Determination Of Income And Employment

1. Read the following statements carefully : (2024)

Statement 1: If in an economy the level of income increases (△Y), it will always proportionately increase the level of consumption (△C).

Statement 2: Marginal Propensity to Consume (MPC) and Marginal Propensity to Save (MPS) are always equal to each other.

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

(A) Statement 1 is true and Statement 2 is false.

(B) Statement 1 is false and Statement 2 is true.

(C) Both Statements 1 and 2 are true.

(D) Both Statements 1 and 2 are false.

Ans. (D) Both Statements 1 and 2 are false.

2. Read the following statements - Assertion (A) and Reason (R). Choose the correct alternative given below : (2024)

Assertion (A) : Full employment situation refers to absence of involuntary unemployment.

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

Alternatives :

(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 notthe 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.

Ans. (A) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).

3. Total consumption expenditure by households under Keynesian Economics is a combination of _____ and _____. (2024)

(Choose the correct alternative to fill in the blanks)

(A) Autonomous Consumption, Autonomous Investments

(B) Autonomous Investments, Induced Consumption

(C) Induced Investments, Autonomous Investments

(D) Autonomous Consumption, Induced Consumption

Ans. (D) Autonomous Consumption, Induced Consumption

4. Complete the following table. Construct/Express the Consumption function at ₹ 200 crore level of income. (2024)

Income (Y) (in ₹ crore)	Savings (in ₹ crore)	Average Propensity to Consume (APC)	Marginal Propensity to Save (MPS)
0	(–) 30	–	–
100	.....	1	.....
200	.....	0·85	.....
300	.....	0·8	.....

Ans.

Income (Y) (in ₹ crore)	Savings (in ₹ crore)	Average Propensity to Consume (APC)	Marginal Propensity to Save (MPS)
0	(–) 30	–	–
100	0	1	0.3
200	30	0·85	0.3
300	60	0·8	0.3

Consumption function, $C = \bar{c} + bY$

$C = 30 + 0.7Y$

(Alternate answer for which marks may be awarded - Consumption at ₹ 200 crore level of income = ₹ 170)

Working Note:

At an income level of ₹ 200 crore, Marginal Propensity to Save (MPS) = 0.3 and Marginal Propensity to Consume (MPC) = 1- MPS

⇒ 1 - 0.3 = 0.7

5. "In an economy, ex-ante Aggregate Supply is less than ex-ante Aggregate Demand."

Explain its impact on the level of output, income and employment. (2024)

Ans. In an economy, if ex-ante Aggregate Supply is less than ex-ante Aggregate Demand, it implies that households are planning to consume more than what the firms expected them to. This will lead to an unintended fall in inventories. To restore the desired level of inventories, producers may plan to expand production. As a result, there may be an increase in the level of output, employment and income in the economy.

Previous Years' CBSE Board Questions

4.1 Aggregate Demand and its Components

MCQ

1. 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 starts from point of origin with positive slope.
In the light of the given statements, choose the correct alternative from the following:
(a) Statement I is true but statement II is false.
(b) Statement I is false but statement II is true.
(c) Both statements I and II are true.
(d) Both statements I and II are false. *(2023)*

2. Aggregate Demand can be increased by :
(a) increasing Bank Rate
(b) selling government securities by Reserve Bank of India
(c) increasing Cash Reserve Ratio
(d) none of the above. *(Delhi 2017)*

VSA (1 mark)

3. Effective demand is defined as _____. *(2020)*

4. Justify the following statement with valid reason.
"Ex-ante Aggregate Demand is always equal to Ex-ante Aggregate Supply." *(2020)*

5. Define Aggregate Supply. *(2018)* R

6. What is 'Aggregate Demand' in macro-economics? *(AI 2015)*

SA II (4 marks)

7. State and discuss the components of Aggregate Demand in a two sector economy. *(2019)* R

8. Discuss the working of the adjustment mechanism in the following situation.
(a) Aggregate Demand is greater than Aggregate Supply.
(b) Ex-Ante Investments are lesser than Ex-Ante Savings. *(2019)*

9. Distinguish between Aggregate Demand and Aggregate Supply. *(Delhi 2014 C)*

4.2 Propensity to Consume and Propensity to Save

MCQ

10. Read the following statements : Assertion (A) and Reason (R). Choose the correct alternative given below.
Assertion (A) : Rich people have lower Marginal Propensity to Consume (MPC) as compared to poor people.
Reason (R) : Consumption curve makes an intercept on the y-axis at a point above the origin.
(a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true, but R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true. *(2023)*

11. If the Marginal Propensity to Save (MPS) is 0.5, what will be the value of investment multiplier?
(a) 1 (b) 2 (c) 1.6 (d) 1.45 *(2023)*

12. An increase in National Income occurs by ₹ 3,000 crore, as investments increases by ₹ 1200 crore. The value of investment multiplier would be
(a) 2 (b) 2.5 (c) 4 (d) 5. *(2023)*

13. According to the theory of Keynesian Economic, the value of Average Propensity to Consume can never be _____.
(a) Zero (b) Unity
(c) More than one (d) Less than one *(2020)*

14. Suppose in a hypothetical economy, the income rises from ₹ 5,000 Crore to ₹ 6,000 Crore. As a result, the consumption rises from ₹ 4,000 Crore to ₹ 4,600 Crore. Marginal Propensity to Consume in such a case would be _____.
(a) 0.8 (b) 0.4 (c) 0.2 (d) 0.6 *(2019)*

VSA (1/2 mark)

15. Estimate the value of ex-ante Aggregate Demand (AD), if autonomous investment and consumption expenditure (A) is ₹ 50 crore, Marginal Propensity to Save (MPS) is 0.2 and level of income is ₹ 300 crore. *(Term-II, 2021-22 C)*

16. "In an economy, the autonomous consumption ($\bar{C}$) is ₹100 and Marginal Propensity to Consume (MPC) is 0.6. If the equilibrium level of Income is 2,000 then the autonomus investment is ₹ 300".
Justify the statement with valid calculation. *(Term-II, 2021-22)*

17. An economy is in equilibrium, calculate the Marginal Propensity to Save (MPS) from the following :
(i) National income = ₹ 4,400
(ii) Autonomous consumption ($\bar{C}$) = ₹ 1,000
(iii) Investment expenditure (I) = ₹ 70 *(Term-II, 2021-22)*

18. 'Consumption function curve of an involuntary unemployed workers start from some positive level on Y-axis even at zero level of Income'.
Justify the given statement. *(Term-II, 2021-22)*

19. Define Marginal Propensity to Consume. *(Delhi 2014)*

SA I (3 marks)

20. Distinguish between Marginal Propensity to Consume and Average Propensity to Consume. Give a numerical example. *(Delhi 2016)*

21. In an economy, investment is increased by ₹300 crore. If Marginal Propensity to Consume is 2/3, calculate increase in national income. *(Delhi 2016)*

22. In an economy, an increase in investment by ₹ 100 crore led to 'increase' in national income by ₹1000 crore. Find Marginal Propensity to Consume. *(Delhi 2016)*

23. An economy is in equilibrium. Calculate Marginal Propensity to Consume.

National income	= ₹ 1000
Autonomous consumption expenditure	= ₹ 200
Investment expenditure	= ₹ 100 *(AI 2016)*

