3 Determination of Income and Employment

Fastrack Revision

- **Aggregate Demand (AD):** It refers to the total demand for all goods and services in the economic system as a whole. This is expressed in terms of total expenditure made in the economy.
- **Components of Aggregate Demand:** The components of aggregate demand are as follows:
  - Household Consumption Expenditure (C)
  - Private Investment Expenditure (I)
  - Government Expenditure (G)
  - Net Exports (X – M)

  So, $AD = C + I + G + (X - M)$
- **Consumption Function (Propensity to Consume):** Consumption function refers to functional relationship between consumption and national income.

  $C = f(Y)$

  Consumption function is based on Keynes famous Psychological Law of Consumption. This law states that:
  - There is minimum consumption, known as autonomous consumption even at zero level of national income because survival needs consumption.
  - As the income increases, consumption also increases.
  - Income rises at a greater proportion as compared to increase in consumption.
- **Types of Propensity to Consume:** There are two types of propensity to consume:
  - **Average Propensity to Consume (APC):** It refers to the ratio of consumption expenditure to the corresponding level of income.

    APC = Consumption (C)/Income (Y)
  - **Marginal Propensity to Consume (MPC):** It refers to the ratio between change in consumption expenditure and change in income.

    MPC = Change in Consumption (ΔC)/Change in Income (ΔY)
- **Equation of Consumption:** The equation of consumption is written as:

  $C = a + b(Y)$

  where, a = Autonomous Consumption
  b = Marginal Propensity to Consume
  Y = Income
- **Saving Function (Propensity to Save):** It refers to the functional relationship between saving and national income.

  $S = f(Y)$
- **Types of Propensity to Save:** There are two types of propensity to save:
  - **Average Propensity to Save (APS):** It refers to the ratio of savings to the corresponding level of income.

    APS = Saving (S)/Income (Y)
  - **Marginal Propensity to Save (MPS):** It refers to the ratio between change in savings to change in total income.

    MPS = Change in Savings (ΔS)/Change in Income (ΔY)
- **Equation of Saving:** The equation of saving is written as:

  $S = -a + (1 - b)Y$

  where, $-a$ = Autonomous Savings
  $1 - b$ = Marginal Propensity to Save
  Y = Income

Knowledge BOOSTER

- *The sum total of APC and APS is equal to one. i.e., APC + APS = 1*
- *The sum total of MPC and MPS is equal to one. i.e., MPC + MPS = 1*

- **Investment:** Investment refers to the expenditure incurred on creation of new capital assets. It includes the expenditure incurred on assets like machinery, building, equipment, raw material, etc. which lead to increase in the productive capacity of an economy. There are two types of investment:
  - **Induced Investment:** The investment which is made to earn profit is called Induced investment. It depends upon: (i) Marginal efficiency of capital, (ii) Rate of interest.
  - **Autonomous Investment:** The investment which is independent of the level of income is called Autonomous investment. Such investment is made by the government with social motive.
- **Equilibrium Volume of Investment:** Investment decisions depends upon the relative superiority of MEC over rate of interest.

  $MEC = r$, $MEC > r$, $MEC < r$
- **Ex-ante Savings and Ex-ante Investments**
  - **Ex-ante Savings:** It refers to amount of savings which households (or savers) plan or desire to save at different levels of income in the economy.
  - **Ex-ante Investments:** It refers to amount of investment which firms plan or desire to invest at different levels of income in the economy.
- **Ex-post Savings and Ex-post Investments**
  - **Ex-post Savings:** In an economy, what the savers actually save at different levels of income is called ex-post savings. It is also known as Actual or Realised savings in an economy during a year.
  - **Ex-post Investments:** In an economy, what the investors actually invest at different levels of income is called ex-post investments. It is also known as Actual or Realised investment in an economy during a year.

- **Investment Multiplier (K):** It refers to the ratio between change in income and change in investment.

$$K = \Delta Y/\Delta I$$

The working of multiplier tell us to what will be the final change in income, as a result of ΔI. Change in investment cause a change in income. As a result, there is a change in consumption which in turn leads to a multiple change in income.

$$\Delta I \rightarrow \Delta Y \rightarrow \Delta C \rightarrow \Delta Y$$

Knowledge BOOSTER

- *The maximum value of multiplier is infinity.*
- *The minimum value of multiplier is one (unity).*

- **Relationship between MPC and Multiplier:** There is a direct relationship between the value of MPC and the size of Multiplier (K). This means that as the value of MPC increases the size of multiplier also increases and *vice-versa.*

$$K = \frac{1}{1 - MPC}$$

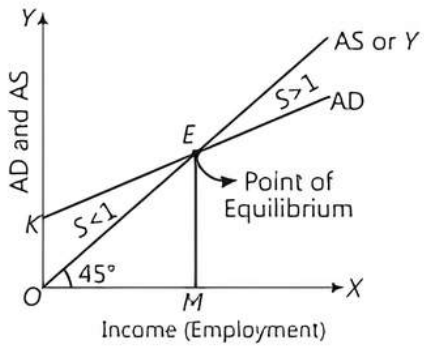
- **Relationship between MPS and Multiplier:** There is an inverse relationship between the value of MPS and the size of Multiplier (K). This means that as the value of MPS increases the size of multiplier decreases and *vice-versa.*

$$K = \frac{1}{MPS}$$

- **Full Employment:** It refers to a situation in which all those people, who are willing and able to work at the existing wage rate, get work without any undue difficulty.
- **Involuntary Unemployment:** It refers to that unemployment in which a person does not get work, even when he is able to do a job and willing to work at the existing wage rate.
- **Aggregate Supply (AS):** It refers to the total value of planned output of final goods and services produced by all the producers during a year.
- **Components of Aggregate Supply:** The components of aggregate supply are:
  - Consumption Expenditure (C)
  - Saving (S)

  So, $AS = C + S$
- **Determination of Short-run Equilibrium Level of National Income and Employment:** According to **J.M. Keynes**, "A period of time during which level of output is determined exclusively by the level of employment in the economy, is termed as short-run." There are two approaches for determining short-run equilibrium level of National Income, output and employment according to J.M. Keynes. They are as follows:
  - **AD and AS Approach:** According to this approach, the equilibrium level of income and employment is determined where aggregate demand equals aggregate supply in the economy.

    According to **Keynes**, the equilibrium level of income and employment is determined where planned aggregate demand and planned aggregate supply are equal.



Determination of Short-run Equilibrium using AD = AS approach

Knowledge BOOSTER

The particular level of AD which is equal to AS is called Effective Demand.

  - **Savings and Investment Approach:** According to this approach, the equilibrium level of income is determined at that level of output where planned Savings (S) are equal to the planned Investment (I) in the economy.

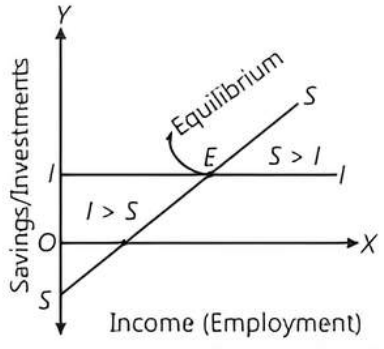
    We know that at equilibrium level of income and employment,

    $AD = AS$

    But, $AD = C + I$ and $AS = C + S$

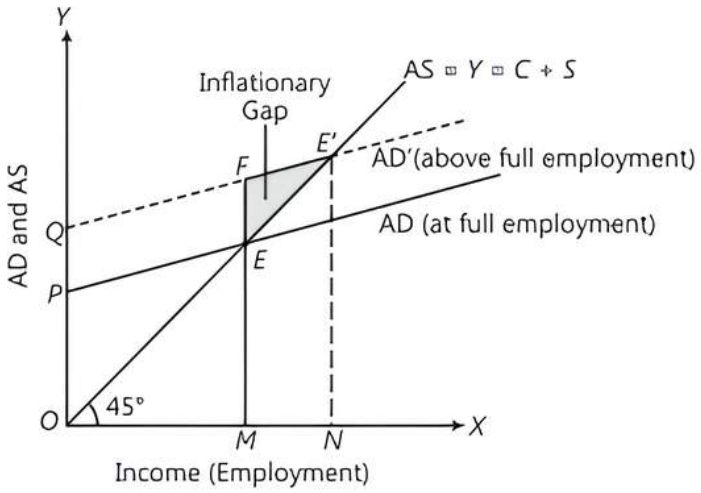
    So, $(C + I) = (C + S)$ or $I = S$

    Thus, equilibrium level of income is determined at a point at which ex-ante savings and ex-ante investments are equal.



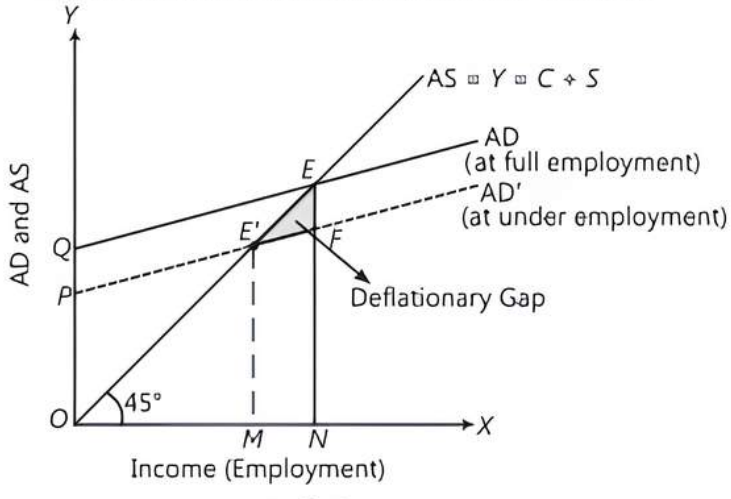
Determination of Short-run Equilibrium Output using S = I approach

- **Types of Equilibrium**
  - Full employment equilibrium if in an economy, AS = AD or S = I along with fuller utilisation of labour force, then the economy is said to be in full employment equilibrium.
  - Under employment equilibrium if in an economy, AS = AD or S = I, but without the fuller utilisation of labour force, then the economy is said to be in under employment equilibrium.
- **Excess Demand:** It refers to the situation in which Aggregate Demand (AD) is more (exceeds) than the Aggregate Supply (AS) [AD > AS] corresponding to full employment level of output in the economy, excess demand leads to inflation in the economy.
- **Inflationary Gap:** It refers to the gap by which actual Aggregate Demand exceeds the Aggregate Demand required to establish full employment equilibrium.



Inflationary Gap

- **Impact of Excess Demand on Output, Employment and Prices**
  - **Impact on Output:** The level of output will not increase in the short-run because the economy is already working at full employment level. However, production can be increased in long-run, but Keynesian's theory is based on short-run. Thus, output remains unaffected in case of excess demand.
  - **Impact on Employment:** The level of employment will not increase because the economy is working at full employment level. At this stage, there is no involuntary employment in the economy. Thus, employment remains unaffected in case of excess demand.
  - **Impact on Prices:** The level of general price will increase in the economy. It is so because the production cannot be increased and AD is more than AS corresponding to the level of full employment in the economy. Thus, prices of goods and services will increase in the economy.
- **Causes of Inflationary Gap**
  - Rise in private consumption expenditure (C).
  - Rise in private investment expenditure (I).
  - Rise in government consumption and investment expenditure (G).
  - Increase in exports (X).
  - Fall in imports (M).
  - Fall in tax burden on people (T).
- **Deficient Demand:** It is a situation in which AD falls short of AS (AD < AS) corresponding to the full employment level of output in the economy. The difference between the desired AD and actual AD corresponding to the full employment level in the economy is called Deflationary Gap.
- **Deflationary Gap:** This deflationary gap or the amount of deficit demand or excess supply is called Deflation.



Deflationary Gap

- **Impact of Deficient Demand on Output, Employment and Prices:** Deficient demand adversely affects the level of output, employment and price level in the economy.
  - **Impact on Output:** The level of output will decrease due to lack of sufficient aggregate demand. There will be an increase in the unsold stock. It will force the producers to plan for lesser production for the following year. As a result, planned output will decrease in the economy.
  - **Impact on Employment:** The level of employment will decrease in the economy because deficient demand causes involuntary unemployment in the economy.
  - **Impact on General Price Level:** The level of general price level will fall due to the lack of demand for goods and services in the economy.
- **Causes of Deflationary Gap**
  - Fall in private consumption expenditure.
  - Fall in private investment expenditure.
  - Fall in government consumption and investment expenditure.
  - Increase in imports.
  - Fall in exports.
  - Decrease tax burden on people.
- **Measures to Correct Excess Demand and Deficient Demand:** There are two types of measures:
  - **Monetary Measures:** Monetary measures are initiated by Central Bank to regulate the cost and availability of credit in the country. These are as follows:
    - **Quantitative Measures**
      - **Bank Rate:** It is the rate at which commercial banks borrow money/funds from Central Bank for a period of more than 90 days.
        Excess Demand → Repo rate is increased.
        Deficient Demand → Repo rate is decreased.
      - **Open Market Operations:** It refers to buying and selling of government approved securities in the open market by the Central Bank to Commercial Banks.
        Excess Demand → Central Bank sells securities.
        Deficient Demand → Central Bank buys securities.
      - **Cash Reserve Ratio (CRR):** It is the fraction of total deposits that commercial banks should keep with Central Bank as a part of fractional reserve system.
        Excess Demand → CRR is increased.
        Deficient Demand → CRR is decreased.
      - **Statutory Liquidity Ratio (SLR):** It refers to the fraction of total deposits that each commercial bank should keep with itself in the form of liquid assets.
        Excess Demand → Increase in SLR.
        Deficient Demand → Decrease in SLR.
    - **Qualitative Measures**
      - **Marginal Requirements:** It is the difference between the market of securities provided by the borrower and the amount of loan granted to him.
      - Excess Demand → Rise in marginal requirements.
        Deficient Demand → Reduction in marginal requirements.

■ **Moral Suasion:** The Central Bank issues directives to banks to follow rules and regulations.
Excess Demand → Central Bank imposes restrictions on commercial banks on granting loans.
Deficient Demand → Central Bank issues directives to commercial banks to increase availability of credit.

