Economics 2016 (Outside Delhi)   SET I

Time allowed : 3 hours   **Maximum marks : 70**

SECTION—A

1. **What is the relation between Average Variable Cost and Average Total Cost, If Total Fixed Cost is zero ?** [1]

   Answer : Average variable cost is a part of average total cost because average variable cost and average fixed cost together make average total cost but when total fixed cost is zero, then :

$$AVC = ATC$$

2. **A firm is able to sell any quantity of a good at a given price. The firm's marginal revenue will be :** [1]

   (Choose the correct alternative)

   (a) Greater than Average Revenue

   (b) Less than Average Revenue

   (c) Equal to Average Revenue

   (d) Zero

   Answer : (c) Equal to Average Revenue

3. **When does 'Change in demand' take place ?** [1]

   Answer : Change in demand takes place when there are changes in factors other than price.

4. **Differentiated products is a characteristic of (choose correct answer) :**

   (a) Monopolistic competition only

   (b) Oligopoly only

   (c) Both monopolistic competition and oligopoly

   (d) Monopoly [1]

** Answer is not given due to change in present syllabus

Answer : (c) Both monopolistic competition and oligopoly.

5. **Demand curve of a firm is perfectly elastic under :** [1]

(Choose the correct alternative)

(a) Perfect competition

(b) Monopoly

(c) Monopolistic Competition

(d) Oligopoly

Answer : (a) Perfect competition.

6. **A consumer consumes only two goods X and Y. Marginal utilities of X and Y are 3 and 4 respectively. Prices of X and Y are ₹ 4 per unit each. Is consumer in equilibrium ? What will be further reaction of the consumer ? Give reasons.** [3]

Answer : For equilibrium $\dfrac{MU_x}{P_x} = \dfrac{MU_y}{P_y}$

Marginal utility of X = 3

Price of X = ₹4

Marginal Utility of Y = 4

Price of Y = ₹ 4

$$\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$$

$$\frac{3}{4} = \frac{4}{4}$$

Since $\dfrac{MU_x}{P_x} \neq \dfrac{MU_y}{P_y}$

Hence, Consumer is not in equilibrium

To reach equilibrium level, consumer should decrease the consumption of good X.

7. **What will be the effect of 10 percent rise in price of a good on its demand if price elasticity of demand is (a) Zero, (b) –1, (c) –2.** [3]

Answer : Percentage change in price = 10%

(a) $E_d = 0$

$E_d = \dfrac{\text{Percentage change in quantity demanded}}{\text{Percentage change in price}}$

$0 = \dfrac{\text{Percentage change in quantity demanded}}{10}$

Percentage change in quantity demanded is 0.

(b) $E_d = -1$

$E_d = \dfrac{\text{Percentage change in quantity demanded}}{\text{Percentage change in price}}$

$-1 = \dfrac{\text{Percentage change in quantity demanded}}{10}$

Percentage change in quantity demanded is – 10%

(c) $E_d = -2$

$Ed = \dfrac{\text{Percentage change in quantity demanded}}{\text{Percentage change in price}}$

$-2 = \dfrac{\text{Percentage change in quantity demanded}}{10}$

Percentage change in quantity demanded is –20%

8. **What is minimum price ceiling ? Explain its implications.**

OR

If the prevailing market price is above the equilibrium price, explain its chain of effects. [3]

Answer : Minimum price ceiling is also known as price floor, which is the minimum allowable price set above the equilibrium price by the government.

The need for minimum price ceiling arises when government finds that equilibrium price is too low for the producers. This policy is in the interest of producers. It leads to surplus and illegal selling below the equilibrium price.

For effective minimum support price or price floor, it must be accompanied by government purchases either to increase its buffer stocks or exports.

Implications of Minimum Price Ceiling :

(a) Minimum price ceiling ensures the farmers that they will get the minimum price for their production which helps them to produce more in order to earn their bread and butter with the help of government. It also states that their whole produce will be sold in the market.

(b) With the minimum price given by the government to the farmers, increases the income of the poor people.

OR

When the prevailing price is above the equilibrium price , then there is condition of excess supply. Excess supply induces seller to sell more and in order to sell more , seller has to reduce the price of their output. The fall in price will continue till the price reaches the equilibrium price where market demand and market supply equals and the equilibrium price is fixed.

As can be seen in the above graph that at price OP_2, the quantity supplied is OQ_3 while the quantity demanded is OQ_2 so there is the excess supply of Q_2Q_3 is the market. Hence, this leads to the seller to sell their output at lower prices. With the fall in price the quantity demanded of the commodity increases. The price continues to

fall till is reaches OP_1. At OP_1 price the quantity demanded becomes equal to quantity supplied OQ_1 and the equilibrium establishes at Point E.
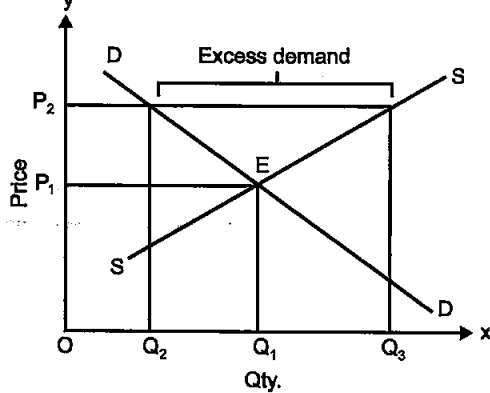
9. Define demand. Name the factors affecting market demand. [4]

Answer : Demand : Demand for a commodity refers to the quantity of a commodity which a consumer is willing to buy at a given price and in a given period of time.

Factors affecting Market demand :

(1) Population : Increase in the population increases the demand. Composition of the population also affects the demand. Composition of the population means the distribution of the population on the basis of sex, age etc. A change in the composition of the population has an effect on the demand of the commodity.

(2) Season and weather : The season and weather conditions also affect Consumer's demand. Example : Demand for woolen clothes rises in winter season.

(3) Government policy : The government of the country can also affect the demand for a commodity through taxation and subsidies It may reduce the demand for the commodities by imposing tax on it or increases by lowering the prices through subsidies.

(4) State of business : The prevailing business condition in a country also affects the level of demand. Level of demand increases during boom period while decreases during the period of depression.

(5) Distribution of income : If the national income is equally distributed, then the demand for the necessities will increase. If it is unequally distributed, there will be more demand for luxury goods.

10. Define fixed cost. Give an example. Explain with reason the behaviour of Average Fixed cost as output is increased.

OR

Define marginal product. State the behaviour of marginal product when only one input is increased and other inputs are held constant. [4]

Answer : Fixed cost is the cost which does not change with the change in the level of output. This is incurred on fixed factors like machines, building etc. Fixed cost does not change with the change in the level of output. For eg. a sugar mill usually remains closed for about 3 months in a year for want of raw material but still the mill owner has to incur certain costs like rent of the building, interest on past borrowings, salaries of permanent employees, taxes, etc.

On the other hand AFC is fixed cost per unit of output

$$AFC = TFC/Output\ produced$$

For eg.

| No of units produced	TFC	AFC
0	150	∞
1	150	150
2	150	75
3	150	50
4	150	37.5
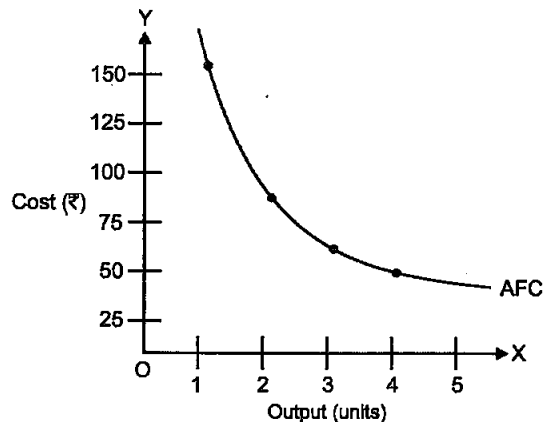
The shape of AFC curve is downward sloping curve from left to right because average fixed cost goes on falling with every increase in the output as TFC remains constant. AFC curve neither touches X-axis because AFC always remain positive nor touches Y-axis because AFC approaches infinity when production is zero.

OR

Marginal product is an addition to the total product when an additional unit of only variable factor is used , keeping other things same. Marginal product measures extra output per extra unit of input holding all other inputs fixed.

Land (fixed factor)	Labour (variable factor)	TP	AP	MP
1	0	0	–	–
1	1	2	2	2

1	2	6	3	4
1	3	12	4	6
1	4	20	5	8
1	5	25	5	5
1	6	29	4.8	4
1	7	31	4.4	2
1	8	31	3.9	0
1	9	29	3.2	−2
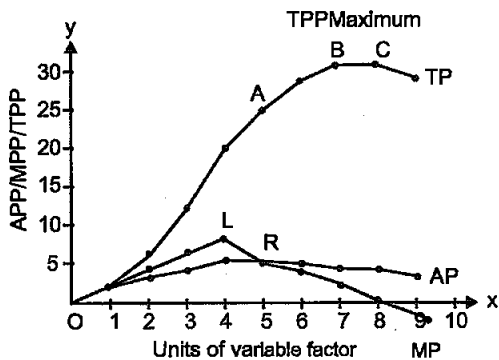
TP increases continuously from point O to B . It increases at an increasing rate from O to A and at diminishing rate from A to B. TP is maximum at point B and remains up to point C.

MP (MPP) curve initially rises, reaches its maximum and ultimately declines taking the shape of inverted –U .

AP (APP) curve first rises, reaches its maximum and then declines taking the shape of an inverted –U.

11. When price of a commodity falls from ₹ 12 per unit to ₹ 9 per unit, the producer supplies 75 percent less output. Calculate price elasticity of supply. [4]

Answer: Percentage change in quantity supplied
$$= -75\%$$

$$\text{Old price} = ₹ 12$$
$$\text{New price} = ₹ 9$$
$$\text{Change in price} = 9 - 12$$
$$= -3$$
$$\text{Percentage change in price} = (-3 \div 12) \times 100$$
$$= -25\%$$

E_s = Percentage change in quantity supplied
Percentage change in price

$$= -75\% \div -25\%$$

$$= \frac{-75}{-25} = 3$$

12. Why do central problems of an economy arise? Explain the central problem of "for whom to produce." [6]

Answer : The problem of making choices among alternative uses of resources is called central problems of the economy. Scarcity of resources having alternative uses in relation to unlimited wants has given rise to central problems.

Main causes of central problems are :
(1) Unlimited wants.
(2) Limited resources.
(3) Alternative uses of resources.

