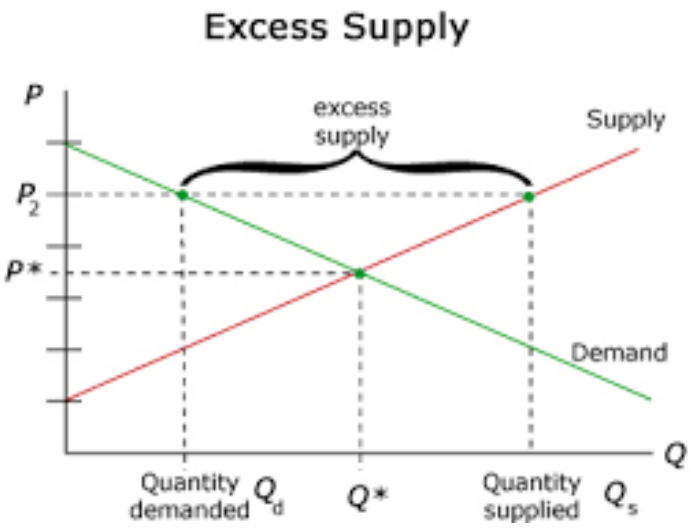
Economics Class 12 **Solution 2016**

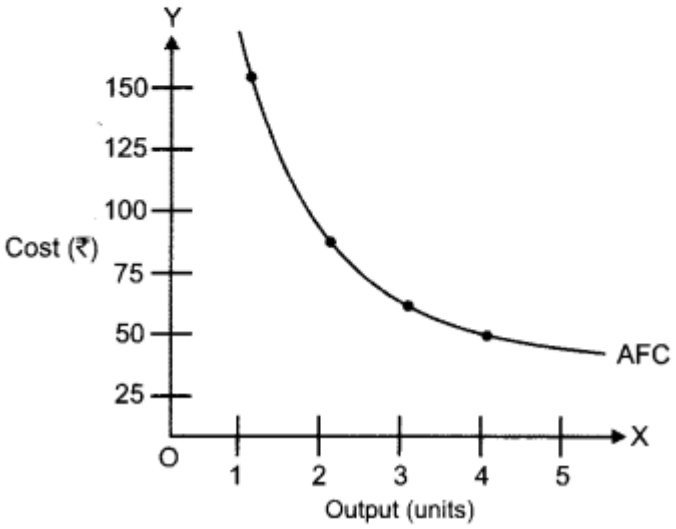
	Section A - Microeconomics	
1	AVC = ATC, We know that, TC=TFC +TVC Dividing both the sides by 'Q', we get Hence, TC/Q = TFC/Q + TVC/Q [TFC = 0] ATC = AVC Graphically, both the cost curves will intersect each other. Both will be equal.	1
2	c) Equal to average revenue. Selling any quantity at the given price means a perfect competition market. In a perfect competition market, the Marginal Revenue = Average Revenue	1
3	Change in demand describes a change or shift in demand due to change in any of the following factors: (i) change in factors other than the own price of the commodity, (ii) Change in the price of complementary goods, (iii) Change in the price of substitute goods, (iv) Income of the consumer, (v) Taste and preferences of the consumer, and (vi) Future expectation of price.	
4	(c) Both Monopolistic Competition and Oligopoly	1
5	(a) Perfect Competition.	1
6	The consumer is not in equilibrium, Consumer attains equilibrium when, MUx/Px = MUy/Py MUx/Px = 3/4 = 0.75 And MUy/Py = 4/4 = 1 Thus, MUy/Py > MUx/Px. Hence to attain equilibrium consumers will consume more units of Y and less units of X.	3
7	(a) PED = Zero Percentage change in price= 10 0 = %change in quantity / %change in Price %change in quantity = 0 X % change in price %change in price = 0 Thus , a 10% rise in the price of the commodity will not affect its demand, as the demand for the good is perfectly inelastic.	3