➤ **Fiscal Measures:** Fiscal measures are a part of the revenue and expenditure policy of the government. The instruments used are:

- Revenue Policy
- Expenditure Policy
- Deficit Financing

Practice Exercise

Multiple Choice Questions

Q 1. If an economy is to control recession like most of the Euro-zone nations, which of the following can be appropriate? *(CBSE SQP 2016)*
a. Reducing Repo Rate b. Reducing CRR
c. Both a. and b. d. None of these

Q 2. Aggregate demand can be increased by: *(CBSE 2017)*
a. Increasing bank rate
b. selling government securities by RBI
c. increasing CRR
d. None of the above

Q 3. The monetary policy generally targets to ensure:
a. price stability in the country
b. employment generation in the country
c. stable foreign relations
d. greater tax collections for the government

Q 4. If MPC is greater than MPS, the value of the multiplier will be: *(CBSE 2017)*
a. greater than 2 b. less than 2
c. equal to 2 d. equal to 5

Q 5. If MPC = 1, the value of multiplier is: *(CBSE 2015)*
a. zero b. 1
c. between 0 and 1 d. infinity

Q 6. If MPC = 0, the value of multiplier is: *(CBSE 2015)*
a. 0 b. 1
c. between 0 and 1 d. infinity

Q 7. When aggregate demand is greater than aggregate supply, inventories: *(CBSE 2017)*
a. fall b. rise
c. do not change d. first fall, then rise

Q 8. Average propensity to consume can never be: *(CBSE SQP 2020)*
a. positive b. zero
c. more than one d. less than one

Q 9. Suppose in a hypothetical economy, the income rises from ₹ 5,000 crore to ₹ 6,000 crore. As a result, the consumption expenditure rises from ₹4,000 crore to ₹4,600 crore. Marginal propensity to consume in such a case would be: *(CBSE 2019)*
a. 0.8 b. 0.4
c. 0.2 d. 0.6

Q 10. The value of multiplier is: *(CBSE 2015)*
a. $\frac{1}{MPC}$ b. $\frac{1}{MPS}$
c. $\frac{1}{1 - MPS}$ d. $\frac{1}{MPC - 1}$

Q 11. If APC : APS = 3 : 2, then their values are:
a. 0.4, 0.6 b. 0.2, 0.4
c. 0.6, 0.4 d. 0.5, 0.7

Q 12. If MPC : MPS =1 : 1, then their values are:
a. 0.4, 0.6 b. 0.5, 0.5
c. 0.6, 0.4 d. 0.2, 0.2

Q 13. If MPS = 1, then investment multiplier will be:
a. 0 b. 2
c. infinity d. 1

Q 14. Out of APC and APS, the value of ..... can be negative.
a. APS b. APC
c. Both a. and b. d. None of these

Q 15. The maximum value of investment multiplier is:
a. 1 b. 10
c. infinity d. None of these

Q 16. When savings are negative, the value of APC will be:
a. greater than 1 b. less than 1
c. equal to 1 d. None of these

Q 17. If C = 100 + 0.75Y, then autonomous consumption is:
a. –100 b. 100
c. 200 d. –200

Q 18. The particular level where AD = AS is called:
a. Effective Demand
b. Excess Demand
c. Deficient Demand
d. None of the above

Q 19. If K = 2, then:
a. MPC = MPS b. MPC ≠ MPS
c. MPC = 1, MPS = 0.5 d. None of these

Q 20. In a two sector economy, components of AD are:
a. C and S b. S and I
c. C and I d. None of these

Q 21. If in an economy, the value of investment multiplier is 4 and Autonomous Consumption is ₹ 30 Crore, the relevant consumption function would be: *(CBSE SQP 2022-23, CBSE 2023)*

a. C = 30 + 0.75 Y
b. C = (–)30 + 0.25Y
c. C = 30 – 0.75 Y
d. C = 30 – 0.25 Y

Q 22. If increase in National Income is equal to increase in consumption, identify the value of Marginal Propensity to Save: *(CBSE SQP 2022-23, CBSE 2023)*

a. Equal to unity
b. Greater than one
c. Less than one
d. Equal to zero

Q 23. In an economy, the value of Marginal Propensity to Save (MPS) is 0.25, what will be the value of increase in income, if investments increased by ₹ 200 crore? *(CBSE 2023)*

a. ₹ 200 crore
b. ₹ 150 crore
c. ₹ 1,000 crore
d. ₹ 800 crore

Statement Based Questions

Q 24. Read the following statements carefully:
Statement I: The consumption curve is an upward sloping straight line curve due to the direct relationship between income and consumption and the assumption of constant Marginal Propensity to Consume.

Statement II: Aggregate demand curve and Consumption curve are parallel to each other.

In the light of the given statements, choose the correct alternative from the following: *(CBSE SQP 2022-23)*

a. Statement I is true and statement II is false.
b. Statement I is false and statement II is true.
c. Both statements are true.
d. Both statements are false.

Q 25. Read the following statements carefully:
Statement I: Consumption curve makes an intercept on the Y-axis, some point above the origin.

Statement II: People need certain basic goods and services to sustain themselves, even if income is zero.

In the light of given statements, choose the correct alternative from the following:

a. Statement I is true and statement II is false.
b. Statement I is false and statement II is true.
c. Both statements are true.
d. Both statements are false.

Q 26. Read the following statements carefully:
Statement I: In a two sector economy, consumption expenditure and investment expenditure are the two components of aggregate demand.

Statement II: Aggregate demand curve always start from point of origin with positive slope. *(CBSE 2023)*

In the light of given statements, choose the correct alternative from the following:

a. Statement I is true and statement II is false.
b. Statement I is false and statement II is true.
c. Both statements are true.
d. Both statements are false.

Q 27. Read the following statements carefully:
Statement I: The induced consumption shows, the direct relation between consumption and income.

Statement II: With a certain increase in income, induced consumption also increases.

In the light of the given statements, choose the correct alternative from the following: *(CBSE 2023)*

a. Statement I is true and statement II is false.
b. Statement I is false and statement II is true.
c. Both statements are true.
d. Both statements are false.

Q 28. Read the following statements carefully:
Statement I: Consumption function assumes that, consumption changes at a constant rate as income changes.

Statement II: Autonomous consumption is the ratio of total consumption (C) to total income (Y).

In light of the given statements, choose the correct alternative from the following: *(CBSE SQP 2023-24)*

a. Statement I is true and statement II is false.
b. Statement I is false and statement II is true.
c. Both statements are true.
d. Both statements are false.

Fill in the Blank Type Questions

Q 29. Graphically, aggregate demand function can be obtained by vertically adding the ..... and ..... function.
(Choose the correct alternative to fill up the blanks) *(CBSE SQP 2023-24)*

a. consumption, saving
b. consumption, investment
c. investment, saving
d. aggregate supply, consumption

Q 30. The value of ..... can be greater than one.
(Choose the correct alternative to fill up the blank) *(CBSE SQP 2023-24)*

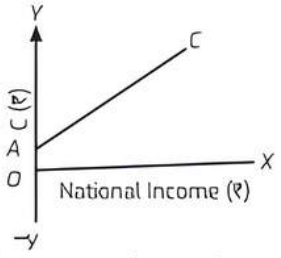
a. marginal propensity to consume
b. average propensity to consume
c. marginal propensity to save
d. average propensity to save

Q 31. Suppose for a given economy,
S = – 60 + 0.1Y
I = ₹ 4,000 crore
(Where S = Saving Function, Y = National Income and I = Investment Expenditure)
Equilibrium level of income would be ₹ ..... crore.
(Choose the correct alternative to fill up the blank) *(CBSE SQP 2023-24)*

a. 4,000
b. 40,000
c. 40,600
d. 60,400

Q 32. When consumption is more than income, the value of APC is ..... than one.
(Choose the correct alternative to fill up the blank)
a. less b. more
c. zero d. equal

Q 33. In the adjoining figure, OA represents .....



(Choose the correct alternative to fill up the blank)
a. induced consumption
b. autonomous investment
c. autonomous consumption
d. induced investment

Q 34. If APC = 1, then APS = ...
(Choose the correct alternative to fill up the blank)
a. one b. two
c. half d. zero

Q 35. To overcome deficient demand, Central Bank ..... SLR.
(Choose the correct alternative to fill up the blank)
a. increases b. reduces
c. zero d. None of these

Q 36. Investment multiplier is positively related to .....
(Choose the correct alternative to fill up the blank)
a. MPC b. MPS
c. APC d. APS

Q 37. If due to an increase in investment of ₹ 100 crore, national income increases by ₹ 400 crore, then MPS = ...
(Choose the correct alternative to fill up the blank)
a. 0.75 b. 0.50
c. 4 d. 0.25

Q 38. The sum total of MPC and MPS is equal to .....
(Choose the correct alternative to fill up the blank)
a. one b. two
c. –1 d. zero

Q 39. If K = 5, then MPC = ...
(Choose the correct alternative to fill up the blank)
a. .20 b. .80
c. .25 d. 5

Q 40. ..... refers to that level of aggregate demand, which can be met by the corresponding supply in the economy.
(Fill up the blank with correct alternative) *(CBSE 2023)*
a. Autonomous consumption
b. Effective demand
c. Excess demand
d. Deficient demand

True/False Type Questions

Q 41. Equilibrium level of income is determined by ex-post savings and ex-post investments.

Q 42. The sum total of APS and MPC is equal to one.

Q 43. Multiplier is inversely related to marginal propensity to save.

Q 44. During excess demand, the level of output and employment remains constant.

Q 45. Full employment means zero unemployment.

Q 46. At equilibrium C + I = S.

Q 47. Value of MPC can be greater than one. *(CBSE 2018)*

Q 48. APC can be greater than one. *(CBSE 2018)*

Q 49. In a two sector economy, if consumption is equal to income, APS = 0. *(CBSE 2019)*

Q 50. According to Keynesian theory of employment, ex-ante savings and ex-post savings are always equal. *(CBSE 2019)*

Q 51. Ex-post investments mean fixed capital with production units during a particular period of time. *(CBSE 2019)*

Q 52. Value of MPS can never be negative.

Q 53. Sum of APC and MPC is equal to 1.

Q 54. The value of APS can never be greater than 1.

Q 55. When the value of APS is negative, the value of MPS will also be negative.

Q 56. APS can never be negative. *(CBSE SQP 2018)*

Q 57. According to Keynesian theory of employment, a state of under employment can never exist in an economy. *(CBSE 2019)*

Q 58. According to Keynesian theory of employment, the state of full employment is obtained only when the economy is in equilibrium. *(CBSE 2019)*

Q 59. If MPC : MPS = 4 : 1, the value of investment multiplier will be 4.

Q 60. Inventories accumulate when planned investment is less than planned savings. *(CBSE SQP 2018)*

Match the Column Type Questions

Q 61. From the following statements given in Column I and Column II, choose the correct pair of statements:

Column I	Column II
A. Consumption > Income	1. Autonomous consumption (C̄)
B. Consumption = Income	2. APC > 1
C. Consumption < Income	3. APC = 1
D. Consumption at zero level of income	4. APC < 1

	A	B	C	D
a.	1	2	3	4
c.	4	3	2	1

	A	B	C	D
b.	2	3	4	1
d.	3	4	1	2

Q 62. From the following statements given in Column I and Column II, choose the correct pair of statements:

Column I	Column II
A. Functional relationship between consumption and national income	1. Autonomous investment
B. Functional relationship between saving and national income	2. Induced investment

C.	That investment which is directly related to profit	3.	Consumption function
D.	That investment which is not influenced by income	4.	Saving function

	A	B	C	D		A	B	C	D
a.	3	4	2	1	b.	1	2	3	4
c.	4	3	2	1	d.	3	1	4	2

Q 63. From the following statements given in Column I and Column II, choose the correct pair of statements:

Column I		Column II	
A.	That unemployment in which a person is able to do a job and willing to work at the existing wage rate but he does not get a job.	1.	Structural unemployment
B.	That unemployment in which a person is able to do the job, but he himself is not willing to do it at the existing wage rate, even when the job is available.	2.	Frictional unemployment
C.	Temporary unemployment, which occurs due to the shortage of raw-material, changing of jobs, etc.	3.	Voluntary unemployment
D.	The unemployment, in which people remain unemployed due to the demand for specific type of workers	4.	Involuntary unemployment

	A	B	C	D		A	B	C	D
a.	1	2	3	4	b.	3	4	1	2
c.	4	3	2	1	d.	2	1	4	3

Q 64. From the following statements given in Column I and Column II, choose the correct pair of statements:

Column I		Column II	
A.	That level of income at which planned aggregate demand equals planned aggregate supply in the economy.	1.	Over full-employment equilibrium
B.	When the equality between aggregate demand and aggregate supply takes place prior to the level of full employment in the economy.	2.	Equilibrium income
C.	When the equality between aggregate demand and aggregate supply takes place at the level of full employment in the economy.	3.	Under-employment equilibrium
D.	When the equality between aggregate demand and aggregate supply takes place beyond the level of full employment in the economy.	4.	Full employment equilibrium

	A	B	C	D		A	B	C	D
a.	2	3	4	1	b.	1	2	3	4
c.	3	4	1	2	d.	4	1	2	3

Q 65. From the following statements given in Column I and Column II, choose the correct pair of statements:

Column I		Column II	
A.	The ratio between change in income and change in investment.	1.	APC
B.	The ratio of consumption expenditure to the corresponding level of income.	2.	MPC
C.	The ratio between change in consumption expenditure and change in income.	3.	Investment multiplier
D.	The ratio of savings to the corresponding level of income.	4.	APS

	A	B	C	D
a.	1	2	3	4
b.	4	3	2	1
c.	2	4	1	3
d.	3	1	2	4

Assertion & Reason Type Questions

Directions (Q.Nos. 66-79): *There are two statements marked as Assertion (A) and Reason (R). Read the statements and choose the appropriate option from the options given below:*

a. Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
b. Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).
c. Assertion (A) is true, but Reason (R) is false.
d. Assertion (A) is false, but Reason (R) is true.

Q 66. Assertion (A): Ex-post investments represent planned investments; whereas Ex-ante investments represent actual level of investments.
Reason (R): At equilibrium level, Ex-ante savings and Ex-ante investments are always equal.
(CBSE SQP 2022-23)

Q 67. Assertion (A): Saving curve makes a negative intercept on the vertical axis at zero level of income.
Reason (R): Saving function refers to the functional relationship between saving and income.
(CBSE SQP 2022-23)

Q 68. Assertion (A): Full employment does not mean zero unemployment.
Reason (R): Because there exist some natural rate of unemployment *i.e.*, frictional and structural.

Q 69. Assertion (A): Equilibrium level of income is determined where ex-post savings are equal to ex-post investments.
Reason (R): Equilibrium level of income is determined where Ex-ante savings are equal to Ex-ante investments.

Q 70. Assertion (A): The consumption at zero level of income is autonomous consumption.

Reason (R): For survival human being need to consume for this, either they borrow or they withdraw from their past savings.

Q 71. Assertion (A): During excess demand, the level of output, income, employment increases in the economy.

Reason (R): During excess demand only general price level increases in the economy, as the economy is already operating at full employment level.