For whom to produce : This is the third problem of allocation of resources. It is related to distribution of income. This problem refers to the decision regarding the share of different factors of production in the national product of the country. Goods and services are produced for the people who can purchase them, and purchasing power depends upon their income. We know that the output in an economy is the result of the combined efforts of various factors of production. Hence, the output should be distributed or how the shares of different factors of production should be determined. Thus, this problem is basically the problem of distribution of income and wealth in the society.

In case of capitalistic economy the decision is taken on the basis of the purchasing power of the consumers. Socialist economy takes decision regarding goods or services to be produced on the basis of the requirements of the individuals. Thus, this problem deals with the distribution of output among the people of a country.

**13. Explain three properties of indifference curves.** [6]

Answer : An indifference curve is a curve which shows all the combinations of two goods that give equal satisfaction to the consumer. Indifference curve shows consumers behaviour is indifferent towards various combination of two goods because they give same level of satisfaction.
Properties of indifference curve :
(1) Indifference curve slopes down to the right. It implies that consumer is willing to give up some units of one commodity to get more units of another commodity so as to stay at the same level of satisfaction.
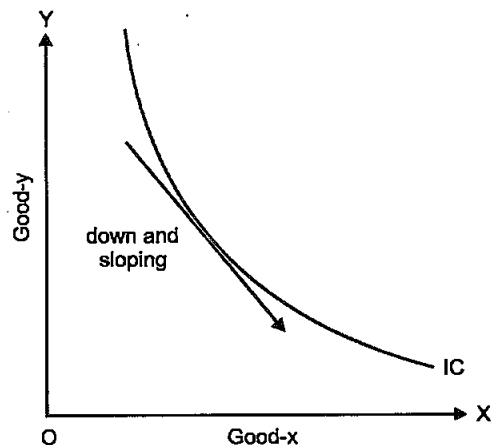
(2) Higher Indifference curves represent higher level of satisfaction and indifference curve cannot meet or intersect. Two indifference curves never intersects. In the figure, point A and B lies on the same indifference curve IC_1 giving same level of satisfaction while point A and C also lie on the same indifference curves IC_2 giving same level of satisfaction. This implies that combination B and C should also give same level of satisfaction, but this is not possible because combinations C lies on the higher indifference curve than B.
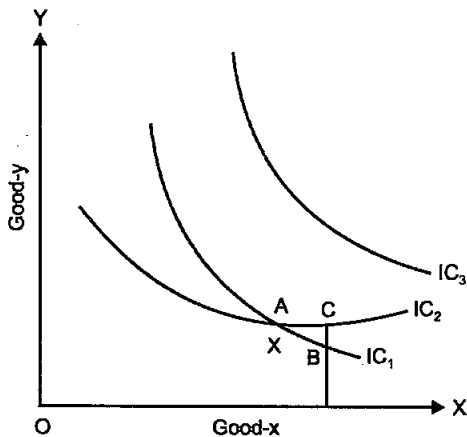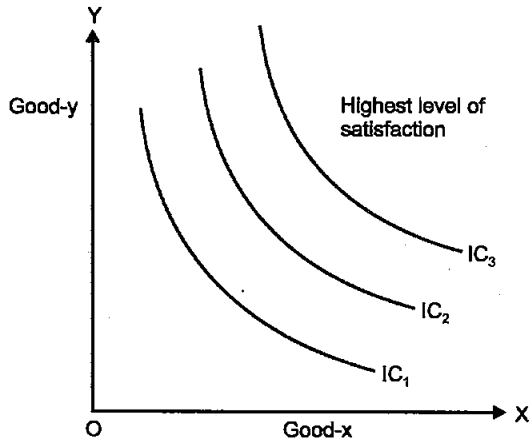

(3) Indifference curves are always convex to the origin O because of diminishing MRS. It implies that marginal rate of substitution diminishes along an indifference curve. This implies that as consumer gets more and more of one good, he is willing to give up less and less of another.
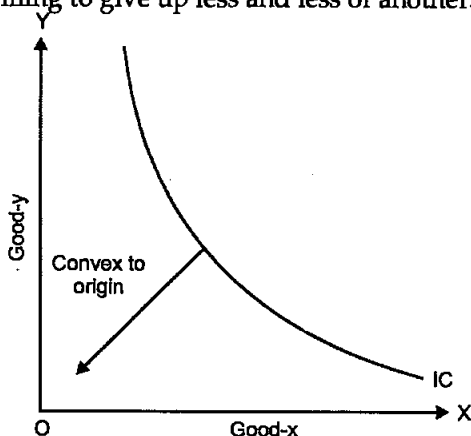

14. **Examine the effect of (a) fall in the own price of good X and (b) rise in tax rate on good X, on the supply curve. Use diagrams.** [6]

Answer : (a) Fall in the own price of good X–It leads to contraction in supply. When the quantity supplied of the commodity falls with fall in the price and other things remaining same is called contraction in supply. It is the movement along the supply curve. Contraction is shown as the downward movement along the supply curve. For example movement from point 1 to point 2 on the SS supply curve is downward movement along the supply curve.
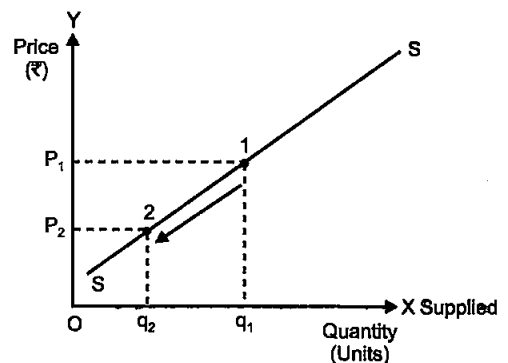
(b) Rise in tax rate on good X on the supply curve– It leads to decrease in supply. Supply of the commodity falls due to factors other than price. The leftward shift in the supply curve indicates decrease in the supply. In case of decrease in supply, supply curve shifts to the left from S_1S_1 to S_2S_2.
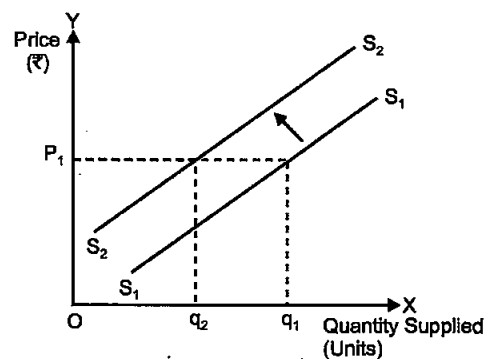
15. **Explain the implications of the following in a perfectly competitive market :** [6]

   (a) Large number of sellers

   (b) Homogeneous products.

                    OR

   (a) Barriers to entry of new firms

   (b) A few or a few big sellers

   Answer : Implications in a perfectly competitive market :

   (a) **Large number of sellers :** The number of

sellers is so large that individually they can't influence the existing price in the market. Large number of sellers in the market implies that the share of each seller in total market supply is so small that no single seller can influence the price and each firm is the price taker.

(b) Homogeneous product : Products sold in the perfectly competitive market is that they are identical in all respects like quality , colour , size and all are the perfect substitutes of each other. Homogeneous products implies that all the firms have to charge the same price for the product *i.e* uniform prices prevail in the market.

OR

Implications in an oligopoly market :

(a) Barriers to entry of new firms : There is very tough competition among the firms, so it is very difficult for the new firm to enter into the oligopoly market.

(b) A few or few big sellers : There are few large firms who rule the oligopoly market and control the prices and output of the market. They are the major part who contribute in the market supply and thus the market is controlled by them.

SECTION B

16. Define flows. [1]

Answer : A flow is a variables whose magnitude which is measured over a period of time. e.g. National Income.

17. National income is the sum of factor incomes accuring to : [1]

(Choose the correct alternative)

(a) Nationals

(b) Economic territory

(c) Residents

(d) Both residents and non-residents

Answer : (c) Residents.

18. What are revenue receipts in a government budget ? [1]

Answer : Revenue Receipts are the government receipts which neither create liabilities nor reduce assets. Tax revenue and non-tax revenue are the revenue receipts in the government budget.

19. Primary deficit equals : [1]

(Choose the correct alternative)

(a) Borrowings

(b) Interest payments

(c) Borrowings less interest payments

(d) Borrowings and interest payments both

Answer : (c) Borrowings less interest payments.

20. Foreign exchange transactions which are independent of other transactions in the Balance of Payments Account are called : [1]

(Choose the correct alternative)

(a) Current transactions

(b) Capital transactions

(c) Autonomous transactions

(d) Accomodating transactions

Answer : (c) Autonomous transactions.

21. Assuming real income to be ₹ 200 crore and price index to be 135, calculate nominal income. [3]

Answer : Real income = ₹ 200 crores

Price index = 135

Let the base year's price index be 100

Nominal Income = ?

Real income = (Nominal income ÷ Price index of current year)

X Price index of base year.

$$200 = (\text{Nominal income} \div 135) \times 100$$

Nominal Income = (200 × 135) ÷ 100

= 27000 ÷ 100

= ₹ 270 crores.

22. What is aggregate demand ? State its components.

OR

Explain how controlling money supply is helpful in reducing excess demand. [3]

Answer : Aggregate demand is the total demand for final goods and services in the economy. It also refers to the total amount of money which all sectors are ready to spend on purchase of goods and services. Aggregate demand is the total expenditure on consumption and investment.

Components of AD are :

(a) Household (or private) consumption demand (C) : Value of goods and services that households are able and willing to buy.

(b) Private Investment demand (I) : This refers to planned expenditure on buying of new capital assets like machines, buildings and raw material by private entrepreneur. This investment is done to increase production capacity in future.

(c) Government demand for goods and services (G) : It is the government expenditure on purchase of consumer and capital goods to fulfil common needs of the society.