24. What is the relationship between :
    (i) Average Propensity to Consume and Average Propensity to Save?
    (ii) Marginal Propensity to Consume and Investment Multiplier? *(Delhi 2015 C)*

25. What is the relationship between :
    (i) Marginal Propensity to Save and Marginal Propensity to Consume?
    (ii) Marginal Propensity to Save and Investment Multiplier? *(Delhi 2015 C)*

26. Which of the following cannot have a negative value? Give reasons.
    (a) Average Propensity to Save
    (b) Marginal Propensity to Save *(AI 2015 C)* An

27. In an economy, investment increases from 300 to 500. As a result of this, equilibrium level of income increases by 2000. Calculate the Marginal Propensity to Consume. *(AI 2015 C)*

28. Give the meaning of Average Propensity to Save. What is its relation with Average Propensity to Consume ? (Delhi 2014 C)

29. Explain the meaning of Average Propensity to Consume. What is its relation with Average Propensity to Save ? (AI 2014 C)

SA II (4 marks)

30. ""In an economy, an increase in investment leads to doubling of the national income."
Calculate the Marginal Propensity to Consume (MPC) for the given economy. *(2023)*

31. An economy is in equilibrium. Find Marginal Propensity to Consume from the following.

National Income	= ₹ 2000
Autonomous Consumption	= ₹ 400
Investment Expenditure	= ₹ 200 *(Delhi 2015)*

32. An economy is in equilibrium. Calculate the Marginal Propensity to Save from the following .

National income	= ₹ 1000
Autonomous consumption	= ₹ 100
Investment expenditure	= ₹ 120 *(AI 2015)*

33. Calculate Marginal Propensity to Consume from the following data about an economy which is in equilibrium :

National income	= ₹ 1500
Autonomous consumption expenditure	= ₹ 300
Investment expenditure	= ₹ 300 *(Delhi 2014)*

34. Calculate Marginal Propensity to Consume from the following data about an economy which is in equilibrium :

National income	= ₹ 3000
Autonomous consumption expenditure	= ₹ 200
Investment expenditure	= ₹100 *(AI 2014)*

4.3 Short Run Equilibrium Output; Investment Multiplier and its Mechanism

MCQ

35. Read the following statements carefully.
Statement-I : Investment is defined as addition to the physical capital and changes in the inventory.
Statement-II : At equilibrium level of income, ex-post investments and ex-post savings are always equal.
In the light of the given statements, choose the correct alternative from the following:
    (a) Statement-I is true but statement-II is false.
    (b) Statement-I is false but statement-II is true.
    (c) Both statements I and II are true.
    (d) Both statements I and II are false. *(2023)*

36. If in an economy, the Investment Multiplier is 4 and Autonomous Consumption is ₹ 30 crore, the relevant consumption function would be ____.
    (a) C = 30 + 0.75 Y (b) C = (–)30 + 0.25 Y
    (c) C = 30 + 0.25 Y (d) C = (–)30 – 0.25 Y *(2023)*

37. If increase in National Income is equal to increase in Savings, the value of Marginal Propensity to Consume would be _____.
    (a) equal to unity (b) greater than one
    (c) less than one (d) equal to zero *(2023)*

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

39. If MPC = 1, the value of multiplier is :
    (a) 0 (b) 1
    (c) Between 0 and 1 (d) Infinity *(AI 2015)*

VSA (2 marks)

40. In an economy, 75 per cent 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 *(Term-II, 2021-22)*

41. 'Investment multiplier and Marginal Propensity to Consume are directly related to each other.'
Explain with the help of a numerical example.
(Term-II, 2021-22)

SA I (3 marks)

42. If in an economy:
Change in initial Investments (ΔI) = ₹ 500 Crore
Marginal Propensity to Save (MPS) = 0.2
Find the values of the following :
(a) Investment multiplier (k)
(b) Change in final income (ΔY) *(2019)*

43. Define investment multiplier. How is it related to Marginal Propensity to Consume? *(2018)*

44. An economy is in equilibrium. Find investment expenditure.
National income = ₹ 1200
Autonomous consumption expenditure = ₹ 150
Marginal Propensity to Consume = ₹ 0.8 *(AI 2016)*

45. An economy is in equilibrium. Find investment expenditure.
National income = ₹ 1000
Autonomous consumption = ₹ 100
Marginal Propensity to Consume = ₹ 0.8
(AI 2016) Ap

46. S = – 100 + 0.2 Y is the saving function in an economy. Investment expenditure is 5000. Calculate the equilibrium level of income. *(Delhi 2015 C)*

47. Calculate the equilibrium level of income in the economy.
C = 500 + (0.9) Y
Investment expenditure = 3000 *(Delhi 2015 C)*

48. In an economy autonomous consumption is 500, Marginal Propensity to Save is 0.2 and investment expenditure is 2000. Calculate the equilibrium level of income. *(AI 2015 C)*

49. In an economy 20 percent of increased income is saved. How much will be the increase in income if investment increases by 10,000? Calculate. *(AI 2015 C)*

50. In an economy planned spending is greater than planned output. Explain all the changes that will take place in the economy. *(AI 2015 C, AI 2014 C)*

51. Explain the meaning of investment multiplier. What can be its minimum and maximum value ?
(Delhi 2014 C)

52. The value of Marginal Propensity to Consume is double the value of Marginal Propensity to Save. Find the value of multiplier. *(AI 2014 C)* U

53. From the following data about an economy, calculate its equilibrium level of income :
(i) Marginal Propensity to Consume = ₹ 0.8
(ii) Investment = ₹ 5000
(iii) Autonomous consumption = ₹ 500
(Delhi 2014 C)

SA II (4 marks)

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

55. What are two alternative ways of determining equilibrium level of income? How are these related?
(2018) R

56. What is ex-ante consumption? Distinguish between autonomous consumption and induced consumption.
(2018)

57. An economy is in equilibrium. From the following data about an economy, calculate autonomous consumption.
(i) Income = 5000
(ii) Marginal Propensity to Save = 0.2
(iii) Investment expenditure = 800 *(Delhi 2017)*

58. An economy is in equilibrium. Calculate national income from the following :
Autonomous consumption = ₹ 100
Marginal Propensity to Save = ₹ 0.2
Investment expenditure = ₹ 200
(Delhi 2015)

59. An economy is in equilibrium. Find 'autonomous consumption' from the following:
National income = ₹ 1000
Marginal Propensity to Consume = ₹ 0.8
Investment expenditure = ₹ 100
(Delhi 2015) Ap

60. An economy is in equilibrium. Calculate the investment expenditure from the following :
National income = ₹ 800
Marginal Propensity to Save = ₹ 0.3
Autonomous consumption = ₹ 100 *(AI 2015)*

LA (5/6 marks)

61. In an economy, if initial investments are increased by ₹ 100 Crore, discuss the working of investment multiplier presuming Marginal Propensity to Consume is 0.8. *(2020)*

62. Assuming that increase in investment is ₹ 1000 Crore and Marginal Propensity to Consume is 0.9, explain the working of multiplier. *(Delhi 2017)*

63. (a) Distinguish between autonomous investment and induced investment.

