Consumption Function

INTRODUCTION:

The theory of consumption function explains the functi... relationship between consumption and income. John May... Keynes based his theory of consumption function o... fundamental psychological law. In his own words [..."T... fundamental psychological law upon which we are entitle... depend with great confidence, both a priori from our knowl... of human nature and from the detailed facts of experience, is ... men are disposed as a rule and on the average to increase t... consumption as their income increases, but not only by as mu... the increase in their income". According to Keynes, consum... expenditure of households depends mainly on their cu... income. Many factors like interest rate, taxation, amoun... wealth, expectations of the consumers about the future prices... influence consumption expenditure. However, in the opinic... Keynes, consumption expenditure mainly depends upon ... current level of income.

The functional relationship between the two is expressed as:

C = f(y), where 'C' refers to consumption, 'y' refers to inc... and 'f' refers to functional relationship. According to Key... whenever income increases, consumption will also increase bu... a lesser proportion. This is because people have a tendency to s... a part of their income when income increases. Households sa... part of the incremental income to protect themselves ag... uncertainties like sickness and unemployment, for purchas... assets, etc. Thus increase in income will lead to increas... consumption but in a lesser proportion.

Consumption function is also known as propensit... consume. It indicates the changes in consumption expenditu... various levels of income. Consumption function is fu... explained through average propensity to consume and mar... propensity to consume.

Consumption function shows the functional relatio... between income and consumption. It is expressed as C = ... where 'C' is consumption, y is income and 'f' funct... relationship. This relationship between income and consum... can be a linear one or nonlinear one.

Linear Consumption Function:

Consumption expenditure will increase with an increase in income. As income continues to rise, consumption expenditure will increase but at a diminishing rate. This is because people have a tendency to save a part of their income. In the case of linear consumption function consumption will increase at a constant rate with the rise in income. Symbolically it is expressed as

$$C = a + cY$$

where 'C' is consumption,

'a' is autonomous consumption even when income is zero

'c' is marginal propensity to consume $\left(\dfrac{\Delta C}{\Delta Y}\right)$

'Y' is income

In the case of linear consumption function marginal propensity to consume remains constant. Linear consumption function can be explained diagrammatically as follows:
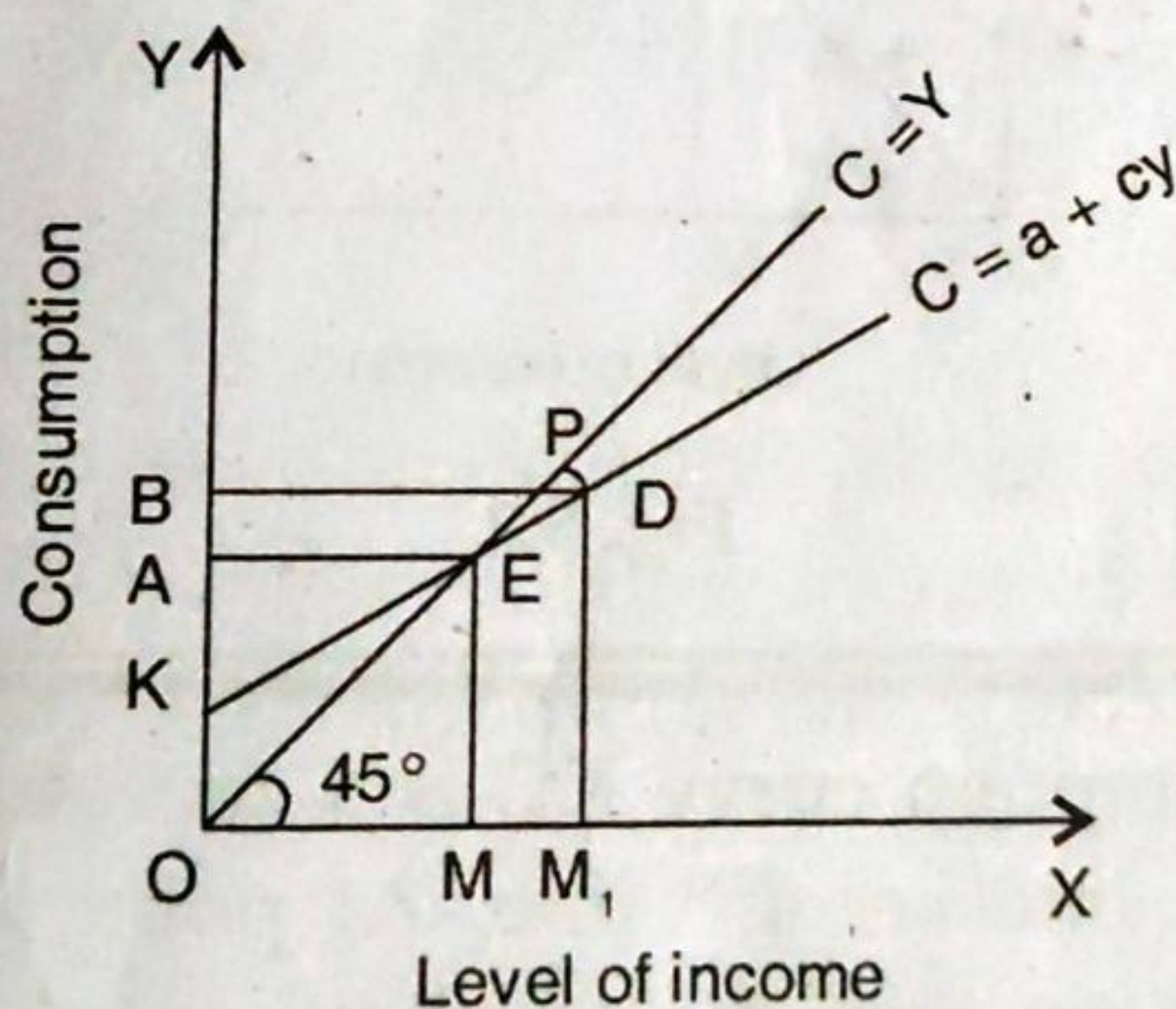