	(b) PED = (-1) Percentage change in price = 10 (-1) = %change in quantity / %change in Price %change in quantity = (-1) X % change in price %change in quantity = (-1) X 10 %change in quantity = (-)10% The price elasticity of demand is unitary elastic. 10 % rise in the price of the commodity will lead to a 10% fall in its demand. (c) PED = (-2) Percentage change in price = 10 (-2) = %change in quantity / %change in Price %change in quantity = (-2) X % change in price. %change in quantity = (-2) X 10 %change in quantity = (-)20% The price elasticity of demand is more than unit elastic. 10 % rise in the price of the commodity will lead to a 20% fall in its demand.	
8	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 a minimum price ceiling arises when the 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) Assurance to the farmer:** 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 the government. **(b) Assurance to return:** It also states that the farmer need not to worry about the sale of their whole product. It will be sold in the market. This ensures a minimum guaranteed return to their investment in the	3

	production process. **(c) Higher income:** 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 a condition of excess supply. Excess supply induces sellers to sell more and in order to sell more, sellers have 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 below that at price OP_2, the quantity supplied is OQ_s while the quantity demanded is OQ_d so there is the excess supply of Q_dQ_s 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 it reaches OP_1. At OP_1 price the quantity demanded becomes equal to quantity supplied OQ and the equilibrium establishes at Point E. 	
9	**Demand**: Demand for a commodity refers to the quantity of a commodity which a consumer is willing and able to buy at a given price and in a given period of time. Factors affecting Market demand:	4

	(1) **Market price of Good**: Other things being equal, If the market price of the commodity rises, quantity demanded of the commodity falls and vice versa. It has a negative relationship. (2) **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. (3) **Season and weather**: The season and weather conditions also affect Consumer's demand. Example: Demand for woolen clothes rises in the winter season. (4) **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. (5) **State of business**: The prevailing business condition in a country also affects the level of demand. Level of demand increases during the boom period while decreases during the period of depression. (6) **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	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.	4

No of units produced	TFC	AFC
0	150	∞
1	150	150
2	150	75
3	150	50
4	150	37.5



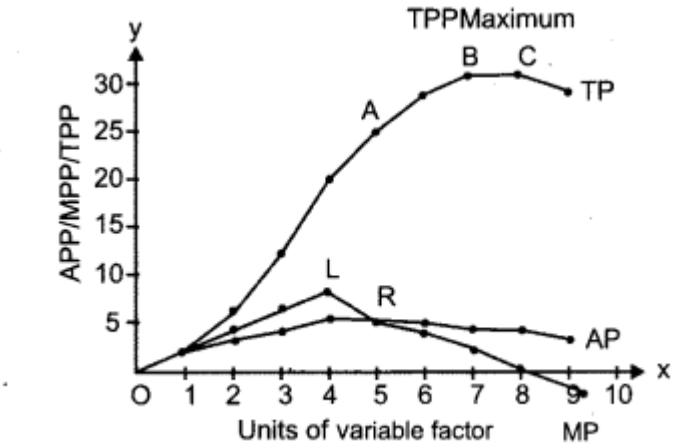
The shape of the AFC curve is a downward sloping curve from left to right because average fixed cost goes on falling with every increase in the output as TFC remains constant. The AFC curve neither touches X-axis because AFC always remains positive nor touches Y-axis because AFC approaches infinity when 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 the same. Marginal product measures extra output per extra unit of input holding all other inputs fixed.
Algebraically, it is defined as the ratio of the change in the total product to the change in the units of labour employed.

$$MP = \frac{Change\ in\ Total\ Product}{Change\ in\ the\ Labour\ Unit} = \frac{\Delta TP}{\Delta L}$$

Land (fixed factor)	Labour (variable factor)	TPP	APP	MPP
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