(d) **Net exports (exports-imports) demand (X-M) :** Net exports is the difference between exports of goods and services and imports of goods and services during a given period. Net exports show the demand of foreign countries for our goods and services over our demand for foreign countries goods and services. This strengthens the income, output and employment process of our economy.

$$AD = C + I + G + (X - M)$$

OR
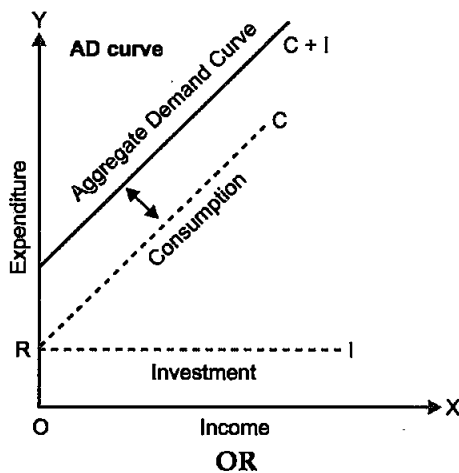
When the planned aggregate expenditure is greater than the available output at full employment level, this situation is termed as excess demand. It leads to inflationary gap in the economy. It arises because of increase in money supply due to deficit financing leading to increase in consumption demand or an increase in autonomous investment without the corresponding increase in savings. So, there is a need to reduce the money supply in the economy in order to curb the demand levels in an economy. As the purchasing power will reduce, aggregate demand levels will come down. This can be done both by using monetary and fiscal policy.

23. **An economy is in equilibrium. Calculate Marginal Propensity to consume :** [3]
   National income = 1000
   Autonomous consumption expenditure = 200
   Investment expenditure = 100
   Answer : National income = 1000
   Autonomous consumption expenditure = 200
   Investment expenditure = 100
   National Income = Consumption + Investment Expenditure

$$Y = C + cY + I$$
$$1000 = 200 + c(1000) + 100$$

$$1000 = 300 + c(1000)$$
$$1000 - 300 = c(1000)$$
$$700 = c(1000)$$
$$c = 700 / 1000$$
$$c = 0.7$$

Marginal propensity to consume = 0.7.

24. **Sale of petrol and diesal cars is rising particularly in big cities. Analyse its impact on gross domestic product and welfare.** [4]

   Answer : Impact of rising sale of petrol and diesel cars pm gross domestic product– GDP will increase because there is increasing demand of petrol and diesel cars in the big cities and to fulfil this increasing demand , the companies have to produce more and have to increase their level of production which will lead to increase in GDP.

   Impact of rising sale of petrol and cars on the welfare – The increased sale of petrol and diesel car in big cities is continuously increasing the level of pollution in big cities and is turning out to be a life threat for the people living there. This high level of pollution is making people suffer with many vulnerable diseases like asthma, heart diseases, lung problems, cancer, respiratory diseases, etc . Thus reducing the welfare of the people.

25. **Explain the 'medium of exchange' function of money. How has it solved the related problem created by barter?***

   OR

   Explain the 'standard of deferred payment' function of money. How has it solved the related problem created by barter ? ** [4]

26. **Explain how 'Repo Rate' can be helpful in controlling credit creation.** [4]

   Answer : The rate at which the central bank (RBI) lends money to commercial banks is called repo rate . It is an instrument of monetary policy. Whenever banks have shortage of funds, they can borrow from RBI . When the repo rate falls, it helps the banks get money at cheaper rate and vice versa.

   When the repo rate is increased, banks are compelled to pay higher interest to RBI which prompts them to raise the interest rates on the loans that they offer to their consumers. It becomes costlier for the consumers to take loans , which leads to shortage of money in the economy and less liquidity. This way repo rate helps in controlling the credit creation.

** Answer is not given due to change in present syllabus

Thus, a rise in repo rate restricts the flow of money and credit in an economy.

27. **What is the difference between revenue expenditure and capital expenditure ? Explain how taxes and government expenditure can be used to influence distribution of income in the society.** [6]

OR

What is the difference between direct tax and indirect tax ? Explain the role of government budget in influencing allocation of resources.

Answer : Difference between Revenue expenditure and capital expenditure :

Revenue Expenditure	Capital Expenditure
1. Revenue expenditure refers to the expenditure that does not result in the creation of assets or reduction of liabilities.	1. Capital expenditure refers to the expenditure which leads to creation of assets or reduction in liabilities.
2. It is used for normal running of government departments and maintenance.	2. It is used for acquiring capital assets.
3. The recurring expenditure is of two types : (a) Plan revenue expenditures. (b) Non-plan revenue expenditure.	3. The capital expenditure is also of two types : (a) Plan capital expenditure. (b) Non-plan capital expenditure.
4. It's recurring in nature and incurred regularly.	4. It is not recurring in nature.
5. It is short period expenditure.	5. It is long period expenditure.
6. Examples : Salaries of govt. employees, pen-sions, interest payments etc.	6. Examples : defence capital, purchasing land, building, machinery etc.

To reduce inequalities of income and wealth , government can influence distribution of income by levying taxes on the rich people and granting subsidies to the poor people. Government levies higher rate of tax on rich and lowers the rate on the low income group people. Government provides subsidies and amenities to people whose income level is low . Fiscal instruments like taxation , subsidies and public expenditure can be made use of to influence distribution of income in the society.

OR

Difference between Direct tax and Indirect tax

Direct Tax	Indirect Tax
When the liability to pay tax and the burden of that tax falls on the same person, it is called direct tax or we can say when impact & incidence of tax is on same person.	When the liability to pay tax is on one person and the burden of that tax falls on some other person, the tax is called an indirect tax. Hence impact and incidence is on different persons.
A direct tax is the tax whose burden is borne by the person on whom it is imposed.	Indirect tax is a tax whose burden can be shifted to others
It is progressive in nature	It is regressive in nature.
Eg : Income tax, wealth tax	Eg : Excise duty, custom duty.

Role of government budget in influencing allocation of resources :

To achieve the social and economic objectives, government provides more resources into socially productive sectors like rural electrification, education, health , etc . Moreover, government allocates more funds in the production of socially useful products and draws resources from some other areas to promote balanced economic growth of regions.

28. **Given saving curve, derive consumption curve and state the steps in doing so. Use diagram.** [6]

Answer : Steps of Deriving the consumption curve from saving curve :

(i) Draw 45° line from the origin.

(ii) Take OC equal to OS on Y axis

(iii) Draw perpendicular line form B to R on OX-axis which intersect 45° line at point B.

(iv) Join C and B and extend it to get consumption curve CC.

In the given figure, a straight line saving curve is plotted showing saving function at different levels of income . It shows negative saving at zero level of income and zero saving level at OR level of income. At point R, consumption expenditure = income, whereas to the left of R, consumption expenditure is less than income.

At zero level of income, consumption expenditure is shown as OC which is equal to dissaving of OS, OC = OS. Thus C is the starting point of consumption curve. At OR level of income, saving is zero, it shows that consumption expenditure must be equal to income of OR. This enables to plot OD as consumption expenditure equal to OR, which in turn gives a point B on 45 degree line showing OD equal to OR. Thus B becomes the point on proposed consumption curve .

B is the point on consumption curve at which total consumption expenditure (C) is equal to income (Y). At point B , APC (C/Y) = 1.
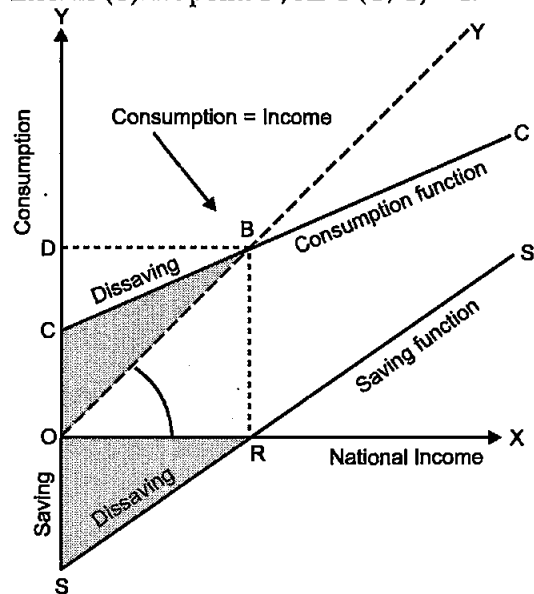
29. **Indian investors lend abroad. Answer the following questions :** [6]

   (a) In which sub-account and on which side of the Balance of Payments Account such lending is recorded ? Give reasons.

   (b) Explain the impact of this lending on market exchange rate.

Answer : (a) Sub-account – Capital Account.

Balance of payment account – Debit Side.

Lending to abroad by Indian investor will be recorded in the capital account on the debit side of balance of payment account. It is recorded on the debit side because it is the negative item in the capital account of balance of payment as it shows outflow of foreign currency from our country.

(b) The lending will reduce the supply of foreign currency, because lending is the outflow of foreign currency from our country. This reduction in the supply increases the demand

of foreign exchange and the supply of foreign exchange remains Inchanged. This will shift the supply curve from SS to S'S'. The new equilibrium is at point E' where the exchange rate rises from OR to OR_1. Lending to abroad by Indian investor affects the supply of foreign currency. This is because lending implies the flow of foreign currency from india to abroad leading to a fall in the supply of foreign currency in the country.
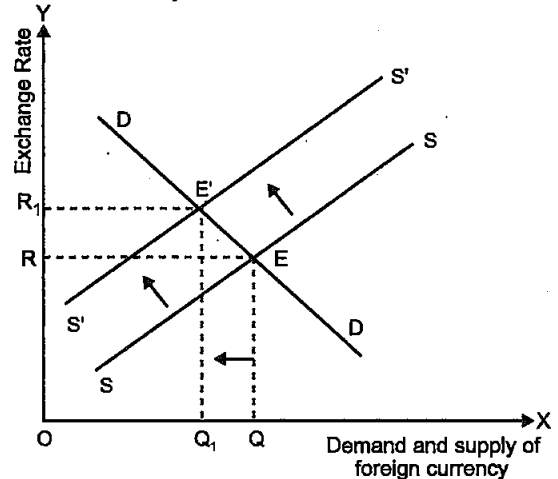
30. **Find Gross National Product at Market Price and (Private Income**) :** [6]

(₹ Crores)

(i)   Private final consumption expenditure   800
(ii) Net current transfers to abroad   20
(iii) Net factor income to abroad   (–) 10
(iv) Government final consumption expenditure   300
(v)   Net indirect tax   150
(vi) Net domestic capital formation   200
(vii) Current trasfers from government   40
(viii) Depreciation   100
(ix) Net imports   30
(x)   Income accuring to government   90
(xi) National debt interest   50

Answer : GDPmp = Private Final Consumption Expenditure + Government Final Consumption Expenditure + (net domestic capital formation+ depreciation) -net imports

$$GDPmp = 800+300+(200+100)-30$$
$$= 1100 +(300) -30$$
$$= 1400 - 30 = ₹1370 \text{ crores.}$$
$$GNPmp = GDPmp - \text{net factor income to abroad}$$
$$= 1370 - (-10) = ₹1380 \text{ crores.}$$

** Answer is not given due to change in present syllabus

●●

Economics 2016 (Outside Delhi)   SET II

Time allowed : 3 hours   **Maximum marks : 70**

Note : Except for the following questions, all the remaining questions have been asked in previous set.