Fig. 5.1

Here the 45° line shows that consumption is equal to income at all levels. The line $C = a + cY$ represents the consumption line. This line starts above the origin from Y axis indicating that consumption can never be zero. It is always positive.

When income is zero, consumption is possible by using past savings or by borrowings.

The consumption line C = a + cY intersects the 45° line at p E. At this point c = y. Here consumption is OA and income is When income increases to OM₁, consumption will increase f OA to OB. It is obvious from the figure that increase consumption is less than increase in income i.e. AB < MM₁. gap between the 45° line and C = a + cY line represents sav Here PD shows saving. The level of saving keeps on rising rise in income.

Non Linear Consumption function: Nonlinear consump function indicates that consumption will rise with increas income but not in a constant proportion. The following diag represents a non-linear consumption function.
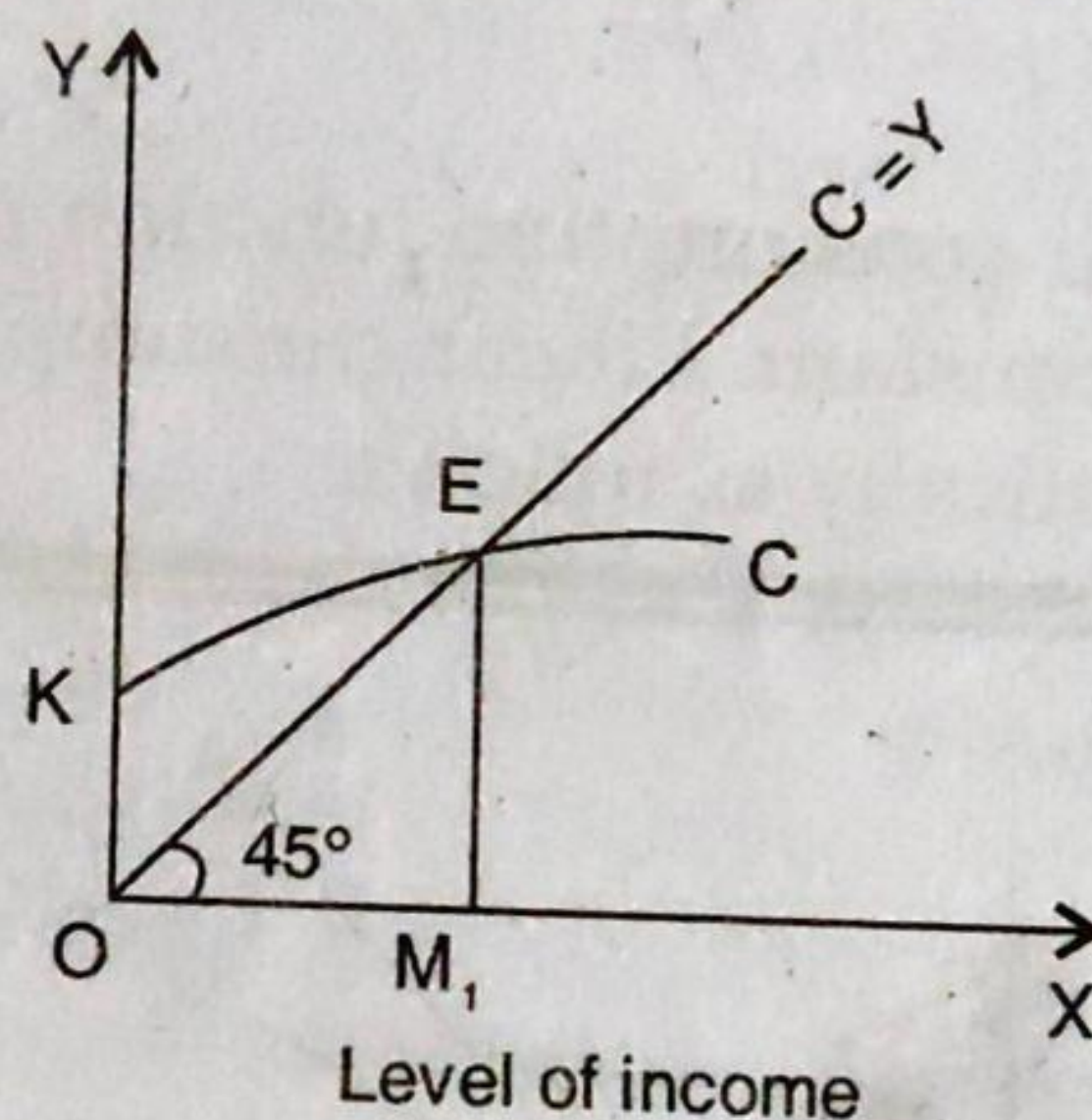

Fig. 5.2

Here the consumption curve KC is a curvature. Initially i above the income line i.e. 45° line. At point E, consumpti equal to income. After that, the gap between the 45° line and consumption curve keeps on widening. It indicates that income continues to rise, consumption will increase but diminishing rate and savings will increase at an increasing The non-linear consumption function represents the Keyn Version. Hence it is called Keynesian Consumption Function.

