credit to be disbursed by the commercial bank for certain purposes.

PART II

*Attempt **any four** questions from this part.*

Answer 5

a) Oligopoly is a form of market in which there are a few big sellers of a commodity and a large number of buyers. These sellers have a significant share of the market. There is a high degree of interdependence among the sellers regarding their price and output policy. As there are a few sellers in the market, the price and output decision of one seller has more impact on the price and output decision of other sellers in the market. Hence, there is severe competition in the market.
   Types of oligopoly:
   i. Pure oligopoly: Pure oligopoly is a form of market in which the products of the firms are homogeneous.
   ii. Differentiated oligopoly: Differentiated oligopoly is a form of market in which the products of different firms are different but are close substitutes of each other.
   iii. Collusive oligopoly: Collusive oligopoly is a form of market in which few firms form a mutual agreement to avoid competition. They form a cartel and fix the output quotas and the market price. The leading firm in the market is accepted by the cartel as the price leader. All the firms in the cartel accept the price as fixed by the price leader.
   iv. Non-collusive oligopoly: Non-collusive oligopoly is a form of market in which there are a few firms in the market. Each firm has its price and output policy independent of the rival firms in the market. All the firms are able to increase their market share through competition in the market.

b) Cash Reserve Ratio (CRR) is the minimum percentage of a bank's total deposits, which are to be necessarily kept with the Central Bank. According to RBI Act, 1934, every commercial bank needs to maintain with the Central Bank a certain percentage of their deposits in the form of cash reserves. By an amendment of the Act in 1962, the Central Bank can vary the CRR between 3 to 15 percent of the total deposits of commercial banks.
   During an inflationary situation, the Central Bank increases the CRR and thereby the funds for providing loans with the commercial bank decline. In this process, the flow of credit and the aggregate demand are reduced. Thus, the process of credit creation

by the commercial bank is checked and the inflationary condition is controlled. On the other hand, the RBI reduces the CRR to curb the deflationary situation.

Answer 6

a)

i. Crowther defined inflation as, "A state in which the value of money is falling, i.e. prices are rising".

ii. Types of inflation observed in an economy on the basis of the rate of increase in the price level:
- Creeping inflation is inflation where the general price level increases at a very slow rate of 2 to 2.5 percent per annum.
- Walking inflation is inflation where the general price level of the economy increases at the rate of 5 to 6 percent per annum.
- Hyperinflation is inflation where the general price level increases at the rate of 200 percent or more per month. Here the price rise is ten or even a hundred-fold in a month.

iii. Effects of inflation on investors: Different kinds of investors are affected differently by inflation. An investor may invest in bonds and debentures which yield a fixed rate of interest or in real estate or equities (shares) whose returns (dividends) rise and fall with profits earned by the companies concerned. When prices rise, the returns on equities go up on account of the rise in profits, while the bond and debenture holders gain nothing as their income remains fixed. By the same logic, holders will lose during depression, while debenture and bond holders will stand to gain.

iv. The causes of inflation are:
- Public expenditure increases: Spending by the government is an important part of the total spending in any modern economy. It is the total spending which determines the total demand. Thus, the government expenditure is an important determinant of the aggregate demand. Government expenditure has shown an upward trend in less-developed countries. In the beginning of the planning period in India, the amount of government spending has increased by leaps and bounds. This has created an inflationary situation in the economy.
- Hoarding: Excess demand is artificially created by hoarders. They stockpile goods and do not release them to the market for sale. This leads to an excess demand and inflation in the economy.

v. Fiscal measures to control inflation:
- Government expenditure: When excess demand is caused by the government expenditure in excess of real output, the most effective measure is to cut down the public expenditure. A cut in public expenditure reduces not only the government's demand for goods and services but also the private consumption expenditure. Therefore, excess demand decreases more than a given cut in the public expenditure.

- Taxation: When excess demand is caused by private expenditure such as the expenditure by households and firms, taxation of income is a more appropriate measure to control inflation. Taxation of income reduces the disposable income. As consumer demand is a function of disposable income, it decreases due to taxation. Thus, a well-designed taxation policy reduces the aggregate demand and thereby brings the inflation under control.