Q 72. Assertion (A) : Full employment refers to, absence of involuntary unemployment.

Reason (R) : Under full employment situation, all willing and able bodied people get employment at prevailing wage rate. *(CBSE 2023)*

Q 73. Assertion (A) : At the break-even level of income, the value of Average Propensity to Consume (APC) is zero.

Reason (R): Sum of Average Propensity to Consume (APC) and Average Propensity to Save (APS) is always equal to one. *(CBSE 2023)*

Q 74. Assertion (A): There is an inverse relationship between MPC and investment multiplier.

Reason (R): There is a positive relationship between MPS and investment multiplier.

Q 75. Assertion (A): MPC is the slope of consumption function. It measures the rate of change in consumption per unit change in income. Its value ranges between 0 and 1 *i.e.*, $0 < b < 1$.

Reason (R): According to Keynes, "Men are disposed, as a rule and on an average, to increase their consumption as their income increases, but not as much as increase in their income." It means that as income rises, propensity to consume also rises, but by less than an increase in income as people tend to save more as well.

Q 76. Assertion (A): Average propensity to save can be zero. It is identified at a point where saving curve intersects the X (income) axis implying APS = 0.

Reason (R): At break-even point, consumption is equal to income (C = Y). This equality is identified at a point where consumption curve intersects the income curve (line) implying APC = 1.

Q 77. Assertion (A): Deflationary gap exists when aggregate demand is less than aggregate supply corresponding to full employment level in the economy. Deflationary gap is measured at full employment output.

Reason (R): Deficient demand refers to a situation when there is shortfall in aggregate demand from the level required to maintain full employment equilibrium in the economy. It represents an under employment situation and generates a gap between the actual Aggregate Demand and Desired Aggregate Demand (Actual AD < Required AD).

Q 78. Assertion (A): Unplanned inventories accumulate when planned investment is less than planned savings *i.e.*, producers are left with unsold stock of goods as planned savings are more than planned investments.

Reason (R): In a situation of deficiency of AD in relation to AS, Aggregate demand is less than Aggregate supply when buyers (consumers and firms) are consuming less and thus spending less. It means that they are planning to buy less than what sellers are planning to sell (implying fall in marginal propensity to consume).

Q 79. Assertion (A): Excess demand refers to the situation when aggregate demand is in excess of aggregate supply corresponding to full employment in the economy *i.e.*, AD > AS, corresponding to full employment. It is when actual level of aggregate demand is more than required or planned level of aggregate demand to maintain full employment.

Reason (R): To correct inflationary gap, bank rate, repo rate, reverse repo rate and legal reserve ratio is increased by the Central Bank to reduce supply of money so that purchasing power of people can be curtailed and inflationary gap can be controlled.

Answers

1. (c) Both a. and b.

TiPs

- ***Repo Rate:*** *It refers to the rate at which commercial banks can borrow from Central Bank against some approved securities for a short time.*
- ***Reverse Repo Rate:*** *It refers to the rate at which commercial banks parks their surplus funds with Central Bank for a short-time.*

2. (d) None of the above
3. (a) price stability in the country
4. (a) greater than 2

TiP

Suppose MPC = 0.6, then MPS = 0.4

$$K = \frac{1}{MPS} = \frac{1}{0.4} = 2.5$$

5. (d) Infinity

TiP

$$K = \frac{1}{1 - MPC} = \frac{1}{1-1} = \frac{1}{0} = \infty \text{ (infinity)}$$

6. (b) 1

7. (a) fall
8. (b) zero

TiP

At zero level of income, consumption will always be positive.

9. (d) 0.6

TiP

$MPC = \frac{\Delta C}{\Delta Y} = \frac{4,600-4,000}{6,000-5,000} = \frac{600}{1,000} = 0.6$

10. (b) $\frac{1}{MPS}$
11. (c) 0.6, 0.4
12. (b) 0.5, 0.5
13. (d) 1
14. (a) APS
15. (c) infinity
16. (a) greater than 1
17. (b) 100
18. (a) Effective Demand
19. (a) MPC = MPS
20. (c) C and I
21. (a) C= 30 + 0.75 Y
22. (d) Equal to zero
23. (d) ₹ 800 crore
24. (c) Both statements are true.
25. (c) Both statements are true.
26. (c) Both statements are true.
27. (c) Both statements are true.
28. (b) Statement I is false and statement II is true.
29. (b) Consumption, investment
30. (b) Average propensity to consume
31. (c) 40,600
32. (b) more
33. (c) autonomous consumption
34. (d) zero
35. (b) reduces
36. (a) MPC
37. (d) 0.25
38. (a) one
39. (b) 0.80
40. (b) Effective Demand
41. False: Equilibrium level of income is determined where ex-ante savings and ex-ante investments are equal.
42. False: The sum total of APS and APC is equal to 1.
43. True: $K = \frac{1}{MPS}$, higher the value of MPS, smaller the size of investment multiplier.
44. True: Because economy is already operating at the level of full employment.
45. False: Even at full employment there exist some natural rate of unemployment namely: frictional and structural unemployment.
46. False: At equilibrium C + S = Y.
47. False: MPC can never be greater than one because a change in consumption cannot be greater than change in income.
48. True: This happens when consumption is more than income.
49. True: When C = Y, S = 0.

    Therefore, $APS = \frac{0}{Y} = 0$.
50. False: Ex-ante savings means planned savings whereas ex-post savings means actual savings. So, they may or may not be equal.
51. False: It includes both fixed assets as well as inventory investment with the production units, during a period of time.
52. True: MPS can never be negative because MPS = $\Delta S/\Delta Y$ and MPC + MPS = 1. So, MPS can be zero but it cannot be negative.
53. False: Sum of APC and APS is equal to 1.
54. True: APS can never be greater than 1 because income is either consumed or saved and savings cannot be more than income.
55. False: APS can be negative, but MPS can never be negative because MPS = $\Delta S/\Delta Y$.
56. False: APS can be negative when consumption is more than income and savings are negative.
57. False: In this theory, under employment can exist when AD = AS at less than full employment level.
58. False: In this theory, economy can be in equilibrium at less than or more than full employment also.
59. False: $\frac{MPC}{MPS} = \frac{4}{1}$ means $\frac{\Delta C/\Delta Y}{\Delta S/\Delta Y} = \frac{4}{1}$ or $\frac{\Delta C}{\Delta S} = \frac{4}{1}$

    In other words, $MPC = \frac{4}{5}$ and $MPS = \frac{1}{5}$.

    $K = \frac{1}{MPS}$, $K = \frac{1}{1/5} = 5$.
60. True: When people save more and spend less in the economy, then the stock of producers remain unsold leading to the accumulation of inventories.

	A	B	C	D
61. (b)	2	3	4	1
62. (a)	3	4	2	1
63. (c)	4	3	2	1
64. (a)	2	3	4	1
65. (d)	3	1	2	4

66. (d) Assertion (A) is false, but Reason (R) is true.
67. (b) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).
68. (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
69. (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
70. (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
71. (d) Assertion (A) is false, but Reason (R) is true.
72. (b) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).
73. (d) Assertion (A) is false, but Reason (R) is true.
74. (d) Assertion (A) is false, but Reason (R) is true.
75. (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
76. (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
77. (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
78. (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
79. (b) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).

Case Study Based Questions

Case Study 1

Read the extract given below and answer the questions on the basis of the same:

India's wholesale inflation accelerated for the third consecutive month and firmed up to an eight-month high of 1.48% in October, driven by manufactured items, data released by the Commerce and Industry Ministry showed on 16 November. The WPI had increased 1.32% in September. The annual rate of inflation based on the WPI Food Index which comprises 'food articles' from the primary articles group and 'food product' from the manufactured products group, decreased to 5.78% in October from 6.92% in September. The government also revised the wholesale inflation for August to 0.41% from 0.16% earlier.

Food inflation cooled to 6.37% in October from 8.17% in September, led by decline in meat, egg and fish inflation that slowed to 1.65% in October from 4.15% the previous month.

Inflation in vegetables and potatoes was 25.23% and 107.70%, respectively.

In the manufactured products category, inflation was 2.12% compared with 1.61% in September.

Source: The Economic Times, November 17, 2020

Q 1. ..... demand refers to a situation in which aggregate demand exceeds aggregate supply corresponding to the level of full employment.

a. Excess b. Deficient
c. Over d. None of these

Q 2. To overcome inflation, Central Bank should try to:

a. increase the bank rate
b. sells government securities to commercial banks
c. Both a. and b.
d. None of the above

Q 3. Inflation in vegetables and potatoes was 25.23% and ....., respectively.

a. 100.77% b. 107.70%
c. 170.70% d. 117.70%

Q 4. ..... items have greater inflation in October 2020.

a. Produced b. Consumed
c. Manufactured d. All of these

Answers

1. (a) 2. (c) 3. (b) 4. (c)

Case Study 2

Read the extract given below and answer the questions on the basis of the same:

Finance Minister Nirmala Sitharaman said perishable goods are putting upward pressure on inflation and the government is working on both short and medium-term measures for controlling price rise.

The Wholesale Price Index (WPI) based inflation rose to a seven-month high of 1.32% in September, while retail inflation was at eight-month high of 7.34% on spiralling prices of food items, especially vegetables.

Speaking to reporters, Mrs. Sitharaman said floods in certain districts have led to uptick in prices of perishable goods and the government is taking steps for their better preservation, long shelf life and providing weather proof storage, particularly for crops like onion and potato.

Source: The Hindu, November 12, 2020

Q 1. Due to floods, there was a rise in prices of ..... goods.

a. perishable b. non-perishable
c. durable d. consumer

Q 2. Government is working on short and medium-term measures for controlling ..... in the country.

a. deflation b. inflation
c. excess d. deficient

Q 3. Due to a rise in demand and fall in supply the prices of goods tend to .....

a. rise b. fall
c. same d. excess

Q 4. The provisions made by government for controlling prices of perishable goods:

a. better preservation
b. providing weather proof storage
c. Both a. and b.
d. None of the above

Answers

1. (a) **2.** (a) **3.** (a) **4.** (c)

Case Study 3

Read the extract given below and answer the questions on the basis of the same:

With industrial demand still below the pre-pandemic level, consumer-centric sectors have taken the centre stage. Companies from these sectors staged a faster recovery in the quarter to September on a sequential basis than the industry on average. This was on account of pent-up consumer demand and rising propensity to spend among rural consumers amid better monsoon and improving farm income aided by higher sowing and government support.

A sample of 593 companies from consumer-focused sectors including automobiles, consumer durables, Fast-Moving Consumer Goods (FMCG), hospitality, jewellery, media and entertainment, healthcare and pharma, retail, real estate and textiles reported a 29% sequential increase in net sales and 94% jump in operating profit in the September quarter. Net sales, however, rose at a more benign rate of 25.7% and operating profit grew 32.2%, for a broader sample of 2,371 companies across sectors.

"Companies have reported demand revival and volume growth in the quarter. Rural continues to outperform urban."

Source: *timesgroup.com, November 17, 2020*

Q 1. Explain the concept of average propensity to consume.

Ans. Average propensity to consume refers to the ratio of consumption expenditure to the corresponding level of income.

APC = Consumption (C)/Income (Y)

Q 2. The consumer good industry has shown a faster recovery than that of capital good industry due to rising propensity to consume. Explain MPC for the above lines.

Ans. Marginal propensity to consume refers to the ratio between change in consumption expenditure and change in income.

MPC = Change in Consumption (ΔC)/Change in Income (ΔY)

Case Study 4

Read the extract given below and answer the questions on the basis of the same:

The denial of the crucial role of the interest rate as equilibrator of savings and investment led directly to the Keynesian theory of employment determinants. Given the 'propensity to consume' and hence the proportion of any given income that will be spent by individual consumers (on which the size of RF Kahn's 'multiplier' depends), the level of output and employment will be a function of investment. According to the level at which investment (also consumption) stands, the level of output and employment may be almost anything between zero and full capacity output. There is at any rate, no longer any unique level to which the system is necessarily tending. So far as investment consists of private investment, it will remain governed by the 'marginal efficiency of capital' (anticipated profitability), modified, on one hand, by 'expectations' (powerfully swayed by business mood and the like) and on other hand, by the cost of borrowing, namely prevailing rate of interest. Thus, was the casual emphasis of theory reversed, instead of any change in saving being translated into an equivalent shift of investment and (*via* income changes) the volume of savings the dependent variable.

Interest was converted virtually into a money rate-something influenced on the one hand by monetary policy (affecting the supply of money available) and on the other hand by the current attitude towards is as something worth holding (e.g, bank deposit) in preference to other assets (e.g, bonds). This later constituted the famous liquidity preference. A preference powerfully influenced by expectations (or uncertainty) about future movements of interest rates (and hence of bond prices).

Source: *From Maurice Dobb, Theories of Value and Distribution since Adam Smith, page 218-219*

Q 1. Explain investment multiplier.

Ans. Investment multiplier refers to the ratio between change in income and change in investment.

$$K = \Delta Y/\Delta I$$

The working of multiplier tell us to what will be the final change in income, as a result of ΔI. Change in investment cause a change in income. As a result, there is a change in consumption which in turn leads to a multiple change in income.

$$\Delta I \rightarrow \Delta Y \rightarrow \Delta C \rightarrow \Delta Y$$

Q 2. Explain the relationship between MPC and multiplier.

Ans. There is a direct relationship between the value of MPC and the size of Multiplier (K). This means that as the value of MPC increases the size of multiplier also increases and *vice-verso*.

$$K = \frac{1}{1 - MPC}$$

Very Short Answer Type Questions

Q 1. What is meant by aggregate demand?

Ans. It refers to the total demand for all goods and services in the economic system as a whole. This is expressed in terms of total expenditure made in the economy.

Q 2. State the components of aggregate demand.

Ans. The components of aggregate demand are as follows:

(i) Household Consumption Expenditure
(ii) Private Investment Expenditure
(iii) Government Expenditure
(iv) Net Exports

Q 3. What is meant by aggregate supply in macroeconomics?

Ans. It refers to the total value of planned output of final goods and services produced by all the producers during a year.

Q 4. State the components of aggregate supply.

Ans. Consumption and savings are the components of aggregate supply.

Q 5. What is consumption function?

OR

What is propensity to consume?

Ans. Consumption function refers to functional relationship between consumption and national income.

$$C = f(Y)$$

Q 6. What is average propensity to consume?

Ans. Average Propensity to Consume (APC) refers to the ratio of consumption expenditure to the corresponding level of income.

$$APC = \text{Consumption/Income or } C/Y$$

Q 7. What is marginal propensity to consume?