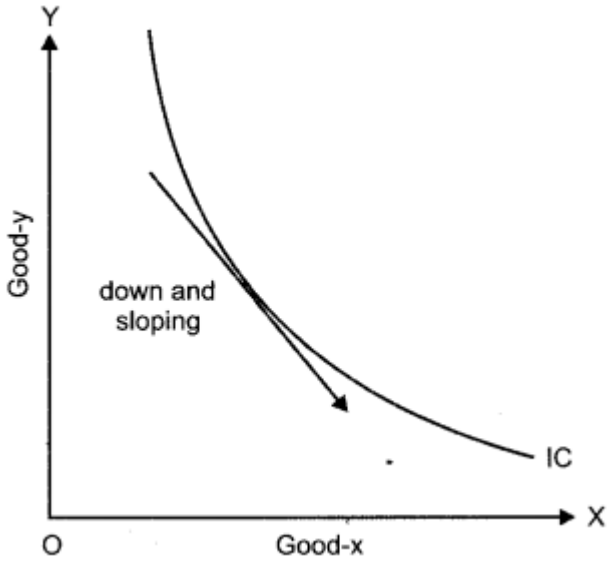


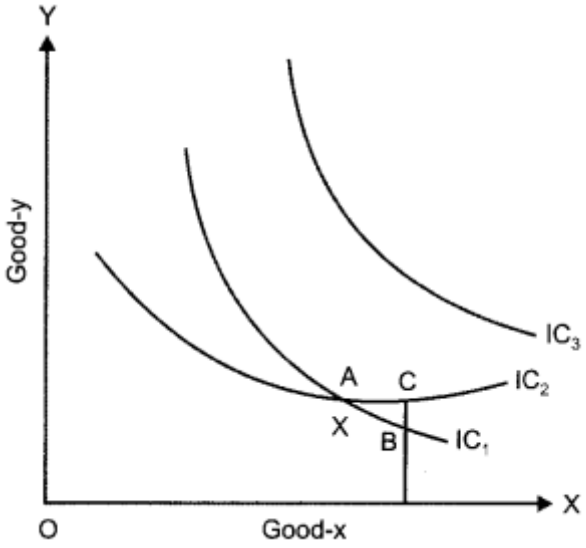
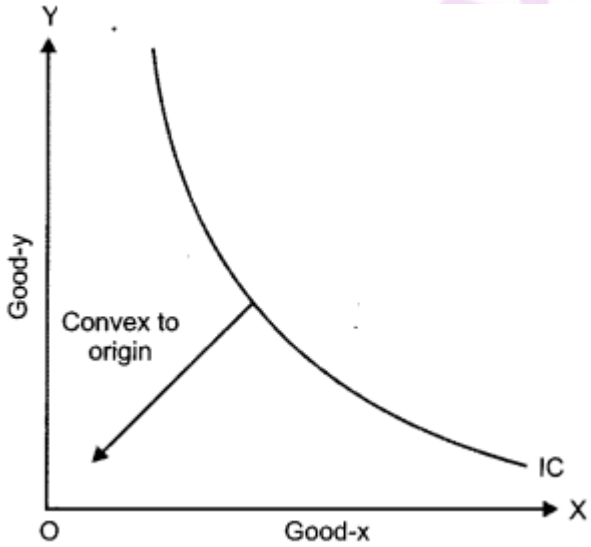
(i) TP (Total Product) increases continuously from point O to B. It increases at an increasing rate from O to A and at diminishing rate from A to B. TP is maximum at point B and remains up to point C.