SECTION—A

4. **When does "Change in quantity demanded" take place ?** [1]

Answer : Change in quantity demanded takes place when price of the goods changes, other things being same (unchanged).

5. **What happens to the difference between Average Total Cost and Average Variable Cost as production is increased ?** [1]

Answer : The difference between Average Total Cost (ATC) and Average Variable Cost (AVC) diminishes as production is increased.

7. **A consumer consumes only two goods X and Y. Marginal utilities of X and Y are 4 and 3 respectively. Price of X and price of Y is ₹ 3 per unit. Is consumer in equilibrium ? What will be further reaction of the consumer ? Give reasons.** [3]

Answer :
$$Marginal\ utility\ of\ X\ =\ 4$$
$$Price\ of\ X\ =\ ₹\ 3$$
$$Marginal\ Utility\ of\ Y\ =\ 3$$
$$Price\ of\ Y\ =\ ₹\ 3$$
$$MU_x \div P_x\ =\ 4 \div 3 = 1.33$$
$$MU_y \div P_y\ =\ 3 \div 3 = 1$$

No, the consumer is not in equilibrium and to reach the equilibrium level, the consumer should increase the consumption of good X.

9. **When price of a good rises from ₹ 10 to ₹ 12 per unit, the producer supplies 10 percent more. Calculate price elasticity of supply.** [4]

Answer : Percentage Change in quantity supplied
$$=10\%$$
$$Original\ price\ (P)\ = ₹\ 10/\ unit$$
$$New\ Price\ (P1)\ = ₹\ 12/\ unit$$
$$Change\ in\ price\ (\Delta P)\ = ₹\ 2/\ unit$$
$$(₹\ 12 - ₹\ 10)$$

Percentage change in price = $(\Delta P \div P) \times 100$

$$=(2 \div 10) \times 100$$
$$= 20\%$$

Price Elasticity of Supply =

$$\frac{Percentage\ Change\ in\ quantity\ supplied}{Percentage\ Change\ in\ price}$$

$$E_s = 10 \div 20$$
$$= 1 \div 2$$
$$= 0.5$$

10. **Define utility. Explain the Law of Diminishing Marginal Utility.** [4]

Answer : **Utility :** Utility is the power or capacity of a commodity to satisfy human want. It is the want satisfying power of a commodity.

Law of Diminishing marginal utility : This law states that with the consumption of every additional unit of a commodity, marginal utility derived from the successive unit goes on diminishing. Utility from first glass of water for a thirsty man is maximum, utility from second glass is lesser and third is still lesser and thus intensity of want goes on falling. Utimately it may become zero or negative. Demand for a commodity depends on its utility or usefulness to the consumer. If the consumer gets more satisfaction , he will pay more and if he gets less satisfaction, he will buy the additional units at lower price. A consumer matches price with marginal utility before buying the additional unit of a commodity.

SECTION—B

19. **Define Fiscal deficit.** [1]

Answer : **Fiscal deficit :** It refers to the difference between total expenditure and total receipt of the government budget, apart from its borrowings and liabilities.

21. **An economy is in equilibrium. Find investment expenditure :** [3]

National income = 1200

Autonomous consumption expenditure = 150

Marginal Propensity to consume = 0.8

Answer :
$$Y = \overline{C} + MPC\ (Y) + I$$
$$1200 = 150 + (0.8 \times 1200) + I$$
$$I = 1200 - 150 - 960$$
$$= 90$$

22. If nominal income is ₹ 500 and price index is 125, calculate real income. **[3]**

Answer : Real Income = (Nominal income ÷ Price index of current year) × Price Index of base year.

Let the base year 's price index be 100.

$$\text{Real Income} = (500 \div 125) \times 100$$
$$= 4 \times 100$$
$$= ₹\ 400$$

24. Explain the role of Cash Reserve Ratio in controlling credit creation. **[4]**

Answer : Cash Reserve Ratio : Commercial banks have to keep a certain percentage of their total deposits with the Central bank in the form of cash reserves. It is very effective in credit controlling and lending capacity of the banks.

To control the credit giving capacity of the banks, central bank raises CRR and to enhance the credit giving powers of the bank, central bank reduces CRR. When the lending capacity of the bank reduces, it leads to fall in money supply and when CRR falls, it increases the money supply.

27. Calculate Net National Product at Market Price and (Private income**) : **[6]**

(i)	Net current transfers to abroad	10
(ii)	Private final consumption expenditure	500
(iii)	Current transfers from government	30
(iv)	Net exports	(–) 20
(v)	Net indirect tax	120
(vi)	National debt interest	70
(vii)	Net domestic capital formation	80
(viii)	Income accuring to government	60
(ix)	Income accruing to government	60
(x)	Government final consumption expenditure	100

Answer : GDP_{MP} = Private Final Consumption Expenditure + Government Final Consumption Expenditure + (Net Domestic Capital Formation + Depreciation) + Net Exports

$$= 500 + 100 + (80 + 0) + (-20)$$
$$= 600 + 80 - 20$$
$$= 680 - 20$$
$$= ₹\ 660\ \text{crores.}$$

NNP_{MP} = GDP mp – Depreciation – Net Factor Income to abroad

$$= 660 - 0 - 20$$
$$= 660 - 20$$
$$= ₹\ 640\ \text{crores.}$$

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Economics 2016 (Outside Delhi)   SET III

Time allowed : 3 hours   **Maximum marks : 70**

> **Note : Except for the following questions, all the remaining questions have been asked in previous set.**

SECTION—A

3. What happens to the difference between Total Cost and Total Variable Cost as output is increased ? **[1]**

Answer : The difference between Total Cost and Total Variable Cost is total Fixed Cost. Fixed cost remains the same as output is increased. Hence the difference between TC and TVC remains the same as the output increases.

5. When does 'shift' in supply curve take place ? **[1]**

Answer : Shift in supply curve takes place when there is change in supply due to change in any of the factors other than the price of the good.

8. A consumer consumes only two goods X and Y. The marginal utilities of X and of Y is 3. Prices of X and Y are ₹ 2 and ₹ 1 respectively. Is consumer in equilibrium ? What will be further reaction of the consumer ? Give reasons. **[3]**

Answer : Marginal utility of X = 3

Price of X = 2

Marginal utility of Y = 3

Price of Y = 1

$$MUx \div Px = 3 \div 2 = 1.5$$
$$MUy \div Py = 3 \div 1 = 3$$

** Answer is not given due to change in present syllabus

The ratio of Marginal utility to the price of good Y is more than the ratio of marginal utility to the price of good X. Hence, the consumer is not in equilibrium and to reach equilibrium level, the consumer should increase the consumption of Y and decrease the consumption of X.

10. When price of a good rises from ₹ 8 per unit to ₹ 10 per unit, producer supplies 40 units more. Price elasticity of supply is 2. What is the quantity supplied before the price change? Calculate. [4]

Answer : Change in quantity supplied (ΔQ) = 40 units

Old price = ₹ 8/ unit

New price = ₹ 10/ unit

Price elasticity of supply is ₹ 2

Quantity = ?

$$\Delta P = \text{new price} - \text{old price}$$
$$= 10 - 8$$
$$= 2/ \text{unit}$$
$$Es = (\Delta Q \div \Delta P) \times (P \div Q)$$
$$2 = (40 \div 2) \times (8 \div Q)$$
$$2 = (20) \times (8 \div Q)$$
$$2 = 160 \div Q$$
$$2Q = 160$$
$$Q = 160 \div 2$$
$$= \textbf{80 units}$$

Hence, quantity supplied before price change was 80 units.

11. Distinguish between individual's demand and market demand. Name the factors affecting demand for a good by an individual. [4]

Answer : Individual Demand – Individual Demand for a commodity means the quantity an individual is willing to buy at different prices in a given period of time.

Market Demand – Market Demand means the total demand of all the consumers in the market taken together. It is the sum total of all the individual demands.

Factors affecting demand for a good by an individual :

(1) Price of a commodity itself (inverse relationship)

(2) Price of related goods :

(i) Substitute goods (direct relationship)

(ii) Complementary goods (Inverse relationship)

(3) Income of the consumer

(i) Normal goods (Direct relationship)

(ii) Inferior goods (inverse relationship)

(4) Taste and Preference of the consumer (Direct relationship).

SECTION B

20. What are capital receipts in a government budget? [1]

Answer : Capital Receipts : Government receipts which either create liabilities or reduce assets. Thus, when government raises funds either by incurring a liability or by disposing off its assets, it is called capital receipts .

22. An economy is in equilibrium. Find investment expenditure : [3]

National Income	**= 1000**
Autonomous Consumption	**= 100**
Marginal Propensity to consume	**= 0.8**

Answer : National Income (Y) = 1000

Autonomous Consumption (C) = 100

Marginal propensity to consume (c) = 0.8

$$\text{At Equilibrium, } Y = C + I$$
$$Y = C + cY + I$$
$$1000 = 100 + (0.8 \times 1000) + I$$
$$1000 = 100 + (800) + I$$
$$1000 = 900 + I$$
$$1000 - 900 = I$$
$$I = ₹ 100.$$

Investment expenditure = **₹ 100**

23. If real income is ₹ 400 and price index is 105, calculate nominal income. [3]

Answer : Real Income = (Nominal income ÷ Price index of current year) X price index of base year.

Let base year 's price index be 100

$$400 = (\text{nominal income} \div 105) \times 100$$
$$\text{Nominal Income} = (400 \times 105) \div 100$$
$$= ₹ 420.$$

29. Calculate National Income and (Personal Disposable Income**) : [6]

(₹Crores)

(i)	Corporation tax	100
(ii)	Private final consumption expenditure	900
(iii)	Personal Income tax	120
(iv)	Government final consumption	

** Answer is not given due to change in present syllabus

	expenditure	200
(v)	Undistributed profits	50
(vi)	Change in stocks	(–) 20
(vii)	Net domestic fixed capital formation	120
(viii)	Net imports	10
(ix)	Net indirect tax	150
(x)	Net factor income from abroad	(–) 10
(xi)	Private income	1000

Answer : GDPmp Private final consumption expenditure + Government final consumption expenditure + (net domestic fixed capital formation + depreciation + change in stock) – net imports

$$= 900 + 200 + (120 + 0 + (-20) - 10)$$

$$= 1100 + (120 - 20) - 10$$
$$= 1100 + (100) - 10$$
$$= 1200 - 10$$
$$= 1190.$$

NNP_{FC} = GDP_{MP} + Net factor income from abroad – net indirect tax – depreciation

$$= 1190 + (-10) - 150 - 0$$
$$= 1190 + (-160)$$
$$= 1190 - 160$$
$$= 1030$$

National income = ₹ **1030 crores.**

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Economics 2016 (Delhi)   SET I

Time allowed : 3 hours   **Maximum marks : 70**

SECTION—A

1. What is the relation between marginal cost and average variable cost when marginal cost is rising and average variable cost is falling ? [1]
   Answer : Marginal cost lies below the average variable cost when marginal cost is rising and average variable cost is falling. In other words as long as marginal cost is below the average variable cost, the AVC continues to fall, no matter the MC is rising.