(b) On the basis of the following information about an economy, calculate its equilibrium level of income :
(i) Autonomous consumption = ₹ 100
(ii) Marginal Propensity to Consume = 0.75
(iii) Investment = ₹ 5000
(Delhi 2014 C)

64. (a) Explain the distinction between ex-ante measures and ex-post measures.
(b) From the following data about an economy, calculate its equilibrium level of income :
(i) Autonomous consumption = ₹ 200
(ii) Marginal Propensity to Consume = ₹ 0.9
(iii) Investment = ₹ 1000
(AI 2014 C)

4.4 Meaning of Full Employment and Involuntary Unemployment

MCQ

65. Read the following statements : Assertion (A) and Reason (R). Choose the correct alternative given below:
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.
(a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true, but R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true. *(2023)*

VSA (1 mark)

66. State whether the following statement is true or false: "As per Keynesian theory in an economy, full employment can never exist." *(2020)*

67. Give meaning of full employment.
(Delhi 2014, AI 2014)

68. What is involuntary unemployment ? *(Delhi 2014)*

SA II (4 marks)

69. Define full employment in an economy. Discuss the situation when aggregate demand is more than aggregate supply at full employment income level. *(2018)*

4.5 Problem of Excess Demand and Deficient Demand

MCQ

70. Read the following statements : Assertion (A) and Reason (R). Choose the correct alternative given below:
Assertion (A) : Excess demand does not lead to any increase in the level of real output.
Reason (R) : Excess demand creates a gap between actual demand and desired demand corresponding to full employment level.
(a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true, but R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true. *(2023)*

VSA (1/2 mark)

71. 'Excess demand creates greater opportunities of employment in the economy'. Defend or refute the given statement with valid explanation.
(Term-II, 2021-22)

72. Define the inflationary gap. *(AI 2014)*

73. Define deflationary gap. *(AI 2014)*

74. What is 'Excess Demand' in macroeconomics?
(AI 2014)

SA I (3 marks)

75. In an economy, if there is a fall in Bank Rate, how would it affect the demand for credit? Explain.
(Term-II, 2021-22 C)

76. Explain the meaning of deflationary gap with the help of a diagram. (AI 2015 C)

SA II (4 marks)

77. Discuss briefly, how the government can control the situation of deflation using the following:
(a) Taxation policy
(b) Government Expenditure Policy *(2023)*

78. **Read the following text carefully and answer the following questions:**

Government of India announced a lockdown for all the economic and non-economic activities (except emergency ones and selected essential ones) to fight this scare caused by COVID-19 pandemic. This has caused:
- A massive wave of involuntary unemployment particularly in the unorganised and informal sector.
- Fall in demand of a large number of goods and services.
- Shortage of supply of essentials (specific to health and household) and a lot more.

To overcome the situation of lack of consumption demand in the market period, The government is expected to continue its consumption and investment expenditure. These types of government expenditures are expected to push the disposable income of the common man. To ensure a rise in consumption and investment expenditure of the household sector.

The Reserve Bank of India's survey for the month of July 2020 indicates that consumer confidence fell to an all-time low. a majority of respondent's reporting pessimism relating to employment, inflation and income. *(2021 C)*

(a) State; whether the following statement is true or false:
"Involuntary unemployment was the outcome of lockdown in India".

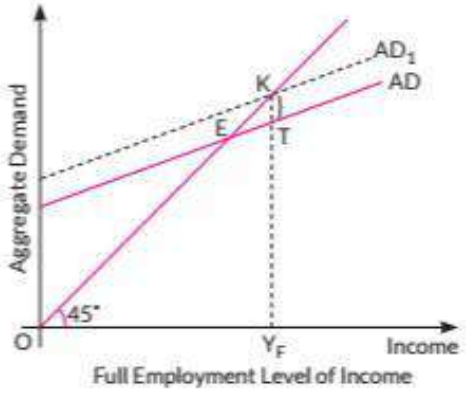
(b) _____ in government expenditure may reduce the deflationary gap.

(c) Private consumption expenditure is directly related to _____ (income / savings) of the households.

(d) Identify the correct statement from the following:
(i) Under the situation of inflationary gap, Aggregate Demand exceeds Aggregate Supply, at full employment level of income.
(ii) Under the situation of inflationary gap, Aggregate Demand falls short of Aggregate Supply, at full employment level of output.

79. State the meaning of "Deficient Demand." Suggest any two monetary policy tools used to reduce deficient demand. *(2021 C)*

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



(2019) U

81. Explain the concept of inflationary gap. Explain the role of Repo Rate in reducing this gap. *(Delhi 2015)*

82. What is 'deficient demand'? Explain the role of 'Bank Rate' in removing it. *(AI 2015)*

83. Explain the changes that take place when aggregate demand and aggregate supply are not equal. *(Delhi 2015 C)*

CBSE Sample Questions

4.2 Propensity to Consume and Propensity to Save

MCQ

1. 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:
(a) Statement I is true but statement II is false.
(b) Statement I is false but statement II is true.
(c) Both statements I and II are true.
(d) Both statements I and II are false. *(2022-23)*

2. "If increase in National Income is equal to increase in consumption". Identity the value of Marginal Propensity to Save.
(a) Equal to unity
(b) Greater than one
(c) Less than one
(d) Equal to zero *(2022-23)*

3. Read the following statements -Assertion (A) and Reason (R). Choose one of the correct alternatives given below :
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.
(a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true but R is not the correct explanation of A.
(c) A is true but R is false
(d) A is false but R is true. *(2022-23)*

VSA (2 marks)

4. Calculate change in income (ΔY) for a hypothetical economy. Given that:
(a) Marginal Propensity to Consume (MPC) = 0.8, and
(b) Change in Investment (ΔI) = ₹ 1,000 Crore
(Term-II, 2021-22) Ap

4.3 Short Run Equilibrium Output; Investment Multiplier and its Mechanism

5. If in an economy, the value of investment multiplier is 4 and Autonomous Consumption is ₹30 Crore, the relevant consumption function would be :
(a) C = 30 + 0.75 Y
(b) C = (–) 30 + 0.25 Y
(c) C = 30 – 0.75 Y
(d) C = 30 – 0.25 Y *(2022-23)*

6. Read the following statements -Assertion (A) and Reason (R). Choose one of the correct alternatives given below :
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.
(a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true but R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true. *(2022-23)*

VSA (2 marks)

7. Calculate equilibrium level of income for a hypothetical economy, for which it is given that:
(a) Autonomous Investment = ₹ 500 Crore, and
(b) Consumption Function, C = 100 + 0.80Y
(Term-II, 2021-22)

8. 'As the income increases, people tend to save more' Justify the given statement. *(Term-II, 2021-22)* U

SA II (4 marks)

9. 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. *(2022-23)*

10. In an economy C = 200 + 0.5 Y is the consumption function where C is the consumption expenditure and Y is the national income. Investment expenditure is ₹ 400 Crore.
Is the economy in equilibrium at an income level ₹ 1500 Crore? Justify your answer. *(2020-21)*

4.4 Meaning of Full Employment and Involuntary Unemployment

SA II (4 marks)

11. 'India's GDP contracted 23.9% in the April-June quarter of 2020-21 as compared to same period of 2019-20, suggesting that the lockdown has hit the economy hard'.
The Hindustan Times, 1st September, 2020
State and discuss any two fiscal measures that may be the Government of India to correct the situation indicated in the above news report.
(2020-21) Ap

4.5 Problem of Excess Demand and Deficient Demand

LA (5/6 marks)

12. As per the following news published in The Economic Times on 26th December 2021 :
'Reserve Bank of India has sold government securities worth ₹8710 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. *(2022-23)*

Detailed SOLUTIONS

Previous Years' CBSE Board Questions

1. (a) : Statement I is true but statement II is false.