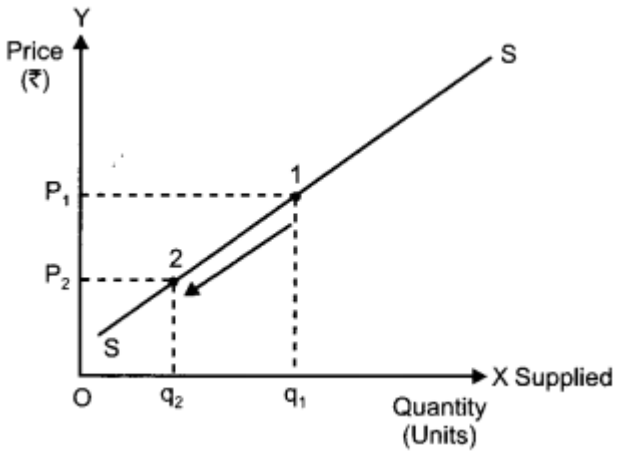
(ii) MP (Marginal Product) curve initially rises, reaches its maximum and ultimately declines taking the shape of inverted -U .

(iii) AP (Average Product) curve first rises, reaches its maximum and then declines taking the shape of an inverted -U.

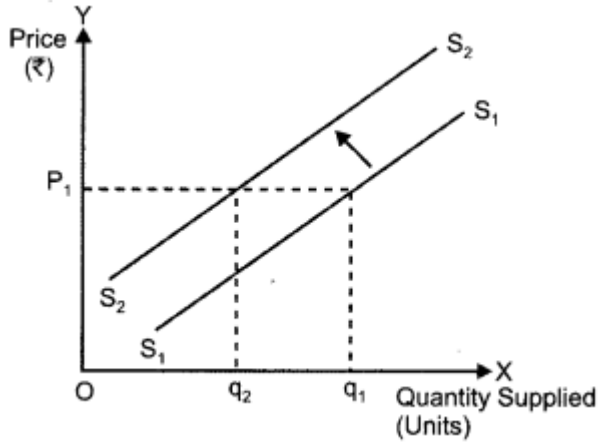
11	Percentage change in quantity supplied = – 75% Old price = ₹ 12 New price = ₹ 9 Change in price = 9 – 12 = -3 Percentage change in price = (- 3 ÷ 12) × 100 Percentage change in price = -25% Es (Elasticity of Supply) = Percentage change in quantity supplied / Percentage change in price Es = – 75% / – 25% Es = 3	4
12	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. **One of the three central problems is For Whom to Produce?** **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 a capitalistic economy the decision is taken on the basis of the purchasing power of the consumers. Socialist economy takes decisions regarding goods or services to be produced on the basis of the requirements of the individuals. Thus, this problem deals	6

	with the distribution of output among the people of a country.	
13	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 combinations of two goods because they give the same level of satisfaction. **Properties of indifference curve:** (1) **Indifference curve slopes down to the right.** It implies that consumers are 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) **Indifference curves cannot meet or intersect.** Two indifference curves never intersect. In the figure, point A and B lie on the same indifference curve IC1 giving the same level of satisfaction while point A and C also lie on the same indifference curves IC1 giving the same level of satisfaction. This implies that combination B and C should also give the same level of satisfaction, but this is not possible because combinations C lies on the higher indifference curve than B.	6

	 (3) **Indifference curves are always convex to the origin O because of diminishing MRS.** It implies that the marginal rate of substitution diminishes along an indifference curve. This implies that as the consumer gets more and more of one good, he is willing to give up less and less of another. 	
14	(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.	6



(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, the supply curve shifts to the left from $S_1S_1$to S_2S_2.

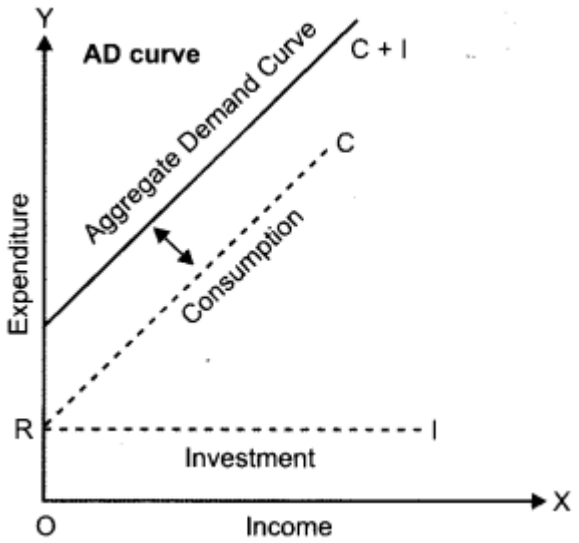


15	Implications in a perfectly competitive market: (a) **Large number of sellers**: The number of sellers is so large that individually they can't influence the existing price in the market. Large number of sellers in the market implies that the share of each seller in total market supply is so small 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	6

	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 to the market supply and thus the market is controlled by them.	