2. Suppose total revenue is rising at a constant rate as more and more units of a commodity are sold, marginal revenue would be : (choose the correct alternative). [1]
   (a) Greater than average revenue
   (b) Equal to average revenue
   (c) Less than average revenue
   (d) Rising
   Answer : (b) Equal to Average Revenue.

3. When does 'increase' in demand take place ? [1]
   Answer : Increase in demand : Rise in demand takes place due to change in factors other than price of the commodity.

4. 'Homogenous products' is a characteristic of : (choose the correct alternative) [1]
   (a) Perfect competition only
   (b) Perfect oligopoly only
   (c) Both (a) and (b)
   (d) None of the above
   Answer : (c) (a) and (b)

5. There is inverse relation between price and demand for the product of a firm under : (choose the correct alternative) [1]

(a) Monopoly only
(b) Monopolistic competition only
(c) Both under monopoly and monopolistic competition
(d) Perfect competition only
Answer : (c) Both (a) and (b)

6. A consumer consumes only two goods X and Y. Marginal utilities of X and Y are 5 and 4 respectively. The prices of X and Y are ₹ 4 per unit and ₹ 5 per unit respectively. Is the consumer in equilibrium? What will be the further reaction of the consumer ? Explain. [3]
   Answe : Marginal utility of X = 5
   Price of X = ₹ 4
   Marginal utility of Y = 4
   Price of Y = ₹ 5
   $MUx \div Px = 5 \div 4 = 1.25$
   $MUy \div Py = 4 \div 5 = 0.8$
   No, the consumer is not in an equilibrium because the marginal utility of X is more than the marginal utility of Y and to reach the equilibrium level , the consumer should increase the consumption of good X and decrease the consumption of good Y.

7. Price elasticity of demand of good X is –2 and of good Y is –3. Which of the two goods is more price elastic and why? [3]
   Answer : Price elasticity of good X = –2
   Price elasticity of good Y = –3
   Good Y is more price elastic as compared to good X. There is inverse relationship between price and demand. For elasticity, negative sign is ignored and hence,
   $$= 3 > 2$$
   Thus, price elasticity of good Y is more .

8. **What is maximum price ceiling ? Explain its implications.** [3]

OR

Explain the chain effects, if the prevailing market price is below the equilibrium price.

Answer : A price ceiling occurs when the government puts a legal limit on how high the price of the product can be. In order for the price ceiling to be effective , it must be set below the natural market equilibrium. It is also known as maximum price. This maximum price is fixed below the equilibrium price for the welfare of poor and vulnerable sections of the society.

Implications of price ceiling :

(a) When prices are lowered below the equilibrium price, than the demand increases more as compared to available supply. This leads to the situation of excess demand.

(b) With price ceiling, all the necessity products come under the reach of poorer and vulnerable sections of the society.

(c) Due to price ceiling, there is the situation of more demand and less of supply, since there is less supply, goods are made available to people in a fixed quantity (quota), otherwise this at times lead to a problem of shortage.

OR

When the prevailing market price is below the equilibrium price, then there is a condition of excess demand . This excess demand increases the competition among the buyers and buyers tend to buy the output at higher prices which increases the market price. As the market price starts rising, demand contracts and supply expands. This market price tend to rise till the equilibrium is restored.
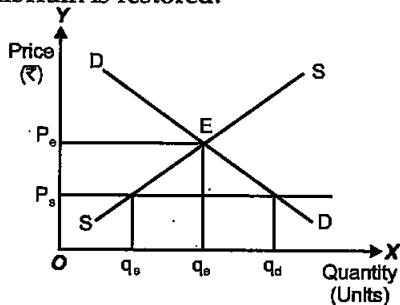
In the above fig, it is assumed that the market price p_s is below the equilibrium price p_e. According to demand curve, quantity demanded q_d, quantity supplied q_s, there emerges the situation of excess demand ($q_d - q_s$).

The excess demand pushes the price up from the OP_s price level. With rise in price, the quantity demanded contracts and quantity supplied expands. This process continues till the equilibrium gets established at point E at OP_e price level and OQ_e quantity.

9. **Explain in effect of change in prices of the related goods on demand for the given good.** [4]

Answer : Goods are said to be related when price of one good (say 'X') causes change in demand for other good (say 'Y'). Related goods are of two types :

(a) Substitute goods (direct relationship) : Substitute goods are a pair of goods which can be used (substituted) in place of each other. They are competitive good. Like pepsi and coca-cola or tea and coffee. Demand for a given commodity is affected if the price of its substitute rises or falls. For the case of tea and coffee-the demand for tea will fall when the price of its substitute-coffee falls. A fall in the price of substitute good (tea) reduces the consumers demand for given good (coffee).

If related good is a substitute of a given good, then a rise in price of substitute good will lead to rise in demand for given good because it becomes relatively cheaper.
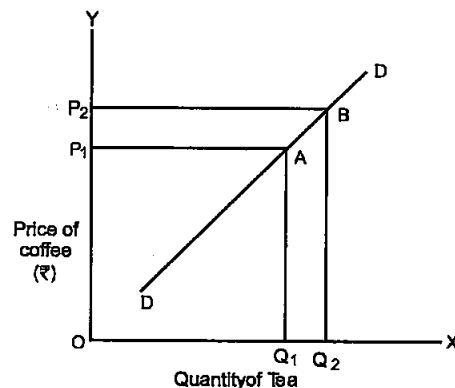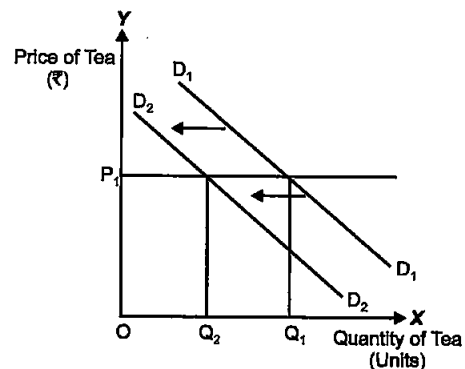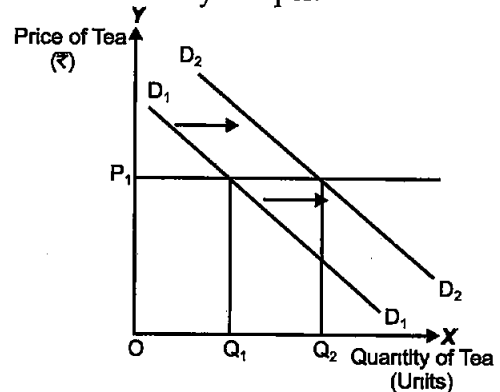
As can be seen is the above graph that when the price of coffee is OP_1, the demand for tea is OQ_1. When the price of coffee rises to OP_2, the demand for tea increased to OQ_2. Hence there is direct relationship between price of coffee and demand for tea.

(b) Complementary goods (inverse relationship) : Complementary goods are pair of goods which are used together to satisfy a given want. They are complementary to each other in the sense that they complete the deficiencies of each other. For eg fountain pen and ink. A fall in the price of one commodity leads to rise in the demand for the other commodity also. If the price of ink falls, demand for its complementary good -fountain pen will rise. Thus, a fall in price of one complementary good increases the demand for the other complementary good.

If related good is complementary to the given good, then a rise in price of complementary good will result in fall in demand of given good.

Increase in the Price of Complementary Good

Decrease in the Price of Complementary Good

Quantity of Pen
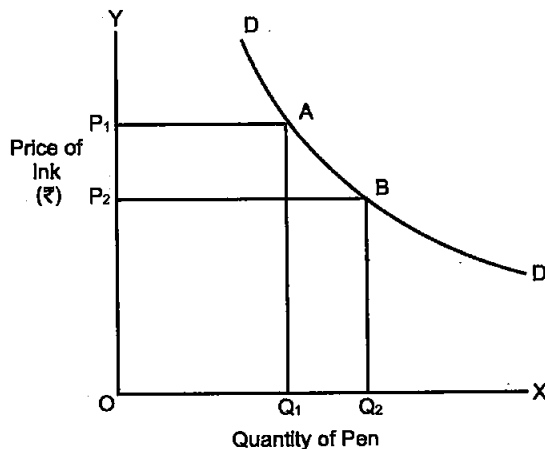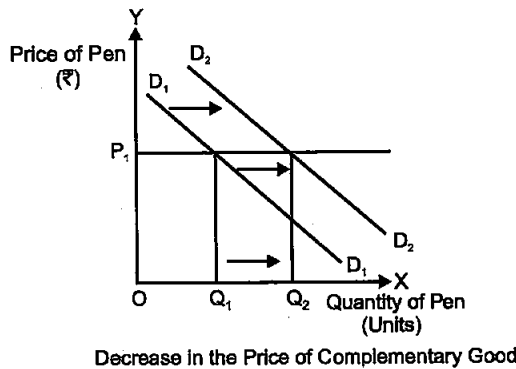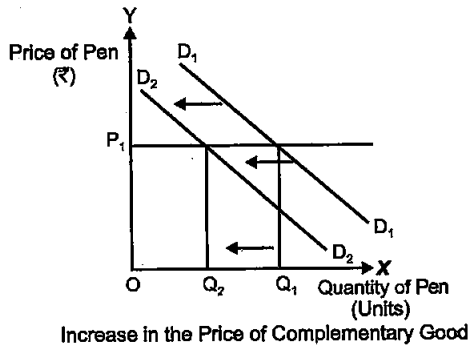
As can be seen is the above graph that when price of the ink was OP_1, the demand for pen was OQ_1. When the price of ink falls to OP_2, the demand for pen rises to OQ_2. Hence there is an inverse relationship between price of ink and demand for pen.