2. (d) : None of these

3. That level of output and employment where Aggregate Demand is equal to Aggregate supply.

4. Ex-ante Aggregate Demand is equal to Ex-ante Aggregate Supply only when the economy is in equilibrium. At under-employment equilibrium level, when Ex-ante Aggregate Demand falls short of Ex-ante Aggregate Supply, it will lead to accumulation of unplanned inventories. Hence the producer will reduce employment leading to reduction in output and income till the two forces becomes equal to each other and vice versa.

5. Aggregate Supply refers to the value of total output of goods and services produced in an economy in a year. In other words aggregate supply is equal to the national product or national income.

6. Aggregate Demand is the total demand for goods and services in the economy. Aggregate Demand, in fact, represent the total expenditure on goods and services in an economy.

7. Aggregate Demand is the total demand for goods and services in the economy. Aggregate Demand in fact represent the total expenditure of goods and services in an economy.
There are four components of Aggregate Demand (AD) :
(i) Private Consumption Expenditure (C) : It refers to the total amount of expenditure incurred by the households on the purchase of goods and services to satisfy their wants. There is a positive relationship between the consumption expenditure and the level of disposable income.
(ii) Investment Expenditure (I) : It refers to the expenditure incurred by the private firms on the purchase of capital goods such as plant and equipment, construction works, etc. There is a negative relationship between the rate of interest and investment demand.

(iii) Government Expenditure (G) : It refers to the expenditure incurred by the government on the purchase of goods and services.

(iv) Net Exports : Net exports is the difference between exports and imports. It shows the effect of domestic spending on foreign goods and services (Imports) and foreign spending on domestic goods and services (Exports) on the level of aggregate demand.

8. (a) When Aggregate Demand is greater than Aggregate Supply (AD>AS), buyers are planning to, buy more goods and services than what producers are planning to produce. It will lead to fall in planned inventories below the desired level. The producers in turn will produce more, which will raise the income level *i.e.* AS, till AD becomes equal to AS.

(b) Ex-ante Investment is more than Ex-ante savings: Suppose the industrialists wish to invest ₹ 50000 Crore while the family units makes a saving of ₹ 45000 Crore. In such a condition the aggregate demand is more the aggregate supply. To supply this demand the industrialists will use more raw material and more means of production to increase their production. This will lead to an increase in the national income the saving and investment will become equal and a state of equilibrium will be achieved.

9.

Aggregate Demand	Aggregate Supply
Aggregate demand implies the total demand of final goods and services by all the people in an economy.	Aggregate supply refers to the aggregate production planned by all the producers during an accounting year.
The important components of aggregate demand are consumption expenditure, investment, government expenditure, net exports etc.	Consumption and savings are the two main components of aggregate supply.
It is measured with the help of aggregate demand price .	It is measured with the help of aggregate supply price .

10. (d) : A is false but R is true.

11. (b) : 2

12. (b) : 2.5

13. (a) : Zero

14. (d) : 0.6

15. Given, MPS=0.2 and A (c+I)= ₹ 50 crore
MPC= 1-MPS=1-0.2=0.8
AD = A+ MPC(Y)
AD = 50+0.8(300)
AD = ₹ 290 crore

Concept Applied

$\Rightarrow$ MPC = $\frac{\Delta C}{\Delta Y} = \frac{600}{1000} = 0.6$

16. Given, National Income (Y) = ₹ 2000
Autonomus Consumption = $\overline{C}$ = ₹ 100
Investment Expenditure (I) = ₹ 300
MPC = 0.6
In equilibrium, $Y = \overline{C} + bY + I$
$Y = 100 + 0.6(Y) + 300$
$Y = 1000$
So, the given statement is wrong. For an equilibrium level of income should be 1000.
Alternatively, $Y = \overline{C} + bY + I$
$2000 = 100 + 0.6(2000) + I$
$700 = I$
But here autonomus investment is ₹ 300.
Therefore, economy is not in equilibrium.

17. Y = ₹ 4,400
$\overline{C}$ = 1,000
I = ₹70
$\therefore$ $Y = \overline{C} + I$
$Y = \overline{C} + bY + I$
or $Y = \overline{C}$
$\Rightarrow$ $4400 = 1000 + bY\,(4400) + 70$
$= \frac{3330}{4400} = b$
b = MPC = 0.75
Now, MPC + MPS = 1
MPS = 1 – 0.75
MPS = 0.25

18. Consumption function curve of an involuntary unemployed works start from some positive level on Y-axis even at zero level of income. Because it is autonomous consumption expenditure which can never be zero because some minimum level of consumption has to be maintained for survival.

19. MPC is the ratio of change in consumption to change in income. Symbolically, MPC = $\frac{\Delta C}{\Delta Y}$

20.

Basis of Difference	APC	MPC
Meaning	It is the ratio of consumption expenditure (C) to the corresponding level of income (Y) at a pint of time.	It is the ratio of change in con-sumption expenditure (ΔC) to change in income (ΔY) over a period of time.
Value more than one	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 as change in consumption can not be more than change in income.

Example	If consumption expenditure is ₹ 100 Crore, then : $APC = \frac{C}{Y} = \frac{70}{100} = 0.70$	If consumption expenditure increases from ₹ 70 Crore to ₹ 110 Crore with an increase in income from ₹ 100 Crore to ₹ 200 Crore, then : $MPC = \frac{\Delta C}{\Delta Y} = \frac{110-70}{200-100} = \frac{40}{100} = 0.40$

21. $\Delta I = 300$; MPC = 2/3

So, $k = \frac{\Delta Y}{\Delta I} = \frac{1}{1-MPC}$

$\Rightarrow \frac{\Delta Y}{300} = \frac{1}{1-2/3} \Rightarrow \frac{1}{\frac{1}{1}-\frac{2}{3}} = \frac{1}{\frac{1}{3}} \Rightarrow \frac{\Delta Y}{300}$

$\Delta Y = \frac{300}{\frac{1}{3}} = 300 \times 3 = 900$

$\Delta Y = 300 \times 3$

$\Delta Y = 900$

$\therefore$ The national income will change by ₹ 900 crore.

22. Given, ΔI = ₹ 100 Crore, ΔY = ₹ 1000 Crore

MPC = ?

$k = \frac{\Delta Y}{\Delta I} = \frac{1}{1-MPC} = \frac{1}{MPS}$

$k = \frac{1000}{100} = 10$

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

$10 = \frac{1}{MPS} \Rightarrow MPS = \frac{1}{10} = 0.1$

MPC = 1 – MPS = 1 – 0.1 = 0.9

23. Given, National Income (Y) = 1,000

Autonomous consumption expenditure ($\bar{C}$) = 200

Investment expenditure(I) = 100

(MPC) Marginal propensity to consume = ?