PROPERTIES OR TECHNICAL ATTRIBUTES:

Average Propensity to Consume (APC) and Marginal Propensity to Consume (MPC):

Average propensity to consume is the ratio of total consumption expenditure to total income. It is expressed as,

$$APC = \frac{C}{Y}$$

If the total income is Rs. 1000 crore, consumption is Rs 600 crore then

$$APC = \frac{600}{1000}$$

$$= 0.6 \text{ or } 60\%$$

It indicates households spend 60% of their income on consumption.

Marginal propensity to consume is the ratio of change in consumption to change in income. It is expressed as

$$MPC = \frac{\Delta C}{\Delta Y}$$

where 'ΔC' refers to change in consumption & ΔY refers to change in income. Suppose income increases from Rs. 1000 crore Rs. 2000 crore and consumption changes from Rs. 600 crore to 1000 crore then

$$MPC = \frac{\text{Change in consumption}}{\text{change in income}}$$

$$= \frac{400}{1000}$$

$$= 0.4 \text{ or } 40\%$$

When income rises both APC & MPC will fall. However M will fall at a faster rate than APC. The counterparts of APC MPC are Average propensity to save (APS) and Marg propensity to save (MPS). They are expressed as follows:

$$APS = \frac{S}{Y}$$

where, 'S' refers to savings and 'Y' refers to income.