	Section B - Macroeconomics	
16	A flow is a variable whose magnitude which is measured over a period of time. e.g., Income earned during the month of April is a flow variable.	1
17	(c) Residents	1
18	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.	1
19	(c) Borrowings less interest payments.	1
20	(c) Autonomous transactions.	1
21	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) × Price index of base year. Nominal Income = (200 × 135) ÷ 100 = 27000 ÷ 100 = ₹ 270 crores.	3

22	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 entrepreneurs. This investment is done to increase production capacity in the future. (c) Government demand for goods and services (G): It is the government expenditure on purchase of consumer and capital goods to fulfill 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)	3

	 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 an 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	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 +1 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	3

24	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 cars 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 from many vulnerable diseases like asthma, heart diseases, lung problems, cancer, respiratory diseases, etc. Thus, reducing the welfare of the people.	4
25	**Medium of Exchange:** ● It means that money can be used to make payments for all transactions of goods and services. ● A buyer can buy goods through money, and a seller can sell goods for money. ● It is an essential function of money. **OR** **Standard of deferred payment:** ● It means that money acts as a 'standard' for making future payments. ● It has made deferred payments much easier than before. ● **Example:** When we borrow money from somebody, we have to return both the principal as well as interest amount in the future. ● Money is a convenient mode of calculation & payment of interest amount to be paid in the future. ● This function has facilitated borrowing and lending. ● It has also led to the creation of financial institutions.	4
26	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 a 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	4

	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. Thus, a rise in repo rate restricts the flow of money and credit in an economy.	
27		6

Basis	Revenue Expenditure	Capital Expenditure
Definition	The expense incurred for maintaining the day to day activities of a business	Expenditure incurred for acquiring assets, to enhance the capacity of an existing asset that results in increasing its lifespan
Tenure	Short term	Long Term
Value addition	Does not enhance the value of an existing asset	Enhances the value of an existing asset
Physical existence	Do not have a physical presence	Have a physical presence except for intangible assets
Occurrence	Recurring in nature	Non-recurring in nature
Availability of Capitalisation	No	Yes
Impact on Revenue	Reduces business revenue	Do not reduce business revenue
Potential Benefits	Short-term benefits for business	Long-term benefits for business
Appearance	It always appears in the Income statement	It appears as assets in the balance sheet and some portion in the income statement

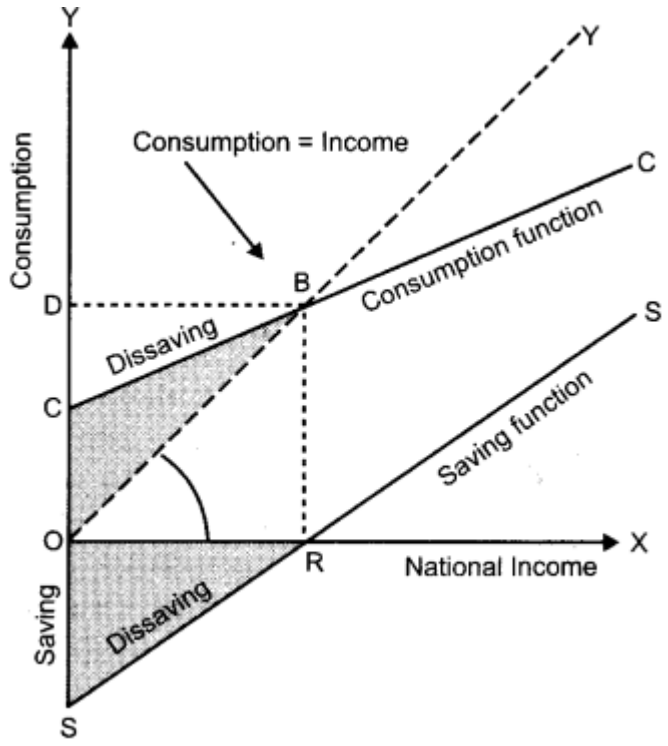
To reduce inequalities of income and wealth, the government can influence distribution of income by levying taxes on the rich people and granting subsidies to the poor people. Government levies like taxation, subsidies and public expenditure can be made use of to influence distribution of income in the society.