At equilibrium level of Income Y = C + I

and $C = \bar{C} + bY$

$\Rightarrow Y = C + bY + I$

$\Rightarrow 1{,}000 = 200 + b\,(1{,}000) + 100$

$\Rightarrow 1000 - 300 = 1{,}000\,b$

$\Rightarrow b = \frac{700}{1000} = 0.7$

$\therefore b = MPC = 0.7$

24. (i) The sum of the APC and APS is always equal to one. Symbolically, APC + APS = 1. It is so, because income is either consumed or saved. Again the relationship can be stated in the following way also:

APC = 1 – APS

APS = 1 – APC

Apparently if one in given, the other can be worked out.

(ii) Multiplier (k) = $\frac{1}{1-MPC}$

There is a direct relationship between multiplier and MPC. Higher the value of MPC higher the multiplier and vice-versa.

25. (i) The sum of MPC and MPS is always equal to one. Symbolically, MPC + MPS = 1

It is so, because the part of income is consumed and rest part of income is saved this relation can be stated as :

MPC = 1 – MPS

MPS = 1 – MPC

(ii) Multiplier (k) = $\frac{1}{1-MPC}$

Since, MPS = 1 – MPC

$\therefore$ Multiplier (k) = $\frac{1}{MPS}$

There is a inverse relationship between multiplier and MPS. Higher the value of MPS, lower the multiplier and vice-versa.

26. (a) APS can be negative when consumption expenditure exceed income because at that level the income of the consumer is zero, he can use his savings for his autonomous consumption.

(b) The coefficient (1 – b) measures the slope of the saving function. The slope of the savings function gives the increase in savings per unit increase in income. This is known as marginal propensity to save (MPS). Since b, *i.e.*, MPC is less than one, it follows that (1 – b), *i.e.*, MPS is positive.

27. Change in Investment,

$\Delta I = 500 - 300 = 200$

Change in income,

$\Delta Y = 2{,}000$ and $k = \frac{\Delta Y}{\Delta I} = \frac{2{,}000}{200} = 10$

Now, $MPS = \frac{1}{K} = \frac{1}{10} = 0.1$

We know that, MPC + MPS = 1

MPC = 1 – MPS = 1 – 0.1 = 0.9

28. Average Propensity to save (APS) is the ratio of total savings to total income.

Symbolically, APS = $\frac{S}{Y}$.

The value of APS can be negative when consumption expenditure exceeds income. At lower level of income, saving is negative. For example, if income is ₹ 1,000 and consumption expenditure is ₹ 1,200. Saving is minus 200 (1000 – 1200). It means that

APS = – 0.2 = (– 200/1000).

The sum of the APC and APS is always equal to one. Symbolically, APC + APS = 1. At lower level of incomes APC will be greater but with the increase in income level of APS also increases.

29. APC (Average propensity to consume) : It is the ratio of consumption expenditure to total income :

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

The sum of the APC and APS is always equal to one.

Symbolically, APC + APS = 1. With change in income both are effected APS will be calculated after deducting APC from income.

30. Let, Increase in investment = 1
Increase in National Income = 2

$k = \frac{\Delta Y}{\Delta I} = k = \frac{2}{1}$

k(Multiplier) = 2

if, $k = \frac{1}{1-MPC}$ then,

$2 = \frac{1}{1-MPC} \rightarrow \begin{matrix} 2-2MPC=1 \\ 2MPC=1 \end{matrix}$; $MPC = \frac{1}{2}$, MPC = 0.5

31. I (Investment expenditure) = ₹ 200
National Income (Y) = ₹ 2,000
Autonomous consumption ($\bar{C}$) = ₹ 400
MPC (*b*) = ?

$Y = C + I$

$Y = \bar{C} + bY + I$

$\Rightarrow \quad 2{,}000 = 400 + b \times 2{,}000 + 200$

$\Rightarrow \quad 2{,}000 - 600 = 2{,}000b \Rightarrow b = \frac{1{,}400}{2{,}000} = 0.7$

$\therefore$ MPC(*b*) = 0.7.

32. Given,
National Income (Y) = ₹ 1,000
Autonomous Consumption ($\bar{C}$) = ₹ 100
Investment Expenditure (I) = ₹ 120
We know that at equilibrium

$Y = C + I$

$\Rightarrow \quad Y = \bar{C} + bY + I \qquad (\because C = \bar{C} + bY)$

Substituting the given values

$1000 = 100 + b \times 1{,}000 + 120$

$1000 - 220 = 1000b \Rightarrow b = \frac{780}{1000}$

$\Rightarrow$ MPC (*b*) = 0.78
So, MPC = 0.78
MPS + MPC = 1
MPS = 1 – MPC
$\Rightarrow$ MPS = 1 – 0.78 = 0.22

33. Given, National income (Y) = ₹ 1500
Autonomous consumption = ₹ 300
Investment expenditure = ₹ 300
We know that,

$Y = C + I$

C(Consumption function) = $\bar{C} + bY$

$1500 = \bar{C} + bY + I$

$1500 = 300 + b(100) + 300$

$1500 = 600 + 1500b$

$b = \frac{900}{1500}$

MPC (*b*) = 0.6

34. Given,
National Income (Y) = ₹ 3,000
Autonomous Consumption Expenditure ($\bar{C}$) = ₹ 200
Investment Expenditure (I) = ₹ 100
We know that, Y = C + I

$C = \bar{C} + bY$

$\Rightarrow \quad Y = \bar{C} + bY + I$

$3{,}000 = 200 + b(3{,}000) + 100$

$2{,}700 = 3{,}000\, b \Rightarrow b = 0.9$

MPC(*b*) 0.9

35. (a) : Statement-I is true but statement-II is false.

36. (a) : $C = 30 + 0.75\, Y$

37. (d) : equal to zero

Commonly Made Mistake

- Students must understand that multiplier is not related to APC, instead it is related to MPC.

38. (b) : $\frac{1}{MPS}$

39. (d) : Infinity

40.

It is given that 75% of the increase in Income is spent on consumption.
Therefore, MPC = 75% or 0.75 → (1)

Now, Investment multiplier (k) = $\frac{1}{1 - MPC}$

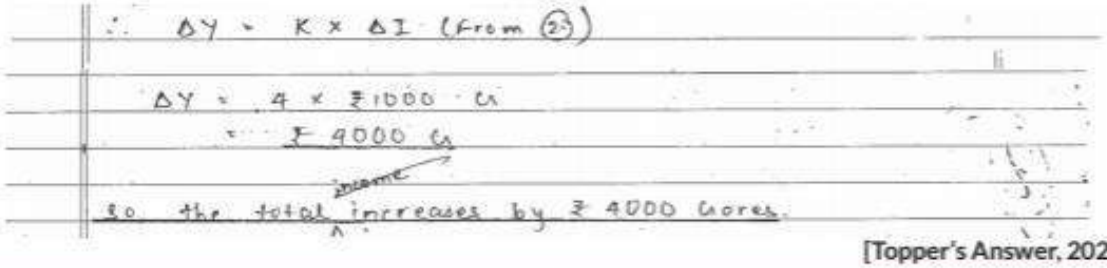
$k = \frac{1}{1 - 0.75} = \frac{1}{0.25}$ (from (1))

$\therefore k = 4$

Now, k can be calculated as $k = \frac{\Delta Y}{\Delta I}$, → (2)

where ΔI = Change in the Investment
ΔY = change in the total income

Here, ΔI is given as ₹ 1000 Cr.