$$MPS = \frac{\Delta S}{\Delta Y}$$

where, 'ΔS' refers to change in savings and 'ΔY' refer change in income. Further

APC + APS = 1 and, MPC + MPS = 1

In the case of rich people, MPS will be greater while in the of the poor people MPC will be greater than MPS. The al concept can be illustrated with the help of the following table:

Income	Consumption (Rs. crore)	APC (c/y)	APS (s/y) (1-APC)	MPC ($\Delta c/\Delta y$)	M (Δs (1- N
1000	1000	1	0	—	—
2000	1800	$\frac{1800}{2000} = .9$	.1	$\frac{800}{1000} = .8$	
3000	2500	$\frac{2500}{3000} = .83$	.17	$\frac{700}{1000} = .7$	
4000	3000	$\frac{3000}{4000} = .75$	.25	$\frac{500}{1000} = .5$	
5000	3200	$\frac{3200}{5000} = .64$	.36	$\frac{200}{1000} = .2$	

The above table clearly illustrates that when income consumption also rises but at a lesser rate. Further when in rises both APC and MPC are falling. But MPC is falling at a f rate than APC.

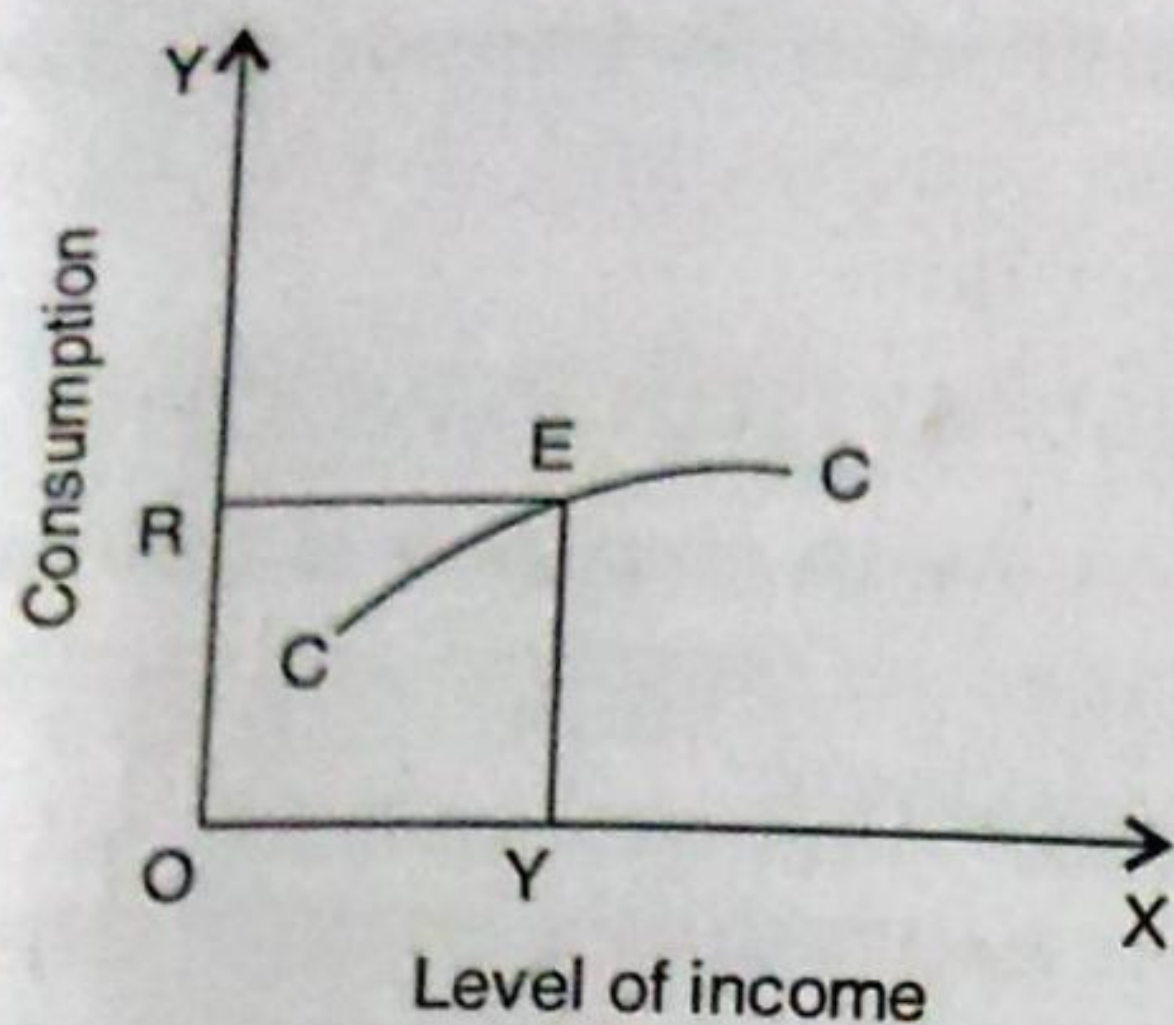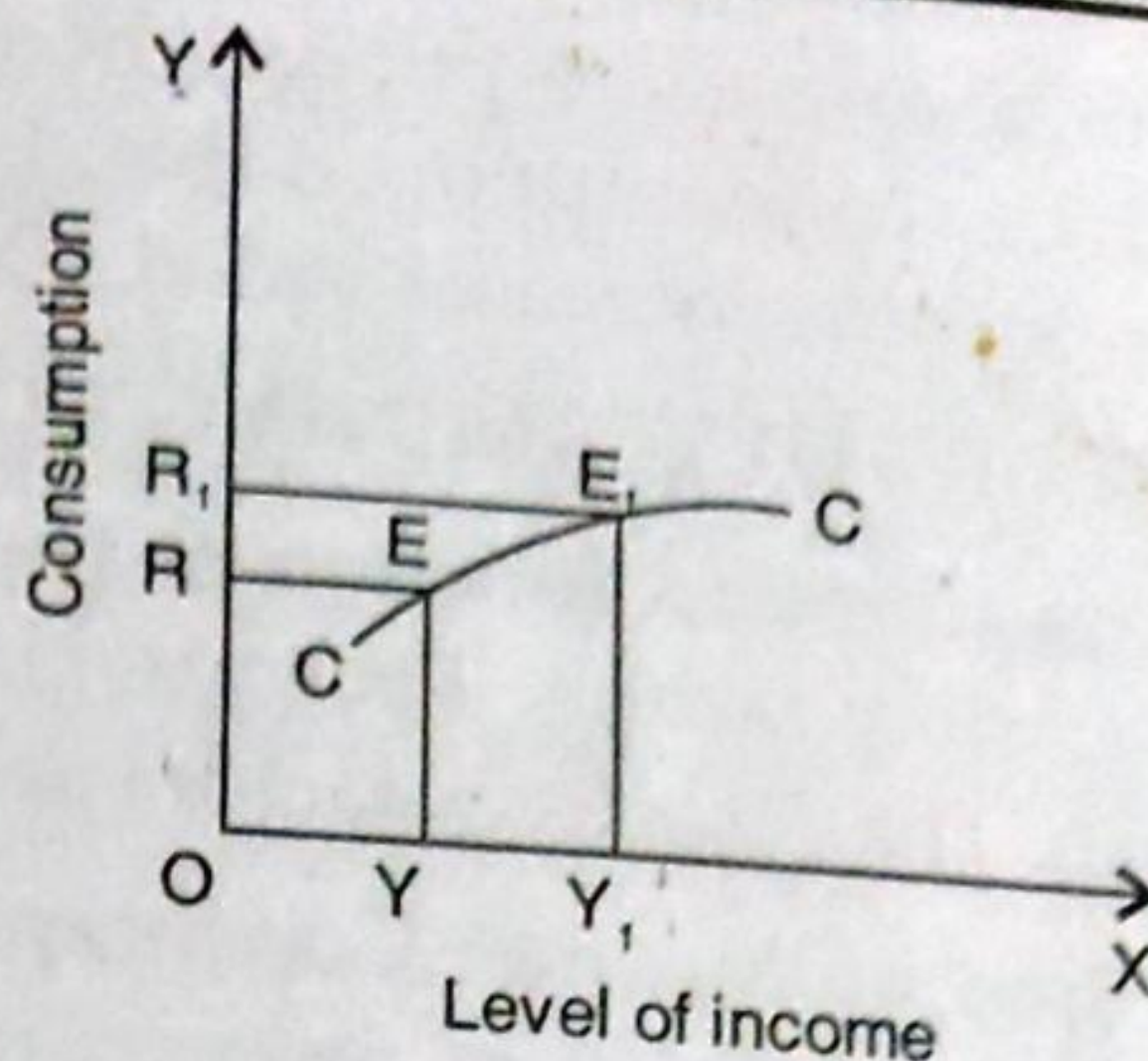APC and MPC can be diagrammatically explained as follows:

Fig. 5.3

Fig. 5.4

In fig. 5.3, APC is represented. APC is $\frac{C}{Y}$. At point E on the CC curve, consumption is equal to OR and income is equal to OY.

$$\therefore APC = \frac{OR}{OY}$$

In fig. 5.4, MPC is shown. When income increases from OY to OY_1, consumption rises from OR to OR_1.

$$\therefore MPC = \frac{RR_1}{YY_1}$$. It is obvious from the figure that RR_1 is less than YY_1. MPC is measured in terms of the slope of the consumption curve.

ASSUMPTIONS OF CONSUMPTION FUNCTION:

The concept of consumption function is based on the following assumptions:

(1) The government adopts a policy of laissez-faire i.e. policy of non-intervention.

(2) The economy is working under normal conditions. It is assumed that there are no abnormal conditions like war, drought, depression, etc.

(3) Psychological and institutional factors like tastes and preferences, habits, price level, population size, distribution

of income and wealth etc do no change in the short run, above factors are assumed to be stable.

The above assumptions when fulfilled, consumption functi valid i.e. consumption depends on income and it will inc when income increases but at a lesser rate.

FACTORS DETERMINING CONSUMPTION FUNCTION:

Consumption function or propensity to consume is influe by a variety factors. They are classified as objective and subje factors. The objectives factors are as follows:

(4) **Size of income:** Consumption expenditure mainly depe upon the size of money income. Higher the income, hi will be the level of consumption and vice versa.

(5) **Price level:** An inverse relationship exists between price and consumption expenditure. An increase in the ger price level reduces the real income of the people and red the level of consumption and vice versa.

(6) **Distribution of income:** Consumption would be higher if national income is distributed equitably and vice versa.

(7) **Propensity to save:** If the households have a greater tende to save rather than spend, then consumption will be less vice-versa.

(8) **Future expectations:** Households tend to buy more and e hoard in the current period if they expect shortages in fut due to war, droughts etc. At such times they spend more consumption goods and hence consumption expendit would be low.

(9) **Tastes and fashions:** Changes in tastes and fashions aff consumption pattern of people. Changes will be profound the long run rather than in the short run.

(10) **Fiscal policy:** Fiscal policy refers to the policy of government regarding taxation, public expenditure a public debt. Changes in fiscal policy has a direct influence level of consumption. For example, if the tax rates increased, consumption expenditure will decline and v versa.

11) Rate of interest: Consumption will be low if rate of interest is high and vice versa.

12) Windfall gains or losses: Unexpected gains like winning a lottery will enhance consumption & vice versa.

(13) Ownership of Assets: If people own considerable amount of assets, then they have a sense of security and spend more from the current income on consumption and vice-versa.

(14) Corporate policies: Policies of corporates also influence consumption expenditure. If they adopt a liberal dividend policy, shareholders level of income will rise leading to a higher level of consumption. On the other hand a conservative policy of the business firms will reduce consumption.

(15) Other factors: High level of indebtedness repayment of loans, etc. also reduce the level of consumption.

Apart from the above objective factors, certain subjective factors also influence consumption function. They induce people to save rather than spend and hence they have a tendency to reduce consumption expenditure. The subjective factors are termed as motives and they are as follows:

(a) Motive of precaution against illness, accident and unemployment, etc.

(b) Motive of future expectations and needs.

(c) Motive of accumulation of wealth.

(d) Motive of independence.

(e) Motive of investment and enhanced income.

(f) Motive of speculation.

(g) Motive of accumulating assets for the future generation.

(h) Motive of miserliness.

Like individuals, business firms also save in order to expand their business, to maintain liquidity, to be financially prudent etc. All these factors increase the prosperity to save and reduce consumption expenditure. According to Keynes some subjective factors like tendency to show off, demonstration effect i.e. poor

and middle income group trying to imitate the lifestyle of the people etc. increase consumption expenditure.