Ans. Marginal propensity to consume refers to the ratio between change in consumption expenditure and change in income.

$$MPC = \text{Change in Consumption/Change in Income or } \Delta C/\Delta Y$$

Q 8. What is saving function?

OR

What is propensity to save?

Ans. Saving function refers to the functional relationship between saving and national income.

$$S = f(Y)$$

Q 9. What is average propensity to save?

Ans. Average Propensity to Save (APS) refers to the ratio of saving to the corresponding level of income.

$$APS = \text{Saving/Income or } S/Y$$

Q 10. Define marginal propensity to save.

Ans. Marginal Propensity to Save (MPS) refers to the ratio between change in savings to change in total income.

MPS = Change in Savings/Change in Income, or $\Delta S / \Delta Y$

Q 11. What is the relationship between APC and APS?

Ans. The sum total of APC and APS is equal to one. So, when APC rises, APS falls and *vice-versa*.

Q 12. What is the relationship between MPC and MPS?

Ans. The sum total of MPC and MPS is equal to one. So, when MPC rises, MPS falls and *vice-versa*.

Q 13. What is meant by investment?

Ans. It refers to the expenditure incurred on creation of new capital assets, or the increase in the stock of capital is called investment.

Q 14. What are the three factors that affect investment?

Ans. The three factors that affect investment are cost, revenue and profit.

Q 15. What is the investment demand function?

Ans. The functional relationship between the interest rate and marginal efficiency of investment and the amount of investment that is demanded is called investment demand function.

Q 16. What are the two main types of investment?

Ans. The two main types of investments are induced investment and autonomous investment.

Q 17. What is marginal efficiency of investment?

Ans. Marginal efficiency of investment is the expected rate of return from additional investment.

Q 18. What are ex-ante savings?

Ans. Ex-ante savings refer to the amount of savings which households (or savers) plan or desire to save at different levels of income in the economy.

Q 19. What are ex-ante investments?

Ans. Ex-ante investments refer to the amount of investment which firms plan or desire to invest at different levels of income in the economy.

Q 20. What are ex-post savings?

Ans. In an economy, the savers actually save at different levels of income is called ex-post savings. It is also known as actual or realised savings in an economy during a year.

Q 21. What are ex-post investments?

Ans. In an economy, what the investors actually invest at different levels of income is called ex-post investments. It is also known as actual or realised investment in an economy during a year.

Q 22. When does equilibrium occur in an economy?

Ans. In an economy, equilibrium occurs when ex-ante savings = ex-ante investment.

Q 23. What is meant by full employment?

Ans. Full employment refers to a situation in which all those people, who are willing and able to work at the existing wage rate, get work without any undue difficulty.

Q 24. Does full employment mean zero unemployment?

Ans. No, full employment does not mean zero unemployment. Even at full employment, there exists some natural rate of unemployment.

Q 25. What is meant by involuntary unemployment?

Ans. It refers to that unemployment in which a person does not get work even when he is able to do a job and willing to work at the existing wage rate.

Q 26. While estimating total unemployment in the country which unemployment is not considered?

Ans. Voluntary unemployment is not considered while estimating total unemployment in the country.

Q 27. Write the equation of consumption.

Ans. The equation of consumption is written as:

$C = a + b\,(Y)$ *Or* $C = a + MPC\,(Y)$

Where, a = Autonomous consumption

b = Marginal propensity to consume

Y = Income

Q 28. Write the equation of saving.

Ans. The equation of saving is written as:

$S = -a + (1-b)Y$ *Or* $S = -a + MPS\,(Y)$

Where, $-a$ = Dis saving or negative saving

$1-b$ = Marginal propensity to save

Y = Income

Q 29. What is autonomous consumption?

Ans. The consumption at zero level of income is called autonomous consumption.

Q 30. What are dissavings?

Ans. The savings at zero level of income or negative savings are called dissavings.

Q 31. What is equilibrium income?

Ans. That level of income at which planned aggregate demand equals planned aggregate supply in the economy is called Equilibrium Income.

Q 32. State two approaches of determining equilibrium level of income.

Ans. The two approaches of determining equilibrium level of income are: (i) AD and AS Approach and (ii) S = I Approach.

Q 33. What is underemployment equilibrium?

Ans. When the equality between aggregate demand and aggregate supply takes place prior to the level of full employment in the economy, it is known as underemployment equilibrium.

Q 34. What is full employment equilibrium?

Ans. When the equality between aggregate demand and aggregate supply takes place at the level of full employment in the economy, it is known as full employment equilibrium.

Q 35. What is over-full employment equilibrium?

Ans. When the equality between aggregate demand and aggregate supply takes place beyond the level of full employment in the economy, it is known as over-full employment equilibrium.

Q 36. Define investment multiplier.

Ans. Investment multiplier refers to the ratio between change in income and change in investment.

In short: $K = \Delta Y/\Delta I$.

Q 37. What is the minimum value of investment multiplier?

Ans. The minimum value of investment multiplier is unity.

Q 38. What is the maximum value of investment multiplier?

Ans. The maximum value of investment multiplier is infinity (∞).

Q 39. What is the relationship between MPC and multiplier?

Ans. There is a direct relationship between the value of MPC and the size of multiplier (K). This means that as the value of MPC increases the size of multiplier also increases and *vice-versa*.

$$\left(K = \frac{1}{1-MPC}\right)$$

Q 40. What is the relationship between MPS and multiplier?

Ans. There is an inverse relationship between the value of MPS and the size of multiplier (K). This means that as the value of MPS increases the size of multiplier decreases and *vice-versa*.

$$\left(K = \frac{1}{MPS}\right)$$

Q 41. What is excess demand?

Ans. Excess demand refers to a situation in which aggregate demand exceeds aggregate supply corresponding to full employment level of output in the economy.

Q 42. What is deficient demand?

Ans. Deficient demand refers to a situation in which aggregate demand falls short of aggregate supply corresponding to full employment level of output in the economy.

Q 43. What is inflationary gap?

Ans. The amount or gap by which aggregate demand exceeds aggregate supply corresponding to full employment level of output in the economy is referred to as inflationary gap.

Q 44. What is deflationary gap?

Ans. The amount or gap by which aggregate demand falls short of aggregate supply corresponding to full employment level of output in the economy is referred to as deflationary gap.

Q 45. What happens to economy's output, income and employment and price when there is a deficient demand?

Ans. They all will decrease.

Q 46. What happens to economy's output, income and employment and price when there is an excess demand?

Ans. They all will remain constant except price (price will increase).

Q 47. What is fiscal policy?

Ans. The revenue and expenditure policy of the government is called Fiscal policy.

Q 48. What is monetary policy?

Ans. The policy of Central Bank to control the flow of credit in the economy is called Monetary policy.

Q 49. What is effective demand?

Ans. The particular level of aggregate demand required to achieve full employment equilibrium is called Effective demand. In simple words, aggregate demand at the point of equilibrium (AD = AS) is called Effective demand.

Short Answer Type-I Questions

Q 1. What is the consumption function? Explain with the help of a schedule and graph.

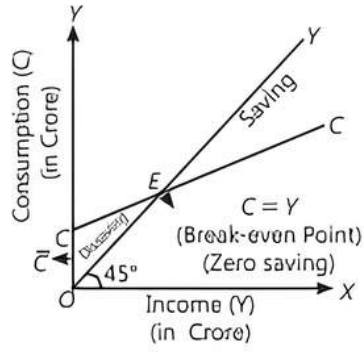
Ans. Consumption function refers to functional relationship between consumption and national income.

$$C = f(Y)$$

Consumption function or propensity to consume shows the willingness of households to purchase goods and services at a given level of income during a given time period.

Schedule showing consumption at different levels of income

Y (in Crore)	C (in Crore)
0	25
100	100
200	175
300	250
400	325
500	400



Consumption Curve

Q 2. What does Keynes famous Psychological Law of Consumption states?

Note: (1 – b = MPS)

Ans. This law states that:

(i) There is minimum consumption, known as autonomous consumption even at zero level of national income because survival needs consumption.

(ii) As the income increases, consumption also increases.

(iii) Income rises at a greater proportion as compared to increase in consumption.

Q 3. What is the saving function? Explain with the help of a schedule and graph.

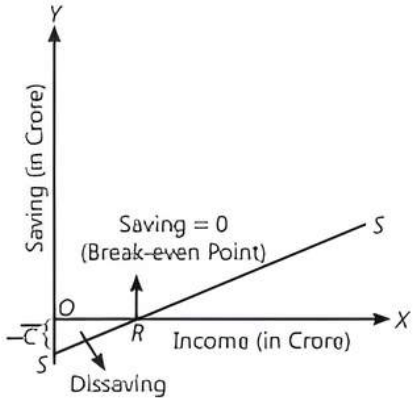
Ans. Saving Function (Propensity to Save): Saving function refers to the functional relationship between saving and national income.

$$S = f(Y)$$

'Saving Function' or 'Propensity to Save' shows the savings of households at a given level of income during a given time period.

Schedule showing savings at different levels of income

Y (in crore)	C (in crore)	S (in crore)
0	25	–25
100	100	0
200	175	25
300	250	50
400	325	75
500	400	100



Saving Curve

Q 4. Derive the saving equation from the consumption equation.

Ans. We know that: $S = Y - C$ ...(i)

and $C = a + b(Y)$ ...(ii)

Putting the value of C from eq. (ii) in (i), we get

$S = -a + Y(1 - b)$ [Hence derived]

$S = Y - a + b(Y)$

$= Y - a - bY$

$= -a + Y - bY$

Note: $1 - b = MPS$

$S = -a + (1 - b)Y$

Q 5. Derive consumption equation from the saving equation.

Ans. We know that

$C = Y - S$ ...(i)

Also, $S = -a + Y(1 - b)$ ...(ii)

Substituting the value of S from eq. (ii) in (i), we get

$C = Y - [-a + Y(1 - b)]$

$= Y - [-a + Y - bY]$

$= Y + a - Y + bY$

$= a + bY$ [Hence derived]

Note: $b = MPC$

Q 6. Distinguish between Average Propensity to Consume (APC) and Marginal Propensity to Consume (MPC).

Ans. Difference between Average Propensity to Consume (APC) and Marginal Propensity to Consume (MPC) are as follows:

S. No.	Basis of Difference	APC	MPC
(i)	Meaning	It refers to the ratio between consumption expenditure (C) and income (Y) at a point of time.	It refers to the ratio between change in consumption expenditure (ΔC) and change in income (ΔY).
(ii)	Value	APC can be more than one as long as consumption is more than national income, *i.e.*, till the break-even point.	MPC cannot be more than one because income rises at a greater proportion as compared to increase in consumption.
(iii)	Rate	When income increases, APC falls, but at a rate less than that of MPC.	When income increases, MPC falls but at a rate more than that of APC.

Q 7. Distinguish between Average Propensity to Save (APS) and Marginal Propensity to Save (MPS).

Ans. Difference between Average Propensity to Save (APS) and Marginal Propensity to Save (MPS) are as follows:

S. No.	Basis of Difference	APS	MPS
(I)	Meaning	It refers to the ratio between total savings (S) and total income (Y).	It refers to the ratio between change in saving (ΔS) and change in income (ΔY).
(II)	Value	The value of APS can be less than zero when there are dissavings, *i.e.*, till consumption is more than national income.	MPS can never be less than zero as change in savings can never be negative.
(iii)	Formula	$APS = \frac{S}{Y}$	$MPS = \frac{\Delta S}{\Delta Y}$

Q 8. Prove that APC + APS = 1.

Ans. We know that income is either consumed or saved.

Therefore, $C + S = Y$

On dividing both the sides by Y, we get

$$C/Y + S/Y = Y/Y$$

$$APC + APS = 1$$

Q 9. Prove that MPC + MPS = 1.

Ans. We know that change in income is either consumed or saved.

Therefore, $\Delta C + \Delta S = \Delta Y$

Dividing both sides by ΔY, we get

$$\Delta C/\Delta Y + \Delta S/\Delta Y = \Delta Y/\Delta Y$$

$$MPC + MPS = 1$$

Q 10. What is meant by inflationary gap? State three measures to reduce this gap.

Ans. The amount or gap by which aggregate demand exceeds aggregate supply corresponding to full employment level of output in the economy is known as Inflationary gap.

The following are the three measures to reduce this gap:

(i) Decrease in government expenditure on public works, public welfare, defence etc.

(ii) Decrease in public expenditure on transfer payments and subsidies.

(iii) Rise in taxes to lower the disposable income with the people.

Q 11. "As the income increases, people tend to save more." Justify the given statement. *(CBSE SQP 2022, Term-2)*

Ans. At lower level of income, a consumer spends a larger proportion of his/her income on consumption expenditure (basic survival requirements). As the income increases, owing to psychological behaviour of a consumer, people tend to consume less and save more for future uncertainty.

Q 12. "Excess demand creates greater opportunities of employment in the economy." Defend or refute the given statement with valid explanation.

(CBSE 2022, Term-2)

Ans. The level of employment will not increase because the economy is working at full employment level. At this stage, there is no involuntary employment in the economy. Thus, employment remains unaffected in case of excess demand.

Q 13. If in an economy bank rate is increased, how will it affect the demand for credit? Explain.

(CBSE 2022, Term-2)

Ans. When central rate increase the bank rate to overcome the problem of excess demand. This will increase the interest rate in the economy. As a result, the flow of credit will decrease in the economy and hence AD will decrease in the economy.

Short Answer Type-II Questions

Q 1. What is meant by investment multiplier? State the relationship between marginal propensity to save and investment multiplier.

Ans. Investment Multiplier (K): Investment multiplier refers to the ratio between change in income and change in investment.

In short: $K = \Delta Y/\Delta I$.

For example, in an economy, investment increases from ₹ 400 crore to ₹ 500 crore and income increases from ₹ 1,000 crore to ₹ 2,000 crore, then the size of multiplier will be 10.

$$K = \frac{\Delta Y}{\Delta I}$$

$$= \frac{2,000 - 1,000}{500 - 400}$$

$$= \frac{1000}{100} = 10, \quad K = 10$$

Relationship between MPS and Investment Multiplier: There is an inverse relationship between the value of MPS and the size of multiplier (K). This means that as the value of MPS increases the size of multiplier decreases and *vice-versa*.

When: (a) MPS = 0.5 (b) MPS = 0.2

Calculate Multiplier (K).

(a) $K = \frac{1}{MPS} = \frac{1}{0.5} = 2$ (b) $K = \frac{1}{MPS} = \frac{1}{0.2} = 5$

Q 2. As per the following news published in The Economic Times on 26th December, 2021: 'Reserve Bank of India has sold government securities worth ₹ 8,710 crore in the secondary market, over the last four weeks, to drain out excessive liquidity'.