[Topper's Answer, 2022]

41. Investment multiplier and Marginal propensity to consume are directly related to each other. Higher the value of MPC, higher the investment multiplier and vice versa, in fact multiplier is often estimated with reference to MPC, as under:

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

Example : If MPC = 0.5,

$$k = \frac{1}{1-0.5} = \frac{1}{0.5} = 2$$

Similarly, if MPC is 0.8 $k = \frac{1}{1-0.9} = \frac{1}{0.2} = 5$

The logic behind the direct relationship between MPC and multiplier. It runs like this:

- Additional investment (ΔI) means additional expenditure in the economy additional expenditure means additional income (ΔY) in the economy.

Example : If MPC = 0.4, then ΔC = 0.4(100) = 40.
If MPC = 0.6, then ΔC = 0.6(100) = 50.

Accordingly, Higher the value of MPC, higher is the generation of income caused by a given increase in investment. Or that, higher the MPC, higher is the value of investment multiplier.

42. $K = \frac{1}{\text{MPS}}$

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

DY = K(DI)

DY = 5 × 500 = ₹ 2,500 Crore

43. Investment multiplier measures the effect of the changes in the investment on the equilibrium level of income.

Investment multiplier is the ratio of the change in income to the change in investment. Symbolically, multiplier $(K) = \frac{DY}{DI}$.

The value of multiplier depends upon the value of MPC. There is a direct relationship between the multiplier and MPC Symbolically, $K = \frac{1}{1-MPC}$.

So, when MPC ↑, K ↑

MPC ↓, K ↓

44. Given,

National Income (Y) = 1,200

Autonomous consumption expenditure($\bar{C}$) = 150

Marginal Propensity to consume (MPC) = 0.8

At equilibrium level of income,

$Y = C + I$ and $C = \bar{C} + bY \Rightarrow C = 150 + 0.8\,Y$

$1,200 = 150 + 0.8 \times 1,200 + I$

$1,200 = 150 + 960 + I$

$1,200 - 1,110 = I$

⇒ Investment Expenditure = 90

45. Given,

National Income, (Y) = 1,000

Autonomous consumption ($\bar{C}$) = 100

Marginal Propensity to Consume (MPC) = 0.8

Investment Expenditure = ?

At Equilibrium level of income,

$Y = C + I$ and $C = \bar{C} + bY$

⇒ $1,000 = 100 + 0.8 \times 1,000 + I$

∵ $C = 100 + 0.8\,y$

$1,000 = 100 + 800 + I \Rightarrow I = 1000 - 900 = 100$

46. $S = -100 + 0.2Y$

Investment expenditure = 5,000

At equilibrium; $Y = C + I$

⇒ $Y = \bar{C} + bY + I$

and $S = -100 + 0.2Y$ and $S = I$

⇒ $-100 + 0.2Y = 5,000$

⇒ $0.2Y = 5,000 + 100 = 5,100$

∴ $Y = \frac{5,100}{0.2} = \frac{51,000}{2} = 25,500$

47. $C = 500 + 0.9Y$

Investment expenditure = 3,000

$Y = C + I$

$Y = 500 + 0.9Y + 3,000$

$0.1Y = 3,500$

$Y = \frac{3,500}{0.1} = 35,000$

48. $\bar{C} = 500$, MPS = 0.2, I = 2,000

MPC = 1 – MPS = 1 – 0.2 = 0.8

$Y = C + I = \bar{C} + bY + I$

$Y = 500 + 0.8 \times Y + 2,000$

$Y - 0.8\,Y = 2 \Rightarrow 500 = 0.2\,Y = 2,500$

$Y = \frac{2,500}{0.2} = 12,500.$

49. Change in income is 20% which means

$\text{MPS} = \frac{20}{100} = 0.20$

$k = \frac{1}{\text{MPS}}$

But $k = \frac{\Delta Y}{\Delta I} \Rightarrow \frac{1}{0.20} = \frac{\Delta Y}{10,000}$

$\Delta Y = (10,000/0.20) = ₹\ 50,000$

50. AD (Planned spending) is more than the planned output (AS), it implies that the consumers and the firms together would be buying more goods than the firms are willing to produce. As a result, the planned inventory would fall below the desired level. To bring back to inventory level, the firms would resort to increase in employment and output until the economy is back at the equilibrium level of income and output, where AD becomes equal to AS and there is no further tendency to change.

51. Investment multiplier is defined as the ratio of change in income to change in investment.

Symbolically, Multiplier (k) = $\frac{\Delta Y}{\Delta I}$

Ex.: Let us suppose that ΔI = ₹ 100 Crore and ΔY = ₹200 Crore, then

Multiplier (k) = $\frac{200}{100}$ = 2.

Its minimum value can be 1 and maximum value can be ∞.

52. $k = \frac{1}{1-MPC} = \frac{1}{MPS}$

We can written this equation as :

$\frac{1}{1-2MPS} = \frac{1}{MPS} = k$

MPS = 1 – 2 MPS,

3 MPS = 1

MPS = 1/3, $\therefore \quad k = \frac{1}{MPS}$

$k = \frac{1}{1/3}$, k = 3

53. AD is total planned demand for good and service in an economy. Whereas, as total planned output of Goods and Services in an economy.

(b) $Y = C + I$ and $C = \bar{C} + b(Y)$

$\Rightarrow \quad Y = 500 + 0.8Y + 5,000 \Rightarrow 0.2Y = 5,500$

$Y = \frac{5,500}{2} \times 10 = 27,500$

54. If planned savings exceeds planned investment in an economy. The following are the effects on:

(i) Output - When S > I, some output would remain unsold and producers will have undesired stock of goods.

(ii) Income - To clear the undesired stock the producres would now plan lesser output. Lesser output wold mean lesser income.

(iii) Employment : If there is already undesired stock, then there will be less requirement of employment, to carry out production activity.

55. There are two ways to find the equilibrium income

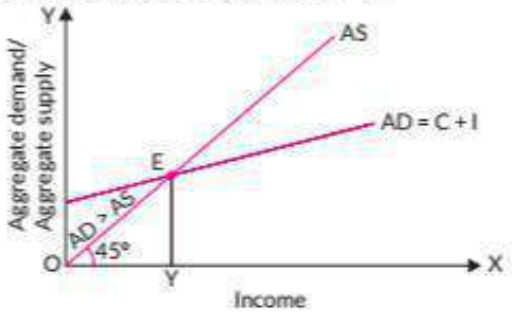
→ AD – AS approach

→ Savings and investment approach/method

(i) AD = AS Approach

Determination of the equilibrium level of income : The equilibrium level of income is determined at a point where AD = AS. The diagram illustrates the point :

In the figure, AD is represented by C + I and 45° line represents AS function. AD and AS interest each other at point E. The equilibrium level of income determined is OY. At this equilibrium level of income, S = I.