10. **Define production function. Distinguish between short run and long run production functions.** [4]

OR

Define cost. Distinguish between fixed and variable costs. Give one example of each.

Answer : Production function : Production has been defined as "transformation of inputs into output". The physical relationship between inputs and outputs under given technology is called production function.

$$Q = f(F_1, F_2............F_n)$$

Short - Run Production Function	Long-Run Production Function
Short-run production function is when one factor is varied while all other factors are kept fixed (constant).	Long-run production function is when all factors are varied (changed) in same proportion.
The law which operates here is known as "law of returns to a factor".	The law which operates in such a situation is known as "law of returns to scale".
It leads to changes in level of production.	It leads to the changes in scale of production.

OR

Cost : The sum of explicit cost (cash payments made by firms to outsiders for hiring factor services and buying raw materials) and implicit costs (cost of self owned and self supplied inputs) constitute total cost of production of a commodity.

Fixed Cost	Variable Cost
Fixed cost does not increase or decrease with increase or decrease in the level of production.	Variable cost rises or falls with the increase or decrease in the level of production.
In short period , fixed cost cannot be changed .	In short period variable cost can be changed.
Fixed cost curve is parallel to X-axis .	Variable cost curve is upward sloping.

Fixed cost can never be zero even if the production is stopped.	Variable cost is zero when production is stopped.
Eg- Rent of a building.	Cost of raw material.

11. A producer supplies 80 units of a good at a price of ₹ 10 per unit. Price elasticity of supply is 4. How much will he supply at ₹ 9 per unit ?
[4]

Answer : Given : $Q_1 = 80$ units, $Q_2 = ?$ $P_1 = ₹ 10/$ unit and $P_2 = ₹ 9/$unit and $E_s = 4$
Let Q_2 be x

$$\Delta Q = (Q_2 - Q_1)$$
$$= (x - 80)$$
$$\Delta P = (P_2 - P_1)$$
$$= (9 - 10)$$
$$= -1$$
$$E_s = (\Delta Q \div \Delta P) \times (P \div Q)$$
$$4 = (x - 80 \div (-1) \times (10 \div 80)$$
$$4 = x - 80 \div -8$$
$$-32 = x - 80$$
$$x = 48 \text{ units}$$

Thus, a producer will supply 48 units at ₹ 9 per unit.

12. Assuming that no resource is equally efficient in production of all goods, name the curve which shows production potential of the economy. Explain, giving reasons, its properties. **[6]**
**Answer :** The curve which shows the production potential of the economy , assuming that no resource is equally efficient in production of all goods is " Production Possibility Curve (PP Curve)".

Production possibility curve : It is a curve which depicts all possible combinations of two goods which an economy can produce with available technology and with full and efficient use of its given resources.

Production possibilities (combinations)	Wheat (lakh tonnes)	Tanks (thousands)
A	0	15
B	1	14
C	2	12
D	3	9
E	4	5
F	5	0

Properties of PP Curve :

(a) Downward sloping curve from left to right: PP Curve is downward sloping from left to right because in a situation of full employment of resources, production of one good can be increased only after sacrificing some quantity of the other good.
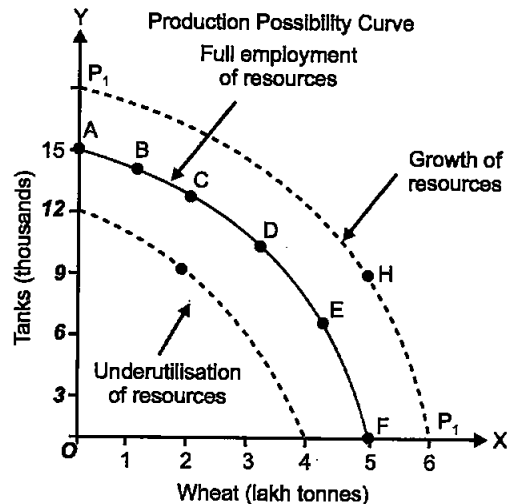

(b) PP curve is concave to the origin : The shape of PP Curve is concave to the origin because of increasing marginal opportunity cost.

(c) Optimum utilisation of resources : When economy is producing on PP Curve , every point on it (A, B, C, D, E ,F) reflects situation of full and efficient employment of resources *i.e.* optimum utilisation of resources.

13. Explain the condition of consumer's equilibrium using indifference curve analysis. **[6]**
Answer : According to indifference curve analysis, a consumer attains equilibrium at a point where budget line is tangent to indifference curve. Consumer equilibrium is achieved where slope of indifference curve (MRS) = slope of budget line (Px/Py)

MRS = Px ÷ Py(Ratio of prices of two goods)

Given the indifference map (preference schedule) of the consumer and budget or price line, we can find out the combination which gives the consumer maximum satisfaction. The aim of the consumer is to obtain highest combination on his indifference map and for this he tries to go to the highest indifference curve with his given budget line. He would be in equilibrium only at such point which is common point between budget line and the highest attainable indifference curve.

A consumer is in equilibrium at a point where budget line is tangent to indifference curve. At this point, slope of indifference curve (called MRS) is equal to slope of budget line.

Good 2

Consumer's Equilibrium
(Optimum)
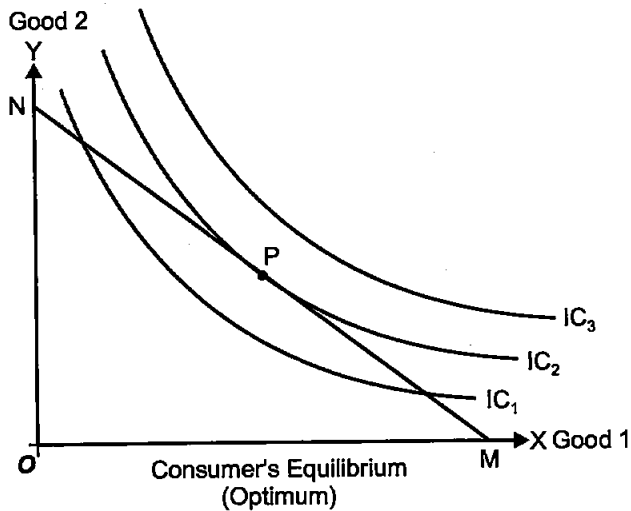
In the above fig, P is the equilibrium point at which budget line M just touches the highest attainable indifference curve IC_2 within consumer budget. Combinations on IC_3 are not affordable because his income does not permit whereas combinations on IC_1 gives lower satisfaction than IC_2. Hence, best combination is at point P where budget line is tangent to the indifference curve IC_2. It is at this point that consumer attains the maximum satisfaction at the state of equilibrium.

For consumer's equilibrium, two conditions are necessary :

(a) Budget line should be tangent to indifference curve (MRS = Px / Py).

(b) Indifference curve should be convex to the point of origin (*i.e.*. MRS should be diminishing at a point of equilibrium.)

14. **Explain the distinction between "Change in quantity supplied" and "Change in supply". Use diagram.** [6]

Answer :

Change in Quantity Supplied	Change in Supply
(i) When supply rises or falls because of change in the price of the commodity and other things remaining constant, is called change in quantity supplied.	When there is increase or decrease in supply because of change in factors other than price, it is called change in supply.
(ii) When supply of a commodity rises with rise in price, other things remaining constant is expansion in supply	When supply of a commodity rises due to change in factors other than price, it is called increase in supply.
(iii) Other things remaining constant, when supply of a commodity falls with fall in the price, it is termed as contraction in supply.	When supply of a commodity falls due to change in factors other than price, is called decrease in supply.
(iv) Change in quantity supplied is depicted by movement along the supply curve.	Change in supply is depicted by shift in supply curve.
(v) Types of change in quantity supplied : (a) Expansion of supply. (b) Contraction of supply.	Types of change in supply : (a) Increase in supply. (b) Decrease in supply.

Decrease in supply

15. **Explain the implication of the following in a perfectly competitive market :** [6]
(a) Large number of buyers
(b) Freedom of entry and exit to firms

OR

Explain the implications of the following in an oligopoly market :
(a) Inter-dependence between firms
(b) Non-price competition

Answer : Implications of the following in perfectly competitive market :

(a) **Large number of buyers :** There are very large number of buyers in perfectly competitive market that no individual buyer can influence the price or demand of any commodity. An individual buyer is the price taker and not the price maker.

(b) **Freedom of entry and exit to the firms :** Implies that there are no obstacles for the firms to move in and out of industry. The implication is that when existing firms are making profits, new firms enters, raise the output of industry, brings down the market price enough for the firm to earn only normal profit in the long run. The opposite happens if the existing firms are facing losses.

OR

Implications of the following in oligopoly market :

(a) **Inter-dependence between firms :** There are very few large firms in oligopoly market and these firms are mutually dependent on each other and hence influence the market price and output. To fix the price and its output , every firm has to consider the decision of the rival firm also as all the firms are mutually dependent on each other.

(b) **Non-price competition :** Since the firms in oligopolistic market are inter- dependent and they fix the prices together, so there is no price competition among the firms as they fix the price after taking into consideration the decision of all the firms together.

SECTION B

16. **Define Stocks.** [1]

Answer : Stock : A stock are the variables whose magnitude is measured at a point of time, e.g. population.

17. **Depreciation of fixed capital assets refers to :** (choose the correct alternative) [1]
    (a) Normal wear and tear
    (b) Foreseen obsolescene
    (c) Normal wear and tear and foreseen obsolescene
    (d) Unforeseen obsolescence

    Answer : (c) Normal wear and tear and foreseen obsolescence.

18. **What is revenue expenditure ?** [1]

    Answer : Revenue Expenditure : An expenditure which neither creates assets nor reduces liabilities is called revenue expenditure.

19. **Fiscal deficit equals :** (choose the correct alternative) [1]
    (a) Interest Payments
    (b) Borrowings
    (c) Interest payments less borrowing
    (d) Borrowings less interest payments

    Answer : (b) Borrowings.

20. **Foreign exchange transactions dependent on other foreign exchange transactions are called:** (choose the correct alternative) [1]
    (a) Current account transactons
    (b) Capital account transactions
    (c) Autonomous transactions
    (d) Accomodating transaction

    Answer : (d) Accommodating transactions.