Answer 7

a) Direct tax refers to the tax whose burden cannot be shifted to any other individual or firm by the taxpayer. It is progressive in nature because the tax rate increases with an increase in the income slabs. Here the impact and incidence of tax fall on the same person.

Indirect tax burden of tax can be shifted by the taxpayer. It is regressive in nature because the common people bear this tax burden. Here the producer bears the impact and incidence of tax on the consumer.

Merits of direct tax:

i. Equity: Direct tax is imposed on the income of a person based on the principle of his/her ability to pay. The income tax burden is equitably distributed to different people and institutions. Thereby the tax burden falls more on the rich than on the poor.

ii. Certainty: An individual knows how much of tax is due and when to pay. The government knows with certainty how tax revenue is to be collected from direct tax. Accordingly, the government can adjust its income and expenditure.

Merits of indirect taxes:

i. Broad coverage: In the tax on commodity, all the buyers of the commodity have to pay indirect tax irrespective of their income level, i.e. irrespective of whether they belong to the high income group or the low income group. By widening the tax net, the government can yield more revenue for public expenditure.

ii. Convenient: Indirect taxes are paid in small portions at regular intervals. It is not a burden to the taxpayer as it is included in the price of the commodity.

b) Industrialisation is a process in which a country transforms itself from an agricultural society into an industrial one. It implies creation and growth of manufacturing units.

The process of industrialisation was started during the second five-year plan in India. Due to the progress of industries such as iron and steel, chemical, coal, cement, thermal power etc., non-renewable resources are slowly depleting. Impacts of industrialisation on the environment are:

i. Global warming: The most serious consequence of industrial pollution is global warming. The emission of a variety of greenhouse gases such as carbon dioxide, methane etc. has raised the temperature of the Earth, leading to global warming. Global warming causes various health hazards and diseases such as malaria, dengue, cholera etc. It also results in the melting of glaciers and snow-capped

mountains, causing an increase in the water levels in seas and rivers, leading to the possibility of floods.

ii. Air pollution: Air pollution has also increased enormously with an increase in the number of industries and factories. Gases such as carbon dioxide, sulphur and nitrogen are emitted from various industries. These gases lead to environmental and health hazards such as acid rain and skin disorders in individuals.

iii. Soil pollution: Due to various reasons, the soil loses its structure and fertility. Dumping of industrial wastes is the main factor which contributes to soil pollution. Industrial wastes contain chemicals which accumulate on the top layer of the soil, leading to a loss of fertility of the soil. This in turn will cause a change in the ecological balance of the environment because of fewer plants.

iv. Water pollution: Water pollution has also increased enormously with an increase in the number of industries and factories. Dumping of industrial waste products into water resources and improper treatment of industrial wastes results in water pollution.

Answer 8

a) The arguments in favour of privatisation of commercial banks are:

i. Commercial banks have the freedom to take decisions regarding loan advancement and are able to choose sectors with higher returns and recoverability.

ii. They are free to design various innovative deposit schemes to attract depositors.

iii. A competitive environment will be created in the banking sector because these banks will face many other private foreign banks in the banking sector. Hence, each commercial bank will try to survive and evolve new methods to improve their efficiency.

Negative impacts of privatisation of commercial banks:

i. These banks would reduce the employment opportunities as private bank functions would be directed by their profit motives.

ii. It may lead to concentration of monopoly power in the hands of private sector banks and increase in unequal distribution of income and wealth of the economy.

iii. If some of these banks are merged with foreign banks and if restrictions on the movements of financial capital from one country to another country are withdrawn, then there will be no guarantee that the savings mobilised from the Indian economy would be recycled within India or abroad.

b) An ecosystem can be defined as a group of living and non-living things which are interdependent and are found in a particular type of environment.

Causes of destruction of an ecosystem are:

i. Changes in land use: Due to an increase in the population growth rate and per capita consumption of resources, the ecosystem is changing and getting

destroyed. Hence, there is a change in land use. Deforestation is undertaken to accommodate more agricultural activity, human settlement, construction of dams, etc. Changes in land use have destroyed the natural habitats of organisms, resulting in many being on the verge of extinction.

ii. Urbanisation: Urbanisation is a process of relative growth in a country's urban population. Due to urbanisation, there is a change in the land use, depletion of water resources, use of large quantities of building materials for construction purposes, development of slums etc. More use of land for housing and industries has resulted in a loss of the biological diversity forever. Due to widespread construction, the local ground water level has declined and cities have to make provisions for external sources of water.