Identify the likely cause and the consequences behind, this type of action plan of the Reserve Bank.

(CBSE SQP 2022-23)

Ans. The given instance where, Reserve Bank of India has sold government securities in the secondary market indicates towards inflation as a possible cause behind the action taken by RBI.

The Reserve Bank of India's action of selling government securities in the secondary market to drain out excessive liquidity is likely due to an increase in the money supply in the economy. The excess liquidity may have been caused by various factors, such as an increase in government spending or a decrease in demand for credit by businesses and households.

When there is excess liquidity in the system, it can lead to inflationary pressures as too much money chases too few goods and services, biding to an increase in prices. By selling government securities, the Reserve Bank of India reduces the amount of money available in the economy, which can help to keep inflation in check.

The consequence of this action plan can be two fold. On the one hand, it can help to curb inflationary pressures by reducing the money supply. On the other hand, it can also lead to an increase in interest rates, as reduced money supply can increase the demand for credit, leading higher interest rates. This, in turn, can have a dampening effect on economic growth and investment.

Q 3. What is meant by investment multiplier? State the relationship between marginal propensity to consume and investment multiplier.

Ans. Investment Multiplier (K): Investment multiplier refers to the ratio between change in income and change in investment.

In short: $K = \Delta Y / \Delta I$

Relationship between MPC and Investment Multiplier: There is a direct relationship between the value of MPC and the size of multiplier (K). This means that as the value of MPC increases the size of multiplier also increases and *vice-versa*.

When: (a) MPC = 0.5 (b) MPC = 0.8

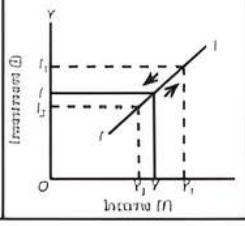
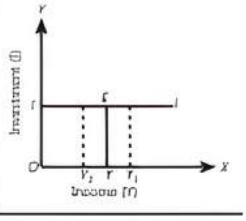
Calculate Multiplier (K).

(a) $K = \frac{1}{1-MPC} = \frac{1}{1-0.5} = \frac{1}{0.5} = 2$

(b) $K = \frac{1}{1-MPC} = \frac{1}{1-0.8} = \frac{1}{0.2} = 5$

Q 4. Distinguish between Induced and Autonomous investment.

Ans. Difference between Induced and Autonomous investments are as follows:

S. No.	Basis of Difference	Induced Investment	Autonomous Investment
(i)	Meaning	The investment which is made to earn profit is called Induced Investment.	The investment which is independent of the level of income is called autonomous investment.
(ii)	Aim	The motive behind Induced Investment is to earn profit.	The motive behind autonomous investment is to provide social welfare.
(iii)	Relation	It is directly related with income.	It is not related with income.
(iv)	Curve		

Q 5. What is aggregate demand? Explain its components.

Ans. Aggregate Demand: It refers to the total demand for all goods and services in the economic system as a whole. This is expressed in terms of total expenditure made in the economy.

Components of Aggregate Demand: The components of aggregate demand are as follows:

(I) Household Consumption Expenditure (C): It refers to the total amount of money which the households are willing to spend on the purchase of goods and services in the economy during an accounting year.

(ii) Private Investment Expenditure (I): It refers to the total amount of money which the firms are willing to spend on the purchase of capital goods in the economy during an accounting year.

(iii) Government Expenditure (G): It refers to the total amount of money which the government is willing to spend on providing services to the people and investment expenditure like construction of roads, dams, etc. in the economy during an accounting year.

(iv) Net Exports (X – M): It is the net expenditure by foreigners on domestically produced goods and services. It is the difference between exports and imports.

Q 6. What happens when AD > AS in the economy?

OR

"In an economy Ex-ante aggregate demand is more than Ex-ante aggregate supply."

Explain/Elaborate its impact on the level of output, income and employment.

(CBSE 2023, CBSE SQP 2023-24)

Ans. This means that the consumers, government and firms would be buying more goods than the producers are willing to produce.

As a result, planned inventory would fall below the desired level of inventory. Therefore, to bring the inventory back to the desired level, the producers would plan greater output for the following year.

As a result of this, the level of income, employment and output will increase in the economy.

This process will continue till the equilibrium is reached *i.e.*, at the level of output where AD = AS.

Thus, when AD > AS, National Income tends to rise.

Q 7. What happens when AD < AS in the economy?

Ans. This means that the consumers government and firms would be buying less goods than the producers are willing to produce.

As a result, planned inventory would rise above the desired level of inventory.

Therefore, to bring the inventory back to the desired level, the producers would plan lesser output for the following year.

As a result of this, the level of income, employment and output will decrease in the economy.

This process will continue till the equilibrium is reached *i.e.*, at a level of output point E, where AD = AS.

Thus, when AD < AS, National Income tends to fall.

Q 8. What happens when I > S in the economy?

Ans. When I > S, investment curve lies above the saving curve.

This means that the consumers are spending more and saving less and they are buying more goods than the producers are willing to produce.

As a result, planned inventory would fall below the desired level of inventory.

Therefore, to bring the inventory back to the desired level, the producers would plan greater output for the following year.

As a result of this, the level of income, employment and output will increase in the economy.

This process will continue till the equilibrium is reached *i.e.*, at a level of output where I = S.

Thus, when I > S, National Income tends to rise.

Q 9. What happens when I < S in the economy?

OR

If planned savings exceeds planned investments in an economy, explain its likely impact on income, output and employment. *(CBSE 2023)*

Ans. When I < S, investment curve lies below the saving curve. This means that the consumers are spending less and saving more and they are buying less goods than the producers are willing to produce.

As a result, planned inventory would rise above the desired level of inventory.

Therefore, to bring the inventory back to the desired level, the producers would plan lesser output for the following year.

As a result of this, the level of income, employment and output will decrease in the economy.

This process will continue till the equilibrium is reached *i.e.*, at the level of output where I = S.

Thus, when I < S, National Income tends to fall.

Q 10. Distinguish between involuntary and voluntary unemployment.

Ans. Difference between involuntary and voluntary unemployment are as follows:

S. No.	Basis of Difference	Involuntary Unemployment	Voluntary Unemployment
(I)	Meaning	Involuntary unemployment refers to that unemployment in which a person is able to do a job and willing to work at the existing wage rate, but does not get work.	Voluntary unemployment refers to that unemployment in which a person is able to do the job, but he is not willing to do it at the existing wage rate, even when the job is available.
(II)	Wish	Unemployment against the wish.	Unemployment as per own wish.
(iii)	Part of total unemployment	It is considered when total unemployment of the country is calculated.	It is not considered when total unemployment of the country is calculated.
(iv)	Full employment level	It does not exist at full employment level.	It exist even at full employment level.

Q 11. Give a numerical example to help the computation of MPC and APC.

Ans. The numerical example given below will help to understand the computation of MPC and APC are:

Income (Y) ₹	Consumption (C) ₹	APC (C/Y)	ΔC	ΔY	MPC (ΔC/ΔY)
0	600	–	–	–	–
400	700	1.75	100	400	0.25
800	800	1	100	400	0.25

Q 12. Explain the role of taxation in reducing excess demand.

Ans. Excess demand refers to the situation when Aggregate Demand (AD) is in excess of Aggregate Supply (AS) corresponding to full employment in the economy.

In a situation of excess demand, government increases the rates of all taxes. This reduces the purchasing power of the people and leads to a fall in both consumption and investment expenditures. A fall in consumption and investment expenditures reduces the level of aggregate demand and help to check the problem of excess demand.

Q 13. Explain how controlling money supply is helpful in reducing excess demand?

Ans. The Central Bank takes measures to reduce money supply in the economy. As money supply decreases, it leads to decrease in liquidity in the economy. Decreased liquidity causes a fall in the level of aggregate demand, and hence the problem of excess demand is checked.

Q 14. Explain the difference between ex-ante measures and ex-post measures.

Ans. **(i) Ex-ante Measures:** These measures are planned or desired measure. Ex-ante measures are generally classified as:

(a) Ex-ante Savings: It refers to amount of savings which households (or savers) plan or desire to save at different levels of income in the economy.

(b) Ex-ante Investments: It refers to amount of investment which firms plan or desire to invest at different levels of income in the economy.

(ii) Ex-post Measures: These measures are actual or realised measure. Ex-post measures are generally classified as:

(a) Ex-post Savings: In an economy, what the savers actually save at different levels of income is called Ex-post savings. It is also known as actual or realised savings in an economy during a year.

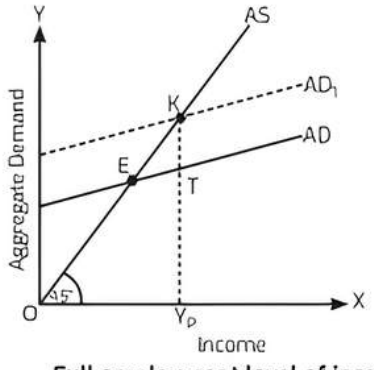
(b) Ex-post Investments: In an economy, what the investors actually invest at different levels of income is called Ex-post savings. It is also known as actual or realised investment in an economy during a year.

Q 15. Differentiate between Autonomous Consumption and Induced Consumption. *(CBSE 2018)*

Ans. Difference between Autonomous and Induced Consumption are:

S. No.	Basis of Difference	Autonomous Consumption	Induced Consumption
(i)	Meaning	Autonomous consumption is the minimum level of consumption required for survival.	Induced consumption is that part of consumption which varies directly with disposable income. With increase in income, autonomous consumption also increase and *vice-versa*.
(ii)	Representation in consumption equation	In a consumption equation, autonomous consumption is represented by $\bar{C}$	In a consumption equation, induced consumption is represented as by where b is the MPC and *Y* is the income.
(iii)	Zero level	It is not zero at zero level of income.	It is zero at zero level of income.

Q 16. In the given figure, what does the gap 'KT' represent? State any two fiscal measures to correct the situation.



Full employment level of income

Ans. In the given figure, the gap 'KT' represents Inflationary gap. AD and AS represents Aggregate Demand and Aggregate Supply respectively at full employment level and 'E' is the point of equilibrium. AD_1 represents actual aggregate demand which exceed aggregate demand at the point of equilibrium. This will lead to inflation in the economy.

Two fiscal measures to correct the situation of inflation are as follows:

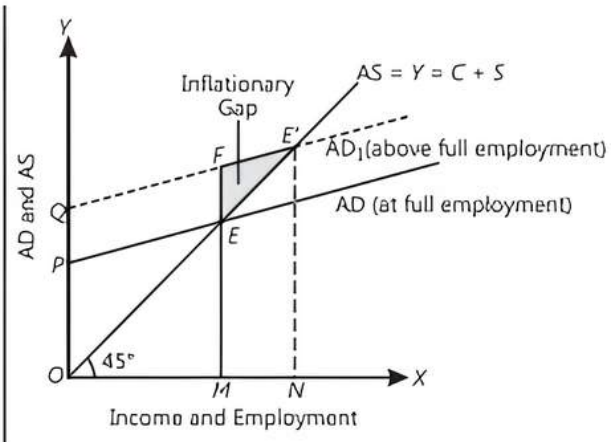
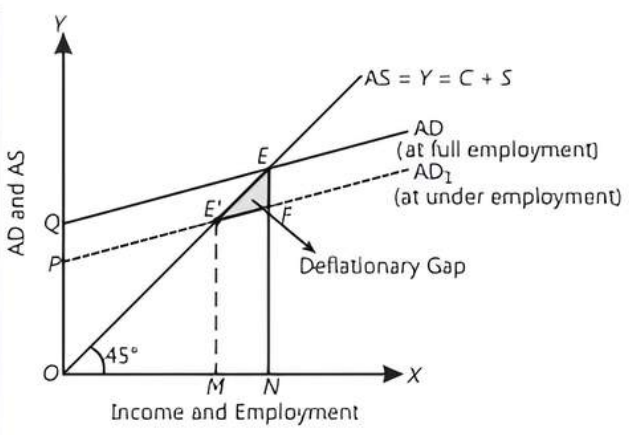
(i) Increase in tax rate

(ii) Reduce government expenditure

Q 17. Distinguish between Inflationary gap and deflationary gap.

Ans. Difference between inflationary gap and deflationary gap are:

S. No.	Basis of Difference	Inflationary Gap	Deflationary Gap
(i)	Meaning	The excess of aggregate demand above the level that is required to maintain full employment level of equilibrium is termed as inflationary gap.	The short fall of aggregate demand below the level that is required to maintain full employment level of equilibrium is termed as deflationary gap.
(ii)	Effect	Inflationary gap causes inflation; increase wages and price level in the economy.	Deflationary gap causes deflation; decrease wages and price level in the economy.

(iii)	Graphical Presentation		
(iv)	Measures to correct it	Bank rate, CRR and SLR are increased.	Bank rate, CRR and SLR are decreased.

Q 18. What do you understand by 'Parametric shift of a line'? How does a line shift when its: (i) slope changes and (ii) intercept increases?

Ans. Let $C = \bar{C} + bY$ be the consumption function

Also, let $\bar{C} = 4$ and $b = 0.5$

Thus, $C = 4 + 0.5Y$

Given situations are:

(i) When b changes

(ii) When $\bar{C}$ changes

(i) When *b* Changes: b is the slope of the consumption curve. when b increases from 0.5 to 0.8, then consumption curve rotates upwards. This is called a parametric shift of a graph. It is shown in the figure (a) and *vice-versa* when b (slope) decreases.

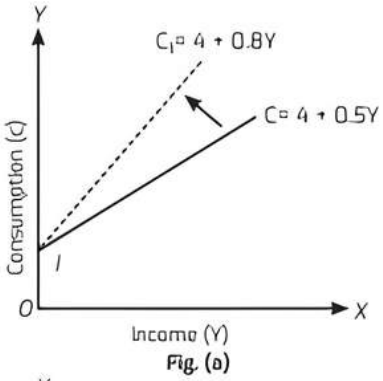


Fig. (a)

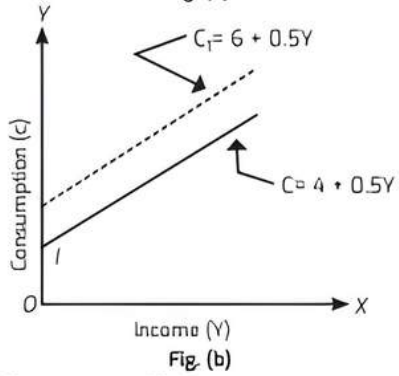


Fig. (b)

(ii) When $\bar{C}$ Changes: $\bar{C}$ is consumption at zero level of income. It graphically gives the intercept of the consumption curve. If increases from 4 to 6, there will be parallel upward shift in the consumption curve. It is shown in the figure (b) above and *vice-verso*, if it decreases.