(ii) Saving - Investment Approach

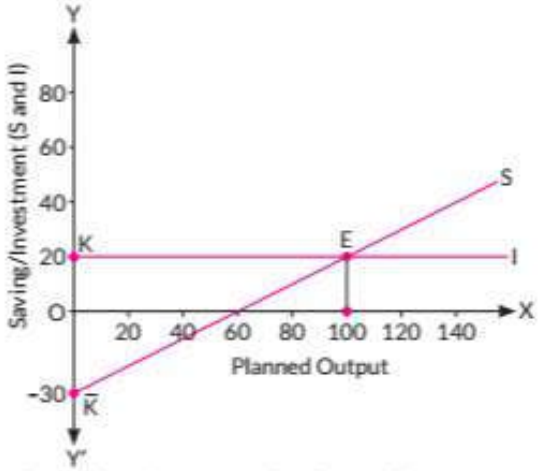
At equilibrium level of national income, planned saving is equal to planned investment.

At equilibrium level of national income, AD = AS

or $C + I = C + S$ or $I = S$

This indicates that planned investment equals to planned savings. The equality between planned investment and savings can be presented graphically as follows :

It is clear from the diagram that the equilibrium level of income OY_e, planned savings and planned investment are equal, both being equal to EY_e. Before this equilibrium level, when income falls to OY_0, investment is I_0Y_0 against savings S_0Y_0. This indicates planned investment is greater than planned savings, which means aggregate demand exceeds aggregates supply. This will lead to deaccumulation of unintended inventories with businessmen. To avoid further deaccumulation of inventories, businessmen will increase production. Consequently output, income and employment will be increased till the equilibrium level of income OY_e is reached where planned Saving = Planned Investment.



Thus, planned savings exceeds planned investment which means aggregate demand falls short of aggregate supply. This will lead to accumulation of unintended inventories with the businessmen. To avoid further accumulation of inventories, businessmen will reduce production. Consequently output, income and employment will be reduced till the equilibrium level of income OY_e is reached where, Planned Savings = Planned Investment.

Answer Tips

- Diagrams matter in economics exam. They can really help to achieve strong analysis marks and support your evaluation too, especially when you develop a diagram that is relevant to the question.

56. The consumption which is willingly done or desired by the household is known as Ex-ante consumption. Autonomous consumption is that consumption which does not depend upon the level of income earned by the household. For example : consumption done by the children or old aged people who are unemployed. Induced consumption is that consumption which depend on the level of income earned by the household. Induced consumption is positively related with the level of income of the consumers *i.e.*, with an increase in the level of income, consumption also increase.

57. Income = 5,000
Marginal propensity to save (MPS) = 0.2
Investment expenditure = 800
When economy is in equilibrium that time:
AD = AS
Components of AD = C + I
Components of AS = C + S
} In Two sector Economy
$\Rightarrow$ C + I = C + S $\Rightarrow$ I = S
$\Rightarrow$ Investment = Savings
$\Rightarrow$ Saving function = $S = -\bar{S} + (1-b)Y$
b = MPC
$\Rightarrow$ $800 = -\bar{S} + 0.2\,(5{,}000)$
$\Rightarrow$ $800 = -\bar{S} + 1000 \Rightarrow -\bar{S} = 800 - 1{,}000 = -200$
Negative savings are always equal to autonomous consumption.
So autonomous consumption is 200.

58. $Y = \bar{C} + bY + I$
$Y = 100 + (1 - 0.2)Y + 200$
$Y = 100 + 0.8Y + 200$
$Y - 0.8Y = 300$
$0.2Y = 300$
$Y = \frac{300}{0.2} = 1{,}500$

59. Given, Y (National income) = 1,000
I (Investment expenditure) = 100
MPC (Marginal propensity to consume = 0.8
$C = \bar{C} + bY$
$Y = C + I$
$1000 = \bar{C} + bY + I$
$1000 = \bar{C} + 0.8(1000) + 100$
$900 = \bar{C} + 800 \Rightarrow \bar{C} = 900 - 800 = ₹\,100$

60. Given, Y(National Income) = 800
MPS (Marginal Propensity to Save) = 0.3
MPC (b) = 1 – MPS = 1 – 0.3 = 0.7
(Autonomous consumption) $\bar{C} = 100$
We know that at equilibrium,
$Y = C + I$
$\Rightarrow$ $Y = \bar{C} + bY + I$ $\quad (\because C = \bar{C} + bY)$
$\Rightarrow$ $800 = 100 + 0.7 \times 800 + I$
$\Rightarrow$ $800 = 660 + I \Rightarrow I = 140$
Thus, the investment expenditure is ₹ 140.

61. The working of investment multiplier is based on the principle that one's expenditure is another's income.
Given initial investment = ₹ 100 Crore and MPC = 0.8

Round	Change in Investment (₹ in Crore)	Change in Income (₹ in Crore)	Change in Consumption (₹ in Crore)	Change in Saving (₹ in Crore)
I	100	100	80	20
II	-	80	64	16
III	-	65	51.2	12.8
	-	-	-	-
	-	500	400	100

$K = \frac{1}{1-MPC} = \frac{1}{0.2} = 5$
$\Delta Y = k \times \Delta I = 5 \times 100 = ₹\,500$ Crore

62. The working of multiplier can be explained as follows: We are given that the value of MPC = 0.9 and also that initial increase in investment is ₹1,000 Crore. This implies that with every increase of ₹1 in the income, people consume 0.9 part of the increased income.

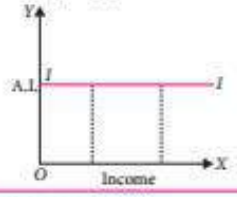
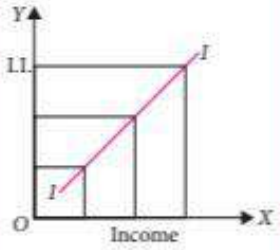
Round	Increase in investment	Change in income ΔI	Induced change in consumption ΔC	Savings ΔS
1	1,000	1,000	9,00	100
2		9,00	810	90
3		810	729	81
4		729	656.1	72.9

The table shows that initial increase in investment of ₹1,000 will lead to change by ₹1000 in income in the first round. As MPS is 0.9, so people will consume 0.9 of the increased income (₹900) thereby, saves ₹100. This will be termed as leakage as it is not ploughed back into the economy in the next round, due to the increase in the consumption expenditure by ₹900 there will be increase in income by ₹900. The people will again spend the increased income ₹810 and save rest part of the income ₹190.

$$k = \frac{1}{1-MPC} = \frac{\Delta Y}{\Delta I}$$
$$= \frac{1}{1-0.9} = \frac{\Delta Y}{1{,}000}$$
or $\frac{1}{0.1} = \frac{\Delta Y}{1{,}000}$
$\Rightarrow$ $\Delta Y = 10{,}000$

63. (a)

Autonomous Investment	Induced Investment
(i) It is done for social welfare.	It refers to the investment which depends on the profit expectations and is directly influenced by level of income.
(ii) It is income-inelastic as curve is parallel to *x-axis*.	It is driven by profit motive.

(iii) The investment which is not affected by changes in the level of income and is not induced solely by profit motive. 	It is income-elastic as curve slopes upwards. 