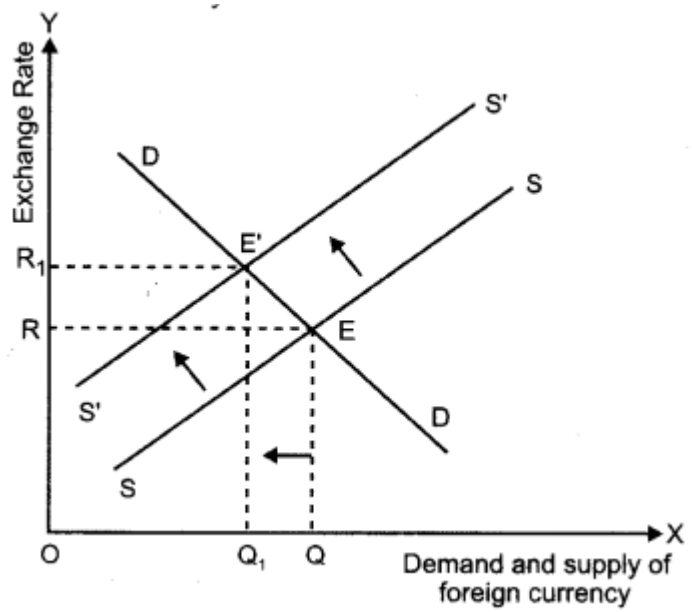
OR

Basis	Direct taxes	Indirect taxes
Meaning	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 the 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.
Examples	Eg: Income tax, wealth tax	Eg: Excise duty, custom duty.
Nature	It is progressive in nature	It is regressive in nature.
Shift if burden	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.
Coverage	They have a limited reach as they do not reach all the sections of the economy.	They have a wide coverage as they reach all the sections of the society.

Role of government budget in influencing allocation of resources:
To achieve the social and economic objectives, the government provides more resources into socially productive sectors like rural electrification, education, health, etc. Moreover, the 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	Steps of Deriving the consumption curve from saving curve: (i) Draw a 45° line from the origin. (ii) Take OC equal to OS on Y axis (iii) Draw a perpendicular line form B to R on the OX- axis which intersects the 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 the 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 the 45-degree line showing OD equal to OR. Thus, B becomes the point on the 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) =	6

		
29	(a) Sub-account – Capital Account. Balance of payment account – Debit Side. Lending abroad by Indian investors will be recorded in the capital account on the debit side of the balance of payment account. It is recorded on the debit side because it is the negative item in the capital account of the 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 Unchanged. 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. Leading abroad by Indian investors 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.	6

		
30	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 crores. GNPmp = GDPmp – net factor income to abroad = 1370 – (- 10) = ₹ 1380 crores. Private income = GDPMP - Net indirect Tax - Depreciation - Income accruing to government - Net factor income to abroad + Current transfer from government - Net current transfer to abroad + National debt interest = 1,380 - 150 - 100 - 90 - (-10) +40 - 20 + 50 = ₹1,120 crores Hence, private income = ₹1,120 crores (Private Income does not form the part of syllabus any more.)	6