21. **Find net value added at factor cost :**

		(₹ Lakh)
(i)	Durable use producer goods with a life span of 10 years	10
(ii)	Single use producer goods	5
(iii)	Sales	20
(iv)	Unsold output produced during the year	2
(v)	Taxes on production	1

    [3]

    Answer : Value of output = sales + change in stock

    $$= 20 + 2 = 22 \text{ lakh.}$$

    Gross value added at market price = value of output - intermediate consumption (single use producer goods)

    $$= 22 - 5 = 17 \text{ lakh.}$$

    Depreciation = (Cost of producers good ÷ no. of life in years)

    $$= (10 \div 10) = 1$$

    Net Indirect taxes = Taxes on production - subsidy

    $$= 1 - 0 = 1$$

    Net value added at FC = GVA mp – Depreciation – Net indirect taxes

    $$= 17 - 1 - 1$$

    $$= ₹ \text{ 15 lakhs.}$$

22. **Distinguish between marginal propensity to consume and average propensity to consume. Give a numerical example.** [3]

    ### OR

    Explain the role of taxation in reducing excess demand.

    Answer :

Marginal Propensity to Consume	Average Propensity to Consume
(i) The ratio of change in consumption (ΔC) due to change in income (ΔY) is called marginal propensity to consume.	The ratio of total consumption expenditure to total income is called average propensity to consume.
(ii) MPC = $\Delta C/\Delta Y$	APC = C/Y
(iii) MPC is always greater than zero but less than 1.	APC can be greater or less than 1 but can never be zero because at zero income, survival needs minimum consumption.

(iv) MPC falls more rapidly with rise in income.	APC falls as income rises.
(v) Eg - if income of a country increases from ₹ 5000 crores to ₹ 5500 crores, consumption expenditure goes up from ₹ 4000 crores to ₹ 4300 crores, then : MPC = $\Delta C/\Delta Y$= 300/500 = 3/5 = 0.6 or 60 paise.	Eg - Aggregate income of the economy = ₹ 5000 crores and aggregate consumption is ₹ 4500 crores, then : APC = C/Y = 4500/5000 = 0.90 or 90 %.

OR

Role of taxation to reduce excess demand :

Important part of fiscal policy is revenue policy which is expressed in terms of taxes. During inflation, government should raise rates of all taxes especially on rich people because taxation withdraws purchasing power from the tax payers and to that extent reduces effective demand. The non-discretionary elements refer to in built stabilizers of income which operate automatically in reducing excess demand like progressive income tax, subsidies, old-age pension and others such as transfer payments .

23. **In an economy investment is increased by ₹ 300 crore. If marginal propensity to consume is 2/3, calculate increase in national income.**   **[3]**

Answer :

$$MPC = 2/3$$
$$\Delta I = ₹ \ 300 \text{ crores}$$
$$k = [1 \div (1 - MPC)]$$
$$= [1 \div (1 - 2/3)]$$
$$\frac{1}{1 - MPC} = \frac{1}{1 - \frac{2}{3}}$$
$$\frac{1}{\frac{1}{3}} = 3$$
$$k = \Delta Y / \Delta I$$
$$3 = \Delta Y / 300$$
$$\Delta Y = 300 \times 3$$
$$= ₹ \ 900 \text{ crore}$$

Increase in national income is ₹ **900 crore.**

24. **Government incurs expenditure to popularize yoga among the masses. Analyse its impact on gross domestic product and welfare of the people.**   **[4]**

Answer : Impact on GDP : With the help of yoga, people will be in good state of health as well as in a good state of mind and it is rightly said that healthy mind stays in a healthy body. When a person has healthy mind and healthy body, he/she will work hard towards producing good and increased quantity of goods which will help in increasing the GDP of the economy. People with healthy mind will provide their efficient services to the economy which will have a positive impact on the GDP of the country and will help in increasing the standards of the economy.

Impact on the welfare of people : Yoga keeps the body, mind and soul healthy and happy. With healthy body, mind and soul people are able to work in an efficient manner and help the others in society, rooting up the welfare of all the people in the society.

25. **Explain the 'store of value' function of money. How has it solved the related problem created by barter ?****   **[4]**

OR

Explain the 'unit of account' function of money. How has it solved the related problem created by barter ?**

26. **Explain how open market operations are helpful in controlling credit creation.**   **[4]**

Answer : Open market operations : Open market operations refer to buying and selling of government securities by central bank to public and banks. This is done to influence money supply in the country. Sale of government securities to commercial bank means flow of money into central bank which reduces cash reserves. Consequently, credit availability of commercial banks is controlled.

On the other hand, if R.B.I purchases government securities, it will increase the money supply with commercial banks that will increase their lending capacity and flow of money into the economy.

27. **What is government budget ? Explain how taxes and subsidies can be used to influence allocation of resources.**   **[6]**

Answer : A government budget is an annual financial statement of estimated revenue and estimated expenditure during a financial year. Government budget is a statement of its income and expenditure.

Through budgetary policy, government aims to allocate resources in accordance with economic (profit maximisation) and social (public welfare) priorities of the country.

To encourage investments, government can give tax concessions, subsidies, etc. to the producers. For example : government discourages the production of harmful consumption goods like liquor or cigarettes, etc. through levying heavy taxes and encourages the use and production of "khaadi" products by providing subsidies.

Government budget can be used to bring price stability or economic stability in the economy :

** Answer is not given due to change in present syllabus

Government can bring price/economic stability i.e., control fluctuations in the general price level through taxes, subsidies and expenditure. For instance, when there is inflation (continuous rise in price), government can reduce its own expenditure. When there is depression, government can reduce taxes and grant subsidies to encourage spending by the people.

28. **Given Consumption curve, derive saving curve and state the steps taken in the process of derivation. Use diagram.** [6]

Answer : Consumption + saving is always equal to income because income is either consumed or saved. It implies that consumption and saving curves representing consumption and saving functions are complementary curves.

In part A , CC curve shows consumption function whereas 45° line represents income. C curve intersects 45° line at point B at which BR = OR *i.e..*,consumption = income. Point B is the break even point showing zero saving. It states that saving curve must intersect X-axis at the same income level where consumption curve and 45° line intersects. Left of point B is negative saving and to the right of point B is positive saving.

In part B, we derive saving function in the form of saving curve. In part A , the amount of saving is the vertical distance between C curve and 45°line. By plotting, the vertical distances of saving/dissaving and by joining them, we derive a saving curve. In part A the vertical distance OC (dissaving) is plotted as OS$_1$ below X-axis in part-B. At OR level of income in Part A, vertical distance at point B is shown as point B1 on X-axis in lower part of figure is nil. LM of part A is shown as L$_1$M$_1$ in part -B. By joining points S, B$_1$ and L$_1$ in lower segment, we get saving curve. Thus saving curve is derived from consumption curve.

PART-A

PART–B
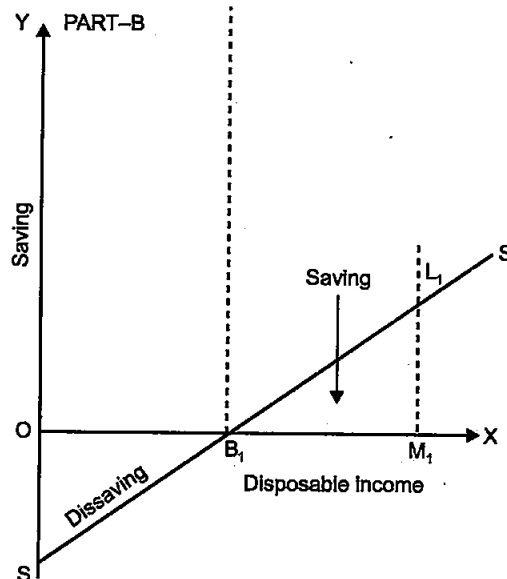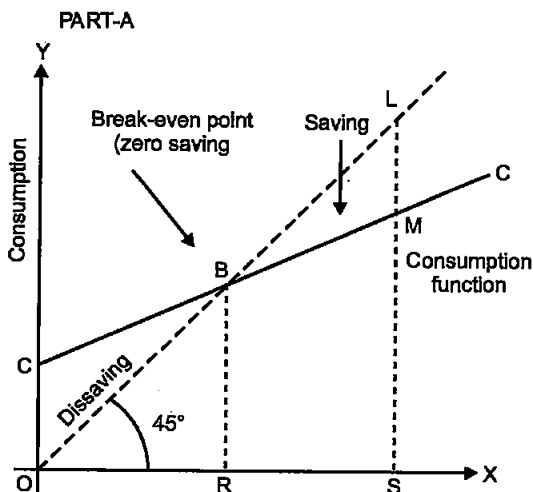
29. **(a) In which sub-account and on which side of balance of payments account will foreign investments in India be recorded ? Give reasons.**

(b) What will be the effect of foreign investment in India on exchange rate ? Explain. [6]

Answer : (a) Foreign investments in India will be recorded in the capital account on the credit side of Balance of Payments accounts. It is recorded as the positive item in the capital account of BOP because foreign investments is an inflow of foreign currency into our country and give rise to foreign exchange liabilities.

(b) Foreign investment in India will increase the supply of foreign currency in our country. This increase in supply is reflected as shift in the supply curve. With the shift, new equilibrium point is established, where exchange rate falls and thus the demand and supply of foreign currency rises and exchange rate falls. This will continue till the equilibrium is reached.

Demand and supply of foreign currency
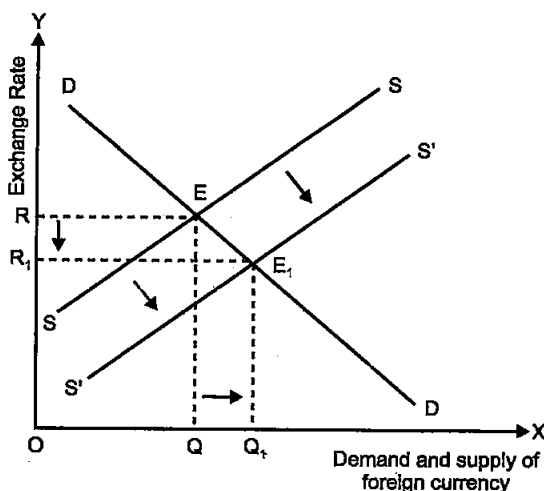
As can be seen in the above diagram that the supply curve of foreign exchange is SS. As the foreign investment in India increases, the supply curve of foreign exchange shifts to rightward and now the new supply curve is S'S'. This shift in supply curve from SS to S'S' changes the equilibrium from E to E_1 where the exchange rate falls from OR to OR_1 and demand and supply quantity of foreign exchange rises from OQ to OQ_1. Hence the new equilibrium gets established at OR_1 exchange rate and OQ_1 quantity of foreign exchange.