(b) $Y = C + I$
$Y = C- + bY + I$
$Y = 100 + 0.75Y + 5{,}000$
$Y - 0.75Y = 5{,}100 \Rightarrow 0.25Y = 5{,}100$
$Y = 5{,}100/0.25 = 20{,}400$

64. (a) Terms like consumption, investment, or the total output of final goods and services in an economy (GDP). Denoting actual values of these items as measured by the activities within the economy in a certain year. We call these actual or accounting values ex-post measures of these items. We call the planned values of the variables– consumption, investment or output of final goods– their ex-ante measures.

(b) $Y = C + I$ and $C = \overline{C} + b(Y)$
$Y = 200 + 0.9Y + 1{,}000 = 0.1Y = 1{,}200$

$$Y = \frac{1{,}200}{1} \times 10 = 12{,}000$$

Related Theory

- Equilibrium level of income and employment can also be determined according to classical theory. However, the scope of syllabus is limited to the keynesian theory.

65. (a) : Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).

66. False

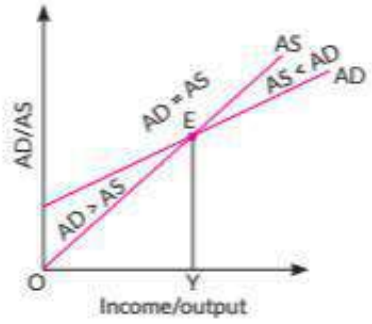
67. Full employment refers to a situation where there is no involuntary unemployment, *i.e.*, those who are willing to work and able to work at the current wage rate get work. In other words, full employment refers to a situation where all services are employed to their full limit.

Commonly Made Mistake

- It must be noted that the concept of full employment is explained only in the context of labour force, *i.e.*, working population and not the total population.

68. Involuntary unemployment : It refers to a situation in which persons are willing to work and able to work at the prevailing wage rate but are not able to get work. They are rendered unemployment against their wishes. Keynes explained, that involuntary unemployment was due to lack of aggregate demand which is due to less investment by business firms.

69. Full employment refers to a situation where there is no involuntary unemployment (*ie*) those who are willing to work and able to work at current wage rate, get work. The excess of aggregate demand over the aggregate supply at the full employment level is known as inflationary gap. The inflationary gap is measure of the amount of excess demand. This situation leads to inflationary tendencies or rise in prices when AD > AS then it means that the consumers and producers are buying more goods which firms are willing to produce. As a result, planned inventory would fall below desired level due to which employment level rise till AD = AS.



70. (a) : Both A and R are true.

71.

The given statement is Refuted

Excess Demand refers to a situation when Aggregate Demand (AD) exceeds Aggregate Supply (AS) corresponding to full employment level of output. So, the economy is already at full employment and no more opportunities for employment exist.

Therefore, Excess Demand doesn't create greater employment opportunities, instead, it leads to rise in the general price level leading to inflations.

[Topper's Answer, 2022]

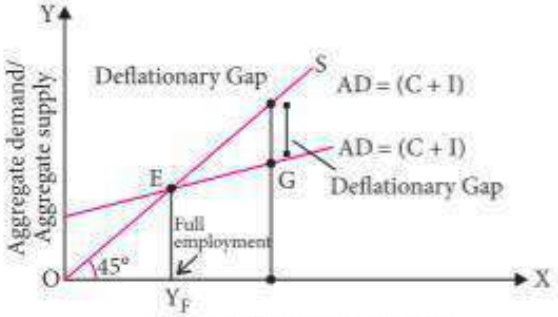
72. The excess of aggregate demand over the aggregate supply at full employment level is known as inflationary gap.

73. The excess of aggregate supply over the aggregate demand at the full employment level is known as the deflationary gap.

74. When aggregate demand (AD) exceeds aggregate supply (AS) at full employment, there is excess demand in the economy which leads to inflation. In other words, a situation of excess demand arises in an economy, when AD > AS at full employment level.

75. Reduction in the bank rate (by the Central Bank), may lead to a fall in the lending rates by the commercial banks. Consequently, loans available at lower rates may encourage the general public to borrow more. This may result in an increase in the demand for credit in the economy.

76. The excess of aggregate supply over the aggregate demand at the full employment level is known as the deflationary gap.
The deflationary gap is measure of the amount of deficient demand.



Income/Output/Employment

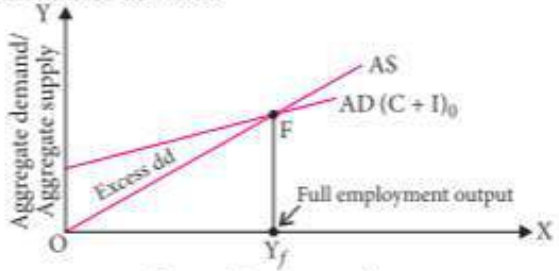
77. (a) To control the situation of deflation the government can use its taxation policy. Government will reduce the tax rates so that people have more disposable income, which they can use to create more demand in the economy. During deflation, Government will tend to bring up aggregate demand.
(b) Government Expenditure
Deflationary tendencies emerge due to aggregate demand being lower than aggregate supply. While increasing its own expenditure government can bring up aggregate demand during deflation.
Ex - To increase aggregate demand, government can use subsidies in the form of its expenditure.

78. (a) True
(b) Increase
(c) income
(d) (i) Under the situation of inflationary gap, Aggregate Demand exceeds. Aggregate Supply, at full employment level of income.

79. Deficient Demand refers to the situation when Aggregate Demand falls short of Aggregate Supply corresponding to full employment level in an economy.
Following are two monetary policy tools used to reduce Deficient Demand: -
(i) Open Market Operations: Under this situation, the Central Bank may purchase government securities, which in turn may raise the credit creation capacity of the commercial banks. Consequently, Aggregate Demand may increase.
(ii) Bank Rate Policy: Under the given situation, the Central Bank may lower the Bank Rate. It may reduce the cost of borrowings, which it in turn may increase the demand for credit in the economy and Aggregate Demand may increase.
(Any other valid instrument with relevant explanation to be allotted marks accordingly)

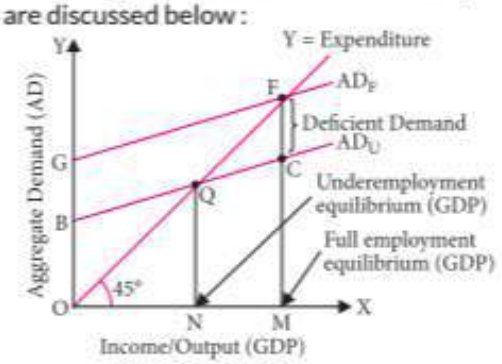
80. The vertical gap 'KT' represent 'Deficient Demand'.
The fiscal measures to correct 'Deficient Demand' are:
(a) Increase in government expenditure
(b) Reduction in taxes.

81. Excess demand exists when aggregate demand exceeds aggregate supply at full employment level. Excess demand gives rise to inflationary gap. This situation leads to inflationary tendencies or rise in prices. The excess of aggregate demand over aggregate supply of full employment level is known as inflationary gap. The figure illustrates the concept of excess demand :
Repo Rate