Observations:

(a) When slope changes there is parametric shift in the curve.

(b) When intercept changes (autonomous consumption) there is parallel shift in the curve.

Long Answer Type Questions

Q 1. Explain with the help of a diagram, how aggregate demand and aggregate supply determine the equilibrium level of income?

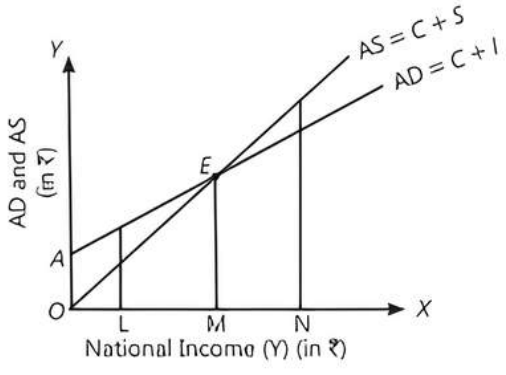
Ans. AD and AS Approach: According to this approach, the equilibrium level of income and employment is determined where aggregate demand equals to aggregate supply in the economy.

According to J.M. Keynes, 'the equilibrium level of income and employment is determined where planned aggregate demand and planned aggregate supply are equal.'

When AD and AS are equal, there is no tendency for output employment and income to change.

This can be explained with the help of following schedule and diagram:

Y (₹)	C (₹)	S (₹)	I (₹)	AD (C+ I) (₹)	(AS = Y) (₹)
0	25	–25	50	75	0
100	100	0	50	150	100
200	175	25	50	225	200
300	250	50	50	300	300
400	325	75	50	375	400
500	400	100	50	450	500



Explanation: In the diagram, at any level of income prior to OM say OL, AD > AS and AD curve lies above 45 degree line. This means that the consumers, government and firms would be buying more goods than the producers are willing to produce. As a result, planned inventory would fall below the desired level. Therefore, to bring the inventory back to the desired level, the producers would plan greater output for the following year. As a result of this, the level of income, employment and output will increase in the economy. This process will continue till the equilibrium is reached *i.e.*, point E where AD = AS. Thus, when AD > AS, National Income tends to increase.

At any level of income beyond OM say ON, AS > AD, AD curve lies below 45 degree line. This means that the consumers and producers would be buying less goods than the producers are willing to produce. As a result, planned inventory would rise above the desired level. Therefore, to bring the inventory back to the desired level, the producers would plan lesser output for the following year. As a result of this, the level of income, employment and output will decrease in the economy. This process will continue till the equilibrium is reached *i.e.* point E where AD = AS. Thus, when AD < AS, National Income tends to fall.

Q 2. Show with the help of savings and investment curves, the determination of equilibrium level of income.

Ans. Savings and Investment Approach: According to this approach, the equilibrium level of income is determined at that level of output where planned Savings (S) are equal to the planned Investment (I) in the economy.

We know that at equilibrium level of income and employment, AD = AS

But, $AD = C + I$

And, $AS = C + S$

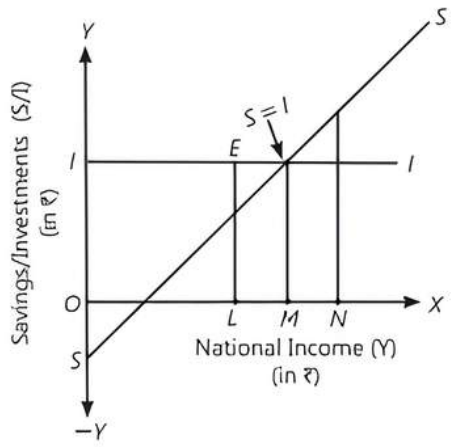
Therefore, at equilibrium AD = AS

$$(C + I) = (C + S) \text{ or } I = S$$

Thus, equilibrium level of income is determined at a point at which ex-ante savings and investment are equal.

The determination of equilibrium level of income by saving and investment approach has been explained with the help of following schedule and diagram:

Y (₹)	C (₹)	S (₹)	I (₹)	AD (C + I) (₹)	(AS = Y) (₹)
0	25	–25	50	75	0
100	100	0	50	150	100
200	175	25	50	225	200
300	250	50	50	300	300
400	325	75	50	375	400
500	400	100	50	450	500



Explanation: In the above diagram, at any level of income prior to OM say OL, I > S, investment curve lies above saving curve. This means that the consumers are spending more and saving less and they are buying more goods than the producers are willing to produce. As a result, planned inventory would fall below the desired level. Therefore, to bring the inventory back to the desired level, the producers would plan greater output for the following year. As a result of this, the level of income, employment and output will increase in the economy. This process will continue till the equilibrium is reached *i.e.*, point E where I = S. Thus, when I > S, National Income tends to increase.

Any level of income beyond OM say ON, S > I, investment curve lies below saving curve. This means that the consumers are spending less and saving more and they are buying less goods than the producers are willing to produce. As a result, planned inventory would rise above the desired level. Therefore, to bring the inventory back to the desired level, the producers would plan lesser output for the following year. As a result of this, the level of income, employment and output will decrease in the economy. This process will continue till the equilibrium is reached *i.e.*, point E where I = S. Thus, when I < S, National Income tends to fall.

Q 3. Explain the working of investment multiplier with the help of an example.

Ans. The working of investment multiplier tells us what will be final change in income, as a result of change in investment. Change in income leads to a change in consumption which in turn leads to a multiple change in income.

$$\Delta I \rightarrow \Delta Y \rightarrow \Delta C \rightarrow \Delta Y$$

The working of multiplier has been explained with the help of following example:

Suppose, government invests ₹ 100 crore for the construction of roads, dams, flyovers, bridges, etc. Assuming MPC to be 0.5, due to this investment expenditure by the government, the income of construction industry will increase by ₹ 100 crore. Now, the people working in the construction industry will spend 50% of their additional income on the

purchase of consumer goods and services.
Due to this, the income of consumer good industry will also increase by ₹ 50 crore. Now, the people working in the consumer good industry will spend 50% of their additional income on the purchase of other goods and services.
Due to this, the income of other industry will increase by ₹ 25 crore. Now, the people working in other industry will spend 50% of their additional income on the purchase of other goods and services.
Thus, change in investment cause a change in income. As a result, there is a change in consumption which in turn leads to a multiple change in income.
The working of multiplier can be explained with the help of the following table:

Round	ΔI (₹)	ΔY (₹)	ΔC (₹)
(I)	100	100	1/2 × 100 = 50
(II)	—	50	1/2 × 50 = 25
(III)	—	25	1/2 × 25 = 12.50
(IV)	—	12.50	1/2 × 12.50 = 6.25
	—	—	—
	—	—	—
	—	—	—
	100	200	100

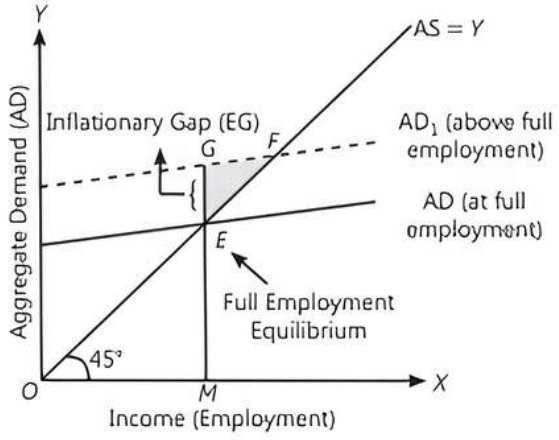
It shows that as a result of initial increase in investment of ₹ 100 crore there is a total increase in income of ₹ 200 crore.
As a result,

$$\text{Multiplier (K)} = \frac{\Delta Y}{\Delta I}$$

$$= \frac{200}{100} = 2$$

Q 4. What is excess demand and inflationary gap? Explain the impact of excess demand on output, employment and prices.

Ans. Excess Demand: Excess demand refers to the situation in which Aggregate Demand (AD) is more (exceeds) than the Aggregate Supply (AS) corresponding to full employment level of output in the economy.

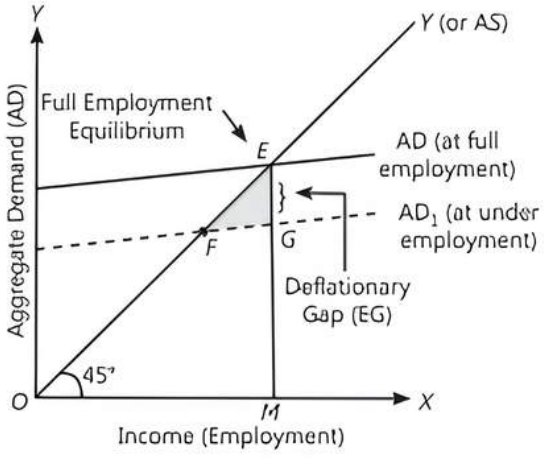


Excess Demand and Inflationary Gap

Excess demand leads to inflation in the economy.
Inflationary Gap: Inflationary gap refers to the gap by which actual aggregate demand exceeds the aggregate demand required to establish full employment equilibrium.
Impact of Excess Demand on Output, Employment and Prices
Impact on Output: The level of output will not increase in the short-run because the economy is already working at full employment level, production cannot be increased in the short-run. However, production can be increased in long run but Keyneslan's theory is based on short-run. Thus, output remains unaffected in case of excess demand.
Impact on Employment: The level of employment will not increase because the economy is working at full employment level. At this stage, there is no involuntary employment in the economy. Thus, employment remains unaffected in case of excess demand.
Impact on Prices: The level of general price level will increase in the economy. It is so because the production cannot be increased and AD is more than AS corresponding to the level of full employment in the economy. Thus, prices of goods and services will increase in the economy.

Q 5. What is deficient demand and deflationary gap? Explain the impact of excess demand on output, employment and prices.

Ans. Deficient Demand: It is a situation in which AD falls short of AS corresponding to the full employment level of output in the economy.



Deficient Demand and Deflationary Gap

Deficient demand leads to deflation in the economy.
Deflationary Gap: Deflationary gap is the amount by which AD falls short of AS at full employment level.
Impact of Deficient Demand: Deficient demand adversely affects the level of output, employment and price level in the economy.
Impact on Output: The level of output will decrease due to lack of sufficient aggregate demand, there will be an increase in the unsold stock. It will force the producers to plan for lesser production for the following year. As a result, planned output will decrease in the economy.

Impact on Employment: The level of employment will decrease in the economy because deficient demand causes involuntary unemployment in the economy.

Impact on General Price Level: The level of general price level will fall due to the lack of demand for goods and services in the economy.

Q 6. Explain any three monetary measures to overcome the problem of excess demand and deficient demand in the economy.

OR

"Monetary measures offer a valid solution to the Inflationary gap in an economy." State and discuss any two monetary measures to justify the given statement. *(CBSE SQP 2022, Term-2)*

OR

State and discuss any two monetary tools to control inflationary pressures in the economy.

(CBSE 2022, Term-2)

Ans. (i) Monetary Measures to Overcome the Problem of Excess Demand:

(a) Bank Rate: The rate at which the Central Bank gives credit to the commercial banks is referred to as bank rate. The Central Bank should try to increase the bank rate to overcome the problem of excess demand. This will increase the interest rate in the economy. As a result of this, people will take less loan and some other people would like to deposit their surplus money into the bank. Thus, the flow of credit will decrease in the economy and hence AD will decrease in the economy.

(b) Cash Reserve Ratio: The minimum percentage of banks' total deposit which is required to be kept with the Central Bank is called CRR. The Central Bank should try to increase the CRR. This will decrease the credit giving capacity of commercial banks in the economy. As a result of this, the flow of credit will decrease in the economy and hence AD will decrease in the economy.

(c) Margin Requirement: The difference between value of asset offered as security and the value of loan granted is referred to as margin money. The Central Bank should try to increase the margin requirement. This will decrease the credit giving capacity of commercial banks in the economy. As a result of this, the flow of credit will decrease in the economy and hence AD will decrease in the economy.

(ii) Monetary Measures to Overcome the Problem of Deficient Demand:

(a) Bank Rate: The rate at which Central Bank gives credit to the commercial bank is referred to as bank rate. The Central Bank should try to decrease the bank rate. This will decrease the interest rate in the economy. Cheaper credit motivates people to borrow money from banks. As a result of this, people will take more loans from the bank. Thus, the flow of credit will increase in the economy. This will lead to increase in consumption as well as investment expenditure and hence AD will increase in the economy.

(b) Cash Reserve Ratio: The minimum percentage of banks' total deposit which is required to be kept with the Central Bank is called CRR. The Central Bank should try to decrease the CRR. This will increase the credit giving capacity of commercial banks in the economy. As a result of this, the flow of credit will increase in the economy and hence AD will increase in the economy.

(c) Margin Requirement: The difference between value of asset offered as security and the value of loan granted is referred to as margin money. The Central Bank should try to decrease the margin requirement. This will increase the credit giving capacity of commercial banks in the economy. As a result of this, the flow of credit will increase in the economy and hence AD will increase in the economy.

Q 7. Explain any three fiscal measures to overcome the problem of excess demand and deficient demand in the economy.

Ans. (i) Fiscal Measures to Overcome the Problem of Excess Demand:

(a) Decrease in Public Expenditure: The government should try to decrease its expenditure on public works such as construction of roads, dams, flyovers, etc. This will decrease the level of output, employment and income in the economy. Thus, aggregate demand will decrease in the economy.

(b) Increase in Taxation: The government should try to increase the tax rate in the economy. This will decrease the level of personal disposable income in the economy. Thus, aggregate demand will decrease in the economy.

(c) Encourages Public Borrowing: The government should try to encourage public borrowing in the economy. This will decrease the spending capacity of the people in the economy. Thus, aggregate demand will decrease in the economy.

(ii) Fiscal Measures to Overcome the Problem of Deficient Demand:

(a) Increase in Public Expenditure: The government should try to increase its expenditure on public works such as construction of roads, dams, flyovers etc. This will increase the level of output, employment and income in the economy. Thus, aggregate demand will increase in the economy.