According to **J. M. Keynes**, most of these factors remain st in the short run. Hence according to him, consumption func also remains stable in the short run.

IMPLICATIONS OF CONSUMPTION FUNCTION:

The implications of consumption function are as follows:

(1) **Significance of investment:** Consumption function indic the gap between income and consumption. According Keynes whenever income increases consumption will increase but in a lesser proportion. The gap between the indicates savings and savings have to be converted investment to maintain higher level of income employment. Thus consumption function implies significance of investment.

(2) **Turning points of trade cycle:** The turning points of tr cycle can be explained through consumption function. Wh consumption lags behind the increase in income, the econo will move from boom to recession. Conversely recovery fr depression occurs due to increase in the consumpti expenditure of the people.

(3) **Repudiation of Say's Law of Market:** J. B. Say's law of mark states that "supply creates its own demand". According Keynes increase in income does not lead to increase consumption in the same proportion. Therefore supply will more than demand leading to a glut of goods and services the market. In the opinion of Keynes, it is demand whi creates supply and not vice versa.

(4) **Over saving gap:** The gap between income and consumpti represents savings and the gap widens with every increase income. Thus there can be an over saving gap affecting th growth of the economy if enough investment opportunities a not available.

(5) **Income propagation:** According to Keynes, the value multiplier will be high if MPC is high and vice-versa. Sin

MPC is less than one, when investment increases, the increase in national income will be lesser.

(6) **Fall in marginal efficiency of capital:** When income rises, consumption rises in a lesser proportion. Thus aggregate supply will be more than aggregate demand. Lack of demand will affect profitability. Hence there will be a decline in marginal efficiency of capital.

(7) **Underemployment equilibrium:** Classical economists believed in full employment equilibrium. J. M. Keynes rejected this and through consumption function proved that under employment equilibrium is the reality as demand is less than supply.

8) **Importance of state intervention:** Consumption function highlights the need for government intervention. When supply is more than demand, it indicates over production. This will lead to unemployment. To avoid this state intervention is absolutely necessary.

QUESTIONS

) **Define the following:**
  (a) Consumption function
  (b) APC
  (c) APS
  (d) MPC
  (e) MPS

State whether the following statements are true or false:
  (a) An increase in income always leads to an increase in consumption.
  (b) Income and consumption are inversely related.
  (c) Consumption function remains stable in the short run.
  (d) When income increases, consumption will rise more than proportionately.
  (e) When income rises both APC and MPC will rise.
  (f) The value of MPC always varies between zero and one.
  (g) MPC is high in the case of rich people and low in the case of poor people.
  (h) Consumption function implies full employment.

(i)   Consumption function justifies Say's Law of markets.

[Ans.: (a) True; (b) False; (c) True; (d) False; (e) False; (f) True; (g) ;
(h) False; (i) False]

Match the following:

(A)	(B)
(1) Consumption function (*BIM, April 18*)	(a) $\frac{S}{Y}$
(2) APC	(b) C = f(y)
(3) MPS	(c) $\frac{C}{Y}$
(4) MPC	(d) $\frac{\Delta S}{\Delta Y}$
(5) APS	(e) $\frac{\Delta C}{\Delta Y}$

Ans.: (1 - b; 2 - c; 3 - d, 4 - e, 5 - a)

3) Explain the concept of consumption function.
4) Describe the consumption functions with a help of a diagram. (*BFM, 18*)
5) Differentiate between APC & MPC and APS & MPS
6) Discuss the factors which influence consumption function.
7) Calculate APC, APS, MPC and MPS from the following data:

Income (Rs. crores)	1000	2000	3000	4000	5000
Consumption (Rs. crores)	800	1600	2400	3200	4000

8) Calculate APC, APS, MPC and MPS from the following data:

Income (Rs. crores)	1000	2000	3500	5500	8000
Consumption (Rs. crores)	900	1700	2300	2700	2900

9) Construct a hypothetical schedule of income and consumptic
calculate APC, APS, MPC and MPS.
10) What are the assumptions and implications of consumption function?
11) Explain the factors determining consumption function. (*BBI, April 18*)
12) Discuss the factors which affecting consumption function. (*BAF, Oct*)