30. Find national income and (private income**) :

		(₹ Crores)
(i)	Wages and salaries	1000
(ii)	Net current transfers to abroad	20
(iii)	Net factor income paid to abroad	10
(iv)	Profit	400

(v)	National debt interest	120
(vi)	Social security contributions by employers	100
(vii)	Current transfers from government	60
(viii)	National income accuring to government	150
(ix)	Rent	200
(x)	Interest	300
(xi)	Royalty	50

[6]

Answer : NNP_{fc} = Wages and salaries + Social security contributions by employers + Rent + interest + profit + royalty - Net factor income paid to abroad.

$$NNP_{fc} = 1000 + 100 + 200 + 300 + 400 + 50 - 10$$

$$= 2050 - 10$$

$$= ₹ 2040 \text{ crores.}$$

●●

Economics 2016 (Delhi)   SET II

Time allowed : 3 hours   **Maximum marks : 70**

> **Note : Except for the following questions, all the remaining questions have been asked in previous set.**

SECTION—A

4. **When does 'increase' in supply take place ?** [1]

   Answer : When supply of a commodity rises due to change in factors other than the price, it is called increase in supply. Increase in supply is the rightward shift of the supply curve.

5. **What is the relation between marginal cost and average cost when average cost is constant ?** [1]

   Answer : Relation between marginal cost and average cost when average cost is constant is, marginal cost is also constant because at this point MC curve cuts the AC curve which implies that MC = AC, and AC curve is at its minimum point.

7. **A consumer consumes only two goods X and Y. If marginal utilities of X and Y are 4 and 5 respectively, and if price of X is ₹ 5 per unit and that of Y is ₹ 4 per unit, is the consumer in**

equilibrium ? What will be further reaction of the consumer ? Explain. [3]

Answer : Marginal utility of X = 4

Price of X = ₹ 5

Marginal utility of Y = 5

Price of Y = 4

$MUx ÷ Px = 4 ÷ 5 = 0.8$

$MUy ÷ Py = 5 ÷ 4 = 1.25$

The ratio of MUy to the price of Y is greater than the ratio of MUx to the price of X, so the consumer is not at equilibrium and to reach equilibrium level, consumer should increase the consumption of good Y and decrease the consumption of good X.

9. **Price elasticity of supply of a good is 2. A producer supplies 100 units of a good at a price of ₹ 20 per unit. At what price will he supply 80 units.** [4]

   Answer : Elasticity of supply (Es) = 2

   Quantity supplied (Q) = 100 units

   Price (P) = ₹ 20/unit

   New quantity (Q_1) = 80 units

** Answer is not given due to change in present syllabus

New price (P_1) = ?

Change in quantity supplied

$$(\Delta Q) = Q_1 - Q$$
$$= 80 - 100$$
$$= -20 \text{ units.}$$
$$Es = (\Delta Q \div \Delta P) \times (P \div Q)$$
$$2 = (-20 \div \Delta P) \times (20 \div 100)$$
$$2 = (-20/(-\Delta P)) \times (1/5)$$

($-\Delta P$ is taken because prices are fallen, supply is falling)

$$2 = (-4/(-\Delta P))$$
$$2\Delta P = -4$$
$$-\Delta P = -4/2$$
$$-\Delta P = -2$$
$$\Delta P = 2$$
$$\Delta P = (P - P1)$$
$$2 = (20 - P1)$$
$$P1 = 20 - 2 = ₹ 18$$

Hence, the seller will supply 80 units at ₹ 18 per unit.

10. Explain the effects of change in income on demand for a good. [4]

Answer : Effects of change in income on demand for a good : Relationship between income and demand is direct in case of normal good but negative in case of inferior good.

(a) In case of **normal good,** an increase in income of the buyer will increase the demand at the same price because he can afford to buy more and shift the demand curve to the right but fall in the income will decrease the demand and shift the demand curve to the left.

(b) In case of an **inferior good ,** an increase in income usually leads to decrease in demand at the same price and shift the demand curve to the left but decrease in income leads to increase in demand at the same price and shifts the demand curve to the right.

●●

Economics 2016 (Delhi)   SET III

Time allowed : 3 hours   **Maximum marks : 100**

SECTION-A

3.   What is the relation between marginal cost and Average Cost when average cost is rising ?   [1]

Answer : When AC is rising, MC rises at a faster rate and MC remains above AC curve.

5.   When does 'decrease' in supply take place ? [1]

Answer : Decrease in supply refers to the fall in the supply due to unfavourable changes in the determinants other than price of a good. Graphically, decrease in supply is indicated by a leftward upward shift of the supply curve.

8.   A consumer consumes only two goods X and Y. Marginal utility of each is 2. The price per unit of X and Y is ₹ 1 and ₹ 2 respectively. Is the consumer in equilibrium ? What will be the further reaction of the consumer ? Explain.   [1]

Answer : According to the utility approach, a consumer reaches equilibrium where the following equality is met.

$$\frac{MUx}{P_x} = \frac{MUy}{P_y}$$

According to the given question :

$$\frac{MUx}{P_x} = \frac{2}{1} = 2$$
$$\frac{MUy}{P_y} = \frac{2}{2} = 1$$

Since, $\frac{MUx}{P_x}$ is greater than $\frac{MUy}{P_y}$

Thus, a consumer is not in equilibrium. In order to reach the equilibrium, a rational consumer would increase the consumption of good X and decrease that of good Y.

10.   When price of a good rises from ₹ 12 per unit to ₹ 15 per unit the producer supplies 50 per cent more output. What is the price elasticity of supply ? Calculate.   [4]

Answer : Given,

Percentage change in quantity supplied is 50%

$P = ₹ 12, P_1 = ₹ 15$ and E_s = ?

$$\Delta P = P1 - P$$
$$= 15 - 12$$
$$= 3$$

Percantage change in Price = $\frac{\Delta P}{P} \times 100$

$$= \frac{3}{12} \times 100 = 25\%$$

Price elasticity of supply (E_s)

$$= \frac{\text{Percentage change in quantity supplied}}{\text{Percentage change in Price}}$$

$$= \frac{50\%}{20\%} = 2$$

11. Explain the effect of (a) change in own price and (b) change in price of substitute on demand of a good. [4]

Answer : Effect on demand of good if :

(a) Change in own Price : Other things remaining constant, as the price fo the goods rises, the quantity demanded of the goods falls, on the other hand as the price of the goods falls, the quantity demanded or the goods rises. Thus price of the goods and its quantity demanded shares a negative relationship.

(b) Change in price of Substitute Goods : In case of substitute goods, if the price of one good increases, the consumer will shift his demand to other substitute good i.e., rise in the price of one good results in a rise in the demand for the other goods.

SECTION–B

20. What is revenue deficit in government budget ? [1]

Answer : Revenue deficit refers to the excess of revenue. Expenditure over revenue receipts. Revenue deficit implies that the government is not able to cover its revenue expenditure by its revenue receipt. In other words, the consumption and administrative expenditure of the government is greater than its tax and non-tax receipts.

Algebraically it is depicted as

Revenue Deficit = Revenue Expenditure – Revenue Receipts.

22. In an economy an increase in investment by ₹ 100 crore led to 'increase' in national income by ₹ 1,000 crore. Find marginal propensity to consume. [3]

Answer : Given,

$$\Delta I = ₹\ 100 \text{ crore}$$
$$\Delta Y = ₹\ 1,000 \text{ crore}$$
$$\text{MPC} = ?$$

$$K = \frac{\Delta Y}{\Delta I}$$
$$K = \frac{1}{1 - \text{MPC}}$$
$$\frac{1}{1 - \text{MPC}} = \frac{\Delta Y}{\Delta I}$$
$$\frac{1}{1 - \text{MPC}} = \frac{1,000}{100}$$
$$\frac{1}{1 - \text{MPC}} = 10$$
$$1 = 10 - 10\ \text{MPC}$$
$$-9 = -10\ \text{MPC}$$
$$\text{MPC} = \frac{9}{10} = 0.9$$

23. Find gross value added at market price :

		(₹ lacs)
(i)	Depreciation	20
(ii)	Domestic sales	200
(iii)	Net change in stocks	(–) 10
(iv)	Exports	10
(v)	Single use producer goods	120

[3]

Answer : Value of output = Sales – Net Change in stock

= (Domestic Sales + Exports) + Net change in Stock

= (200 + 10) + (– 10)

= ₹ 200 lakh

Gross value added at market price = Value of output – Intermediate Consumption

= 200 – 120

= ₹ 80 lakh.

25. Explain how 'margin requirements' are helpful in controlling credit creation ? [4]

Answer : The Commercial Banks function to grant loan depends upon the value of security being mortgaged by the borrower so banks keep a margin, which is the difference between the market value of security and loan value. Raising the marginal requirement reduces the maximum amount a borrower can borrow from the Commercial Banks. In this way margin requirements helps in controlling credit creation.

For example, a Commercial Bank grants loan of ₹ 80,000 against the security of ₹ 1,00,000. So margin is calculated as ₹ 1,00,000 – ₹ 80,000 = ₹ 20,000. When the Central Bank decides to

Economics 2015 (Outside Delhi)   SET I

Time allowed : 3 hours   **Maximum marks : 70**

SECTION—A

1. **Define indifference curve.** [1]

   Answer : Indifference curve is a curve that depicts various combinations of two goods that provides a consumer with the same level of satisfaction. In other words, it shows those combinations of two goods between which the consumer is indifferent.

2. **If due to fall in the price of good X, demand for good Y rises, the two goods are : (choose the correct alternative)** [1]

   (a) Substitutes   (b) Complements

   (c) Not related   (d) Competitive .

   Answer : (b) Complements.

3. **If Marginal Rate of Substitution is increasing throughout, the Indifference Curve will be : (choose the correct alternative)** [1]

   (a) Downward sloping convex

   (b) Downward sloping concave

   (c) Downward sloping straight line

   (d) Upward sloping convex

   Answer : (b) Downward sloping concave.

4. **Giving reason comment on the shape of Production Possibilities curve based on the following schedule :** [3]

Good X (units)	Good Y (units)
0	30
1	27
2	21
3	12
4	0

Answer : Based on the below schedule, we can say that PPC is concave to origin. This is because as the production increases, to produce each additional unit of Good X, more and more units of Good Y need to be sacrificed. In other words, the opportunity cost of producing one good in terms of another increases.

Good X (units)	Good Y (units)	Opportunity Cost
0	30	–
1	27	3
2	21	6
3	12	9
4	0	12

The following figure depicts the shape of PPC.

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