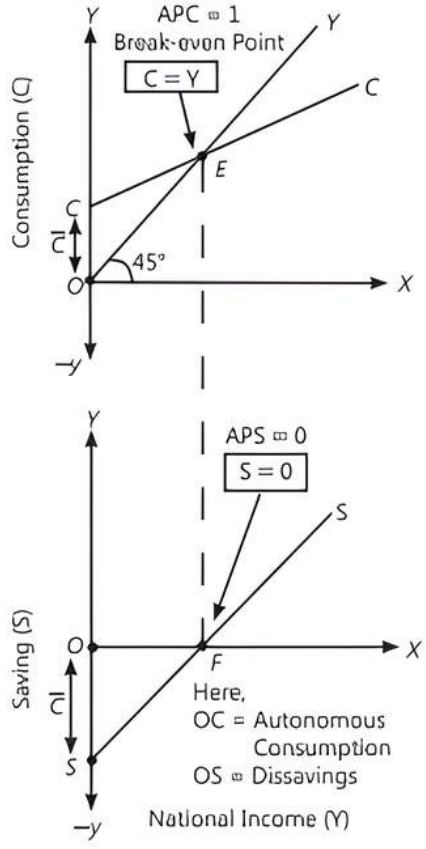
(b) **Decrease in Taxation:** The government should try to decrease the tax rate in the economy. This will increase the level of personal disposable income in the economy. Thus, aggregate demand will increase in the economy.

(c) **Discourages Public Borrowing:** The government should try to discourage public borrowing in the economy. This will increase the spending capacity of the people in the economy. Thus, aggregate demand will increase in the economy.

Q 8. Derive saving curve from consumption curve.

Ans. Given: Consumption Curve (CC), Income Curve (OY) or 45° line OY

To Derive: Saving Curve (SS)



Derivation: Clearly, consumption curve starts from point (C) above origin because at zero level of income there is Autonomous Consumption (OC).

Therefore, savings at zero level of income will be:

Savings = Income – Consumption = $\bar{C}$

So, saving curve will start from point S below origin or saving curve will start from negative OY-axis.

The Consumption Curve (CC) intersects the Income Curve (OY) at point E.

So, at point E,

Income = Consumption and APC = 1

Also, point E is the Break-even point.

And, when Income = Consumption, then savings are zero.

This means that saving curve will intersect the OX-axis at point F.

By joining the point S and F and extending it further, we get the Saving Curve (SS).

Hence, we can say that:

(i) When consumption curve lies above income curve, then saving curve lies below OX-axis.

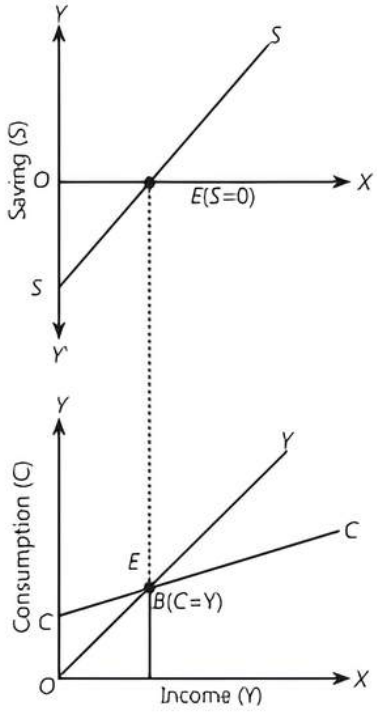
(ii) When consumption curve intersects the income curve, then saving curve intersects the OX-axis.

(iii) When income curve lies above consumption curve, then saving curve lies above OX-axis.

Q 9. Derive consumption curve from saving curve.

Ans. Given: Saving Curve (SS), Income Curve (OY) or 45° line OY

To Derive: Consumption Curve (CC)



Derivation: Clearly, saving curve starts from point S below origin or saving curve starts from negative OY-axis because at zero level of income savings are negative. Negative savings or dissavings are equal to the amount of autonomous consumption.

So, consumption curve starts from a point above origin at $\bar{C}$.

When saving curve intersects the OX-axis, then savings becomes zero. So, at point E, consumption equals income and the consumption curve will intersect the income curve *i.e.* at point B.

When saving curve lies above origin, then at means that savings are positive and thus consumption is less than income. So, consumption curve lies below income curve.

Now, by joining point C and B extending it further, we get the Consumption Curve (CC).

Hence, we can say that:

(i) When saving curve lies below OX-axis, consumption curve lies above income curve.

(ii) When saving curve intersects the OX-axis, consumption curve intersects the income curve.
(iii) When saving curve lies above OX-axis, income curve lies above consumption curve.

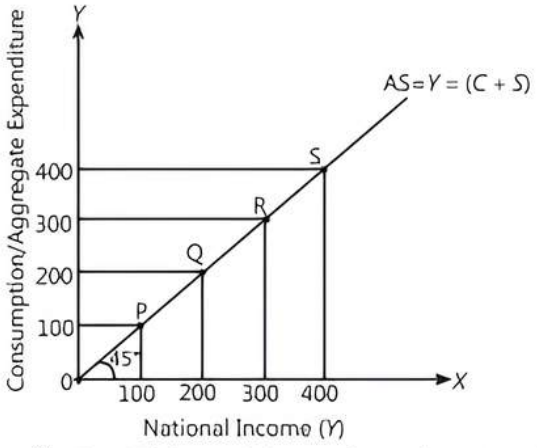
Q 10. Discuss the significance of 45° line in Keynesian Economics. *(CBSE SQP 2018)*

Ans. We know that income is either consumed or saved.

Therefore, $C + S = Y$

And, Aggregate Supply = $C + S$

So, Aggregate Supply = Income *i.e.*, $AS = Y$



(i) The 45° line originates from the point of origin.
(ii) The 45° line has a positive slope.
(iii) The 45° line establishes the relation $Y = C + S$.
(iv) All points on 45° line are equidistant from both the axis.
(v) The 45° line shows all points where aggregate expenditure and output are equal.
(vi) The intersection of aggregate expenditure schedule and the 45° line will be the equilibrium.
(vii) The 45° line has a slope of one and it bisects the 90° angle formed by the two axis.

Numerical Type Questions

Q 1. If APS is 0.8, how much will be APC?

Sol. We know that APC + APS = 1

$\therefore$ APC + 0.80 = 1

APC = 1 − 0.80

APC = 0.20

Q 2. If APC is 0.9, how much will be APS?

Sol. We know that APC + APS = 1

APS = 1 − APC

APS = 1 − 0.90

APS = 0.10

Q 3. If MPC is 0.65, what will be MPS?

Sol. We know that MPC + MPS = 1

MPS = 1 − MPC

MPS = 1 − 0.65

MPS = 0.35

Q 4. How much is the marginal propensity to save in an economy in which MPC is 0.9?

Sol. We know that MPC + MPS = 1

MPS = 1 − MPC

MPS = 1 − 0.90

MPS = 0.10

COMMON ERROR

Many students use the MPS directly in the formula, instead of finding the MPC from it and get wrong answer.

TiP

Students should use MPC not the MPS. If they use the MPS in the formula, they need to use (1 − MPC) instead of directly using MPS.

Q 5. How much is the marginal propensity to consume in an economy in which MPS is 0.4?

Sol. We know that MPC + MPS = 1

MPC = 1 − MPS

MPC = 1 − 0.40

MPC = 0.60

Q 6. If the marginal propensity to save is 1, how much will be the marginal propensity to consume?

Sol. We know that MPC + MPS = 1

MPC = 1 − MPS

MPC = 1 − 1

MPC = 0

Q 7. If the value of marginal propensity to consume is 0.8, calculate the value of multiplier?

Sol. We know that $K = \frac{1}{1-MPC}$

$$K = \frac{1}{1-0.80}$$

$$K = \frac{1}{0.20} = \frac{100}{20} = 5$$

Q 8. If the value of marginal propensity to save is 0.25, calculate the value of multiplier?

Sol. We know that $K = \frac{1}{MPS}$

$$K = \frac{1}{0.25} = \frac{100}{25} = 4$$

Q 9. In an economy, investment increases by ₹ 10 crore and as a result income increases by ₹ 50 crore, what is the value of multiplier?

Sol. Increase in Investment (ΔI) = ₹ 10 crore

Increase in Income (ΔY) = ₹ 50 crore

We know that $K = \frac{\Delta Y}{\Delta I}$

$$K = \frac{50}{10} = 5$$

Q 10. If the value of multiplier is 4, what will be the MPC and MPS?

Sol. We know that $K = \frac{1}{MPS}$

$$MPS = \frac{1}{4} = 0.25$$

Also, MPC + MPS = 1

Therefore, MPC = 1 – 0.25 = 0.75

Q 11. If MPC : MPS = 1 : 1. Find investment multiplier.

Sol. Suppose, $MPC = \frac{1}{2}$ and $MPS = \frac{1}{2}$

We know that $K = \frac{1}{MPS} = \frac{1}{\left(\frac{1}{2}\right)} = \frac{2}{1}$, K =2

Q 12. If the value of multiplier is 4, what will be the effect on income of an economy if investment increases by ₹ 100 crore?

Sol. Investment increases by ₹ 100 crore.

Increase in income = ?

We know that, $K = \frac{\Delta Y}{\Delta I}$

$$4 = \frac{\Delta Y}{100}$$

$$4 \times 100 = \Delta Y$$

Increase in income (ΔY) = ₹ 400 crore

Q 13. What will be the effect on the income of an economy if there is a decrease in investment by ₹ 50 crore provided the value of the multiplier is 5?

Sol. Decrease in Investment (ΔI) = ₹ 50 crore

Decrease in National Income (ΔY) = ?

We know that, $K = \frac{\Delta Y}{\Delta I}$

$$5 = \frac{\Delta Y}{50}$$

$$5 \times 50 = \Delta Y$$

Decrease in National Income = ₹ 250 crore

Q 14. Derive the multiplier when the MPS is: (i) 0.10 (ii) 0.20. Using these multiplier values, find the change in the equilibrium level of income that results from ₹ 20 crore decrease in investment.

Sol. (i) $K = \frac{1}{MPS} = \frac{1}{0.10} = \frac{100}{10} = 10$ and $K = \frac{\Delta Y}{\Delta I}$

$$10 = \frac{\Delta Y}{20}$$

$$10 \times 20 = \Delta Y$$

Decrease in Income (ΔY) = ₹ 200 crore

(ii) $K = \frac{1}{MPS} = \frac{1}{0.20} = \frac{100}{20} = 5$

and $K = \frac{\Delta Y}{\Delta I}$

$$5 = \frac{\Delta Y}{20}$$

$$5 \times 20 = \Delta Y$$

Decrease in Income (ΔY) = ₹ 100 crore

Q 15. For a hypothetical economy, the government incurs an investment expenditure of ₹ 1,000 crore. If the value of Marginal Propensity to Save (MPS) falls from 0.25 to 0.10. Calculate the value of increase in income due to change in the value of Marginal Propensity to Save (MPS). *(CBSE SQP 2023-24)*

Sol. Given (ΔI)= ₹ 1,000 crore. MPS = 0.25 to 0.10

Multiplier (K) $= \frac{1}{MPS}$

Using the given information, the initial MPS = 0.25 and the new MPS = 0.10

Therefore, the initial multiplier is:

$$K = \frac{1}{0.25} = 4$$

And the new multiplier is

$$K = \frac{1}{0.10} = 10$$

To increase in income due to the change in MPS can be calculated using the following formula:

Change in Income = K × Δ I

Substituting the value, we get:

Change in Income = (10 – 4) = 6 × 1,000

= ₹ 6,000 crore

Therefore, the increase in income due to the change in MPS is ₹ 6,000 crore.

Q 16. If saving out of an income of ₹ 5,000 are ₹ 500, what is the average propensity to save?

Sol.

Y (₹)	S (₹)
5,000	500

$$APS = \frac{S}{Y} = \frac{500}{5,000} = \frac{1}{10} = 0.10$$

Q 17. If the disposable income is ₹ 1,000 and consumption expenditure is ₹ 750, find out Average Propensity to Save (APS).

Sol.

Y (₹)	C (₹)	S (₹) (Y – C)
1,000	750	250

$$APS = \frac{S}{Y} = \frac{250}{1,000} = 0.25$$

Q 18. If the disposable income is ₹ 500 and savings are ₹ 100, find out Average Propensity to Consume (APC)?

Sol.

Income (₹) (Y)	Savings (₹) (S)	Consumption (₹) (Y – S)
500	100	500 – 100 = 400

$$APC = \frac{C}{Y} = \frac{400}{500} = 0.80$$

Q 19. When disposable income rises from ₹ 1,000 to ₹ 1,100 savings rises by ₹ 30. Find out marginal propensity to save and marginal propensity to consume.

Sol. $\Delta Y = 1{,}100 - 1{,}000 = ₹\ 100$

$\Delta S = ₹\ 30$

$$MPS = \frac{\Delta S}{\Delta Y} = \frac{30}{100} = 0.30$$

and $MPC + MPS = 1$

$MPC = 1 - MPS$

$MPC = 1 - 0.30 = 0.70$

Q 20. Explain the components of the equation: C = 20 + 0.90Y and construct a schedule for consumption where income is ₹ 200, ₹ 250, ₹ 300, ₹ 350. Calculate APC and show that there is an inverse relationship between income and APC.

Sol. $C = 20 + 0.90Y$

C = Consumption

20 = Autonomous Consumption

0.90 = Marginal Propensity to Consume

Y = National Income

Schedule

Income (Y) (₹)	$C = 20 + 0.90Y$	$APC = \frac{C}{Y}$
200	$20 + 0.90 \times 200 = 200$	$\frac{200}{200} = 1$
250	$20 + 0.90 \times 250 = 245$	$\frac{245}{250} = 0.98$
300	$20 + 0.90 \times 300 = 290$	$\frac{290}{300} = 0.96$
350	$20 + 0.90 \times 350 = 335$	$\frac{335}{350} = 0.95$

Clearly, as income increases from ₹ 200 to ₹ 250 and ₹ 300 to ₹ 350 respectively, APC falls as 1, 0.98, 0.96, 0.95. Hence, there is an inverse relationship between income and APC.

Q 21. The saving function is S = −20 + 0.10Y. The value of income is given as 100, 200, 300, 400 and 500. With the help of saving schedule show that there is a positive relation between income and APS.

Sol. **Schedule**

Income (Y)	$S = -20 + 0.10Y$	$APS = \frac{S}{Y}$
100	$-20 + 0.10 \times 100 = -10$	$\frac{-10}{100} = -0.10$
200	$-20 + 0.10 \times 200 = 0$	$\frac{0}{200} = 0$
300	$-20 + 0.10 \times 300 = 10$	$\frac{10}{300} = 0.03$
400	$-20 + 0.10 \times 400 = 20$	$\frac{20}{400} = 0.05$
500	$-20 + 0.10 \times 500 = 30$	$\frac{30}{500} = 0.06$

Clearly as income increases from 100 to 200, 300, 400 and ₹ 500, respectively. The value of APS also increases as −0.10, 0, 0.03, 0.05 and 0.06. Hence, there is a direct or positive relation between income and APS.