Answer 9

a) Market demand for the good:

As the individual demand of each consumer is similar for 20 consumers, the market demand for the good can be calculated as follows:

Price	Individual demand	Market demand
10	18	18 * 20 = 360
8	20	20 * 20 = 400
4	24	24 * 20 = 480
2	28	28 * 20 = 560

b) Price elasticity of demand for a good is defined as the percentage change in the demand for the good divided by the percentage change in its price. Thus, the percentage method of calculating price elasticity of demand for a good is as follows:

e_p = Percentage change in the demand for the good/Percentage change in the price of the good

Price elasticity of demand is a pure number and it does not depend on the units in which price of the good and the quantity of the good are measured. Price elasticity of demand is a negative number as the demand for a good is negatively related to the price of a good.

i. If at a particular price, the percentage change in demand for a good is less than the percentage change in price, then the demand for the good is inelastic at that price.

$e_p < 1$

ii. If at a particular price, the percentage change in demand for a good is equal to the percentage change in price, then the demand for the good is unitary elastic at that price.

$e_p = 1$

iii. If at a particular price, 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.

$e_p > 1$

Answer 10

a) The total expenditure method is a method to measure the elasticity of demand. The changes in expenditure with a change in the price of a good are measured through this method. Three possible situations under this method are:

i. If a rise or fall in the price of a good result in no change in its total expenditure, then the elasticity of demand is unitary.

ii. If there is a fall in the price of a good, then the total expenditure increases, and if there is a rise in the price of a good, then the total expenditure decreases. The demand in this case is greater than unitary elastic.

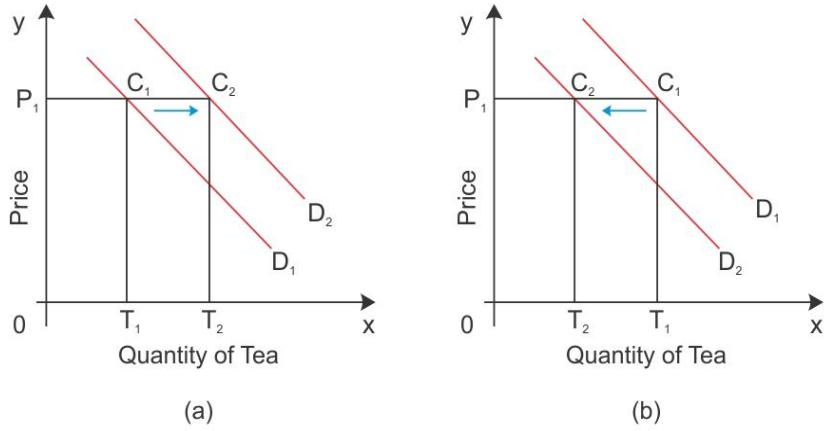
iii. If there is a fall in the price of a good, then the total expenditure decreases, and if there is a rise in the price of a good, then the total expenditure increases. The demand in this case is less than unitary elastic.

b) Demand for a commodity in relation to the price of a substitute good:

Assume tea and coffee as two substitute goods. D_1 is the demand curve for the tea and shown in Fig (a).

Increase in the price of a substitute good:

When the price of tea is OP_1, the quantity demanded is OT_1 as shown in Fig (a). If there is an increase in the price of the substitute good coffee, the demand curve for tea shifts to the right. Now, the consumer is willing to buy P_1C_2 quantity of tea which is equal to OT_2. When there is a greater purchase of a commodity at its constant price, it points to a situation of increase or forward shift in the demand curve. The consumer demand curve shifts from D_1 to D_2, consuming more of tea even when its price is constant.



Decrease in the price of a substitute good:

When there is a decrease in the price of the substitute good coffee, the demand curve for tea shifts to the left even when its price is constant. When the price of tea is OP_1, the quantity demanded is OT_1 as shown in Fig (b). Now, the consumer is

willing to buy P_1C_2 quantity of tea which is equal to OT_2. Thus, the consumer shifts from D_1 to D_2, consuming less of tea even when the price of tea is constant. This is a situation of backward shift in the demand curve.