Q 22. If an economy plans to increase its income by ₹ 2,000 crore and the Marginal Propensity to Consume is 75%. Estimate the increase in investment required to achieve the targeted increase in income.

(CBSE SQP 2022-23)

Sol. Given, $MPC = 0.75$, $\Delta Y = ₹\ 2{,}000$ crore

$$K = \frac{1}{1 - MPC} = \frac{1}{1 - .75} = \frac{1}{.25} = 4$$

$$K = \frac{\Delta Y}{\Delta I} = 4 = \frac{2{,}000}{\Delta I}$$

$$\Delta I = \frac{2{,}000}{4} = ₹\ 500 \text{ crore}$$

Therefore, increase in investment (ΔI) required = ₹ 500 crore.

Q 23. Suppose the consumption equals: C = 40 + 0.75Y, investment equals: I = ₹ 60 and Y = C + I

Find: (i) the equilibrium level of income,

(ii) the level of consumption at equilibrium and

(iii) the level of saving at equilibrium.

Sol. (i) Equilibrium level of income: $C + I = Y$

$40 + 0.75Y + 60 = Y$

$100 = Y - 0.75Y$

$100 = 0.25Y$

$$\frac{100}{0.25} = Y$$

$$\frac{100 \times 100}{25} = Y$$

$Y = ₹\ 400$

(ii) $C = 40 + 0.75Y$ and $Y = ₹\ 400$

$C = 40 + 0.75(400) = ₹\ 340$

(iii) Saving = Income − Consumption

$= 400 - 340 = ₹\ 60$

Q 24. In a two sector economy, the saving and investment functions are:

S = −10 + 0.2Y

I = − 3 + 0.1Y

What will be the equilibrium level of income?

Sol. At equilibrium, Planned Savings = Planned Investments

$\therefore \quad S = I$

$$-10 + 0.2Y = -3 + 0.1Y$$
$$0.2Y - 0.1Y = -3 + 10$$
$$0.1Y = 7$$
$$Y = \frac{7}{0.1} = \frac{7 \times 10}{1} = ₹\ 70$$

Q 25. In a two sector economy, the consumption and investment functions are as follows:
$Y = C + I$, $C = 50 + 0.8Y$, $I = ₹\ 50$
Find: (i) the equilibrium level of income,
(ii) the level of consumption at equilibrium and
(iii) the level of saving at equilibrium.

Sol. (i) At Equilibrium: $C + I = Y$
$$50 + 0.80Y + 50 = Y$$
$$100 = Y - 0.80Y$$
$$100 = 0.20Y$$
$$\frac{100}{0.20} = Y$$
$$\frac{100 \times 100}{20} = Y$$
$$Y = ₹\ 500$$
(ii) $C = 50 + 0.80Y$ and $Y = ₹\ 500$
$C = 50 + 0.80 \times 500$
$C = 50 + 400$
$C = ₹\ 450$
(iii) Saving $= Y - C$
$= 500 - 450 = ₹\ 50$

Q 26. An economy is in equilibrium. Find investment expenditure. *(CBSE 2016)*

(i) National Income	**₹ 1,000**
(ii) Autonomous consumption	**₹ 100**
(iii) Marginal propensity to consume	**0.80**

Sol. We know that, $C = a + (MPC)Y$
$C = 100 + (MPC)Y$
At equilibrium, $C + I = Y$
$$100 + (0.80)\ 1,000 + I = 1,000$$
$$100 + 800 + I = 1,000$$
$$900 + I = 1,000$$
$$I = 1,000 - 900$$
$$I = ₹\ 100$$
Note: Consumption Equation $(C) = a + bY$
C = Consumption, a = Autonomous Consumption, b = MPC

Q 27. An economy is in equilibrium. Calculate marginal propensity to consume. *(CBSE 2016)*

(i) National Income	**₹ 1,000**
(ii) Autonomous consumption	**₹ 200**
(iii) Investment expenditure	**₹ 100**

Sol. We know that, $C = a + b.Y$, $b = MPC$
$C = 200 + (MPC)\ 1,000$
At equilibrium, $C + I = Y$
$200 + (MPC)1,000 + 100 = 1,000$
$$(MPC)\ 1,000 + 300 = 1,000$$
$$(MPC)\ 1,000 = 1,000 - 300$$
$$(MPC)\ 1,000 = 700$$
$$(MPC) = \frac{700}{1,000} = 0.70$$

Q 28. In an economy, 20% of increase in income was saved. How much will be the increase in income, if investment increases by ₹ 10,000? *(CBSE 2015)*

Sol. Clearly, the value of MPS $= 20\% = \frac{20}{100} = 0.20$

Investment Multiplier $(K) = \frac{1}{MPS} = \frac{1}{0.20} = \frac{100}{20} = 5$

Also, $K = \frac{\Delta Y}{\Delta I}$

$$5 = \frac{\Delta Y}{10,000}$$

Increase in income $(\Delta Y) = ₹\ 50,000$

Q 29. In an economy, everytime income rises, 75% of the rise in income is spent on consumption. Now suppose in the same economy investment rises by ₹750 crore, calculate the following:
(i) Investment multiplier
(ii) Change in consumption

Sol. (i) Clearly, the value of MPC = 75% $= \frac{75}{100} = 0.75$

Investment Multiplier $(K) = \frac{1}{1 - MPC}$

$$= \frac{1}{1 - 0.75} = \frac{1}{0.25} = \frac{100}{25} = 4$$

Also, $K = \frac{\Delta Y}{\Delta I}$

$$4 = \frac{\Delta Y}{750}$$

$\Delta Y = 750 \times 4 = ₹\ 3,000$ crore
(ii) $\Delta S = \Delta Y - \Delta C$
$\Delta S = 3,000 - 2,250$
$\Delta S = ₹\ 750$ crore
$$MPC = \frac{\Delta C}{\Delta Y}$$
$$0.75 = \frac{\Delta C}{3,000}$$
$$\Delta C = 3,000 \times \frac{75}{100} = ₹\ 2,250 \text{ crore.}$$

Q 30. If in an economy: *(CBSE 2019)*
Change in Initial Investment (ΔI) = ₹ 500 crore
Marginal Propensity to Save (MPS) = 0.2
Find the values of the following:
(i) Investment Multiplier (K)
(ii) Change in Final Income (Y)

Sol. (i) Given, $\Delta I = ₹\ 500$ crore

and $MPS = 0.2$

$$K = \frac{1}{MPS} = \frac{1}{0.2} = 5$$

(ii) Also, $K = \frac{\Delta Y}{\Delta I} \Rightarrow 5 = \frac{\Delta Y}{₹500}$

$\therefore$ $\Delta Y = ₹\ 500 \times 5 = ₹\ 2,500$ crore

Q 31. Calculate equilibrium level of income for a hypothetical economy, for which it is given that :

(i) Autonomous Investment = ₹ 500 crore

(ii) Consumption Function, C = 100 + 0.80 Y

(CBSE SQP 2022, Term-2)

Sol. At equilibrium: $C + I = Y$

$100 + 0.80\ Y + 500 = Y$

$600 = Y - 0.80\ Y$

$600 = 0.20Y,\ Y = \frac{600}{0.20}$ $Y = ₹\ 3,000$ crore

Q 32. Calculate change in Income (ΔY) for a hypothetical economy. Given that:

(i) Marginal Propensity to Consume (MPC) = 0.8

(ii) Change in Investment (ΔI) = ₹ 1000 crore

(CBSE SQP 2022, Term-2)

Sol.

$$K = \frac{\Delta Y}{\Delta I} \text{ or } \frac{1}{1 - MPC}$$

$$= \frac{1}{1-0.8} = \frac{10}{0.2} = 5$$

$K = 5$, or $5 = \frac{\Delta Y}{1000} = \Delta Y = 5 \times 1,000 = ₹\ 5,000$ crore

Q 33. On the basis of following schedule, answer the given questions:

Income (in crore)	0	50	100	150	200
Savings (in crore)	–20	–10	0	30	60

(i) Calculate Marginal Propensity to Save (MPS) at ₹ 150 crore level of income.

(ii) What is the value of Autonomous Consumption?

(CBSE 2022, Term-2)

Sol. (i) $MPS = \frac{\Delta S}{\Delta Y} = \frac{30-0}{150-100} = \frac{30}{50} = 0.6$

(ii) We know that, the consumption at zero level of Income is known as autonomous consumption.

So, at zero level of Income

$S = -20$

$C = Y - S$

$C = 0 - (-20)$

$C = ₹\ 20$ crore

Q 34. In an economy 75 % of the increase in income is spent on consumption. Investment increased by ₹ 1,000 crore.

Calculate the total increase in income on the basis of given information. *(CBSE 2022, Term-2)*

Sol. 75 % of the increase in income is spent on consumption

$\therefore$ $MPC = \frac{\Delta C}{\Delta Y} = \frac{75}{100} = 0.75$

$$\text{Multiplier}(K) = \frac{1}{1-MPC} = \frac{1}{1-0.75} = \frac{1}{0.25} = 4$$

We know $K = \frac{\Delta Y}{\Delta I} = \Delta Y = K \times \Delta I$

$\Delta Y = 4 \times 1,000 = ₹\ 4,000$ crore

Q 35. For a hypothetical economy, assuming there is an increase in the Marginal Propensity to Consume (MPC) from 75% to 90% and change in investment to be ₹ 1,000 crore.

Using the concept of investment multiplier, calculate the increase in income due to change in Marginal Propensity to Consume (MPC). *(CBSE 2023)*

Sol. Given that,

MPC = 75% to 90%

Change in investment (ΔI) = ₹ 1, 000 crore

Multiplier (K) = 1 / (1 – MPC)

Using the given information, the initial MPC is 0.75 and the new MPC is 0.90

Therefore, the initial multiplier is:

$$K = \frac{1}{1-.75} = \frac{1}{.25} = 4$$

And the new multiplier is :

$$K = \frac{1}{1-.90} = \frac{1}{.10} = 10$$

The increase in income due to the change in MPC can be calculated using the following formula:

Change in Income = $K \times \Delta I$

Substituting the values, we get

Change in income = $(10 - 4) = 6 \times 1,000$

$= ₹\ 6,000$ crore

Therefore, the increase in income due to the change in MPC is ₹ 6,000 crore.

Chapter Test

Multiple Choice Questions

Q 1. According to the theory of Keynesian Economics, the value of average propensity to consume can never be .....

a. zero
b. more than one
c. unity
d. less than one

Q 2. If MPC = 1, the value of multiplier is:

a. 0
b. 1
c. between 0 and 1
d. infinity

Fill in the Blank Type Questions

Q 3. Bank rate is ....., to control credit in the economy.

(Choose the correct alternative to fill up the blank)

a. fiscal measure
b. monetary measure
c. repo rate
d. cash reserve ratio

Q 4. In a competitive market ..... will fall as a result of deficiency in demand.

(Choose the correct alternative to fill up the blank)

a. demand
b. production
c. prices
d. output

True/False Type Questions

Q 5. Fiscal policy is also called Budgetary policy.

Q 6. If workers' unions are strong wage rates will fall.

Match the Column Type Question

Q 7. Which of the given pair is correctly matched?

Column I	Column II
A. Income is zero	1. Consumption is zero
B. MPC + MPS	2. Zero
C. APC + APS	3. two
D. Propensity to save	4. The ratio of saving to income

a. A-1
b. B-2
c. C-3
d. D-4

Assertion and Reason Type Question

Q 8. *There are two statements marked as Assertion (A) and Reason (R). Read the statements and choose the appropriate option from the options given below:*

Assertion (A): Saving functions depicts linear relationship when MPS is found to be constant.

Reason (R): A linear saving function is a straight line savings function. The slope of straight line is constant as indicated by constant MPS.

a. Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
b. Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).
c. Assertion (A) is true, but Reason (R) is false.
d. Assertion (A) is false, but Reason (R) is true.

Case Study Based Questions

Q 9. Read the extract given below and answer the questions on the basis of the same:

In an economy, the Aggregate Demand is determined by consumption, government expenditure and net exports in the economy. This is affected by the savings and investment in the economy. The multiplier, that is investment multiplier, which is influenced by the ratio of total consumption and total income, regulates the flow of money in the economy influencing the Aggregate Demand and Supply. Any change in any of the factors leads to a big change in the economy's equilibrium as a whole. It is to be kept in mind that the economy needs to be in equilibrium condition. When savings is less than the investments the aggregate demand is more than the aggregate supply and *vice-versa*.

(i) Aggregate Demand is not determined by which of the following?

a. Consumption Expenditure
b. Investment Expenditure
c. Net Exports
d. Government Policies

(ii) Saving and Investment affect the .....

a. aggregate demand and supply
b. government policies
c. government budget
d. None of the above

(iii) Investment Multiplier is the ratio of change in ..... and .....

a. Income, Investment
b. savings, Income
c. investment, consumption
d. savings, Investment

(iv) What happens when the investment is lesser than savings?

a. AD is more than the AS.
b. AD is less than the AS.
c. AD is equal to the AS.
d. AD is independent of AS.

Q 10. **Read the extract given below and answer the questions on the basis of the same:**

When, at a particular price level, aggregate demand for final goods equals aggregate supply of final goods the final goods or product market reaches its equilibrium. Aggregate demand for final goods consists of ex-ante consumption, ex-ante investment, government spending, etc. The rate of increase in ex-ante consumption due to a unit increment in income is called marginal propensity to consume. For simplicity, we assume a constant final goods price and constant rate of interest over short-run to determine the level of aggregate demand for final goods in the economy. We also assume that the aggregate supply is perfectly elastic at this price. Under such circumstances, aggregate output is determined solely by the level of aggregate demand. This is known as Effective Demand principle. An increase (or decrease) in autonomous spending causes aggregate output of final goods to increase (or decrease) by a larger amount through the multiplier process.

(i) **What is the circumstance when aggregate output is determined solely by the level of aggregate demand called?**

(ii) **When will there be equilibrium level of National Income?**

Very Short Answer Type Questions

Q 11. **Explain the components of Aggregate Supply.**

Q 12. **Explain the concept of Autonomous Consumption.**

Short Answer Type-I Question

Q 13. **Explain any two components of Aggregate Demand.**

Short Answer Type-II Question

Q 14. **The value of Marginal Propensity to consume is double the value of Marginal Propensity to Save. Find the value of Multiplier?**

Long Answer Type Question

Q 15. **Explain the quantitative measures to correct excess demand.**

Numerical Type Question

Q 16. **From the following data about an economy, calculate its equilibrium level of income.**

Marginal propensity to consume = 0.75

Autonomous consumption = ₹ 200

Investment = ₹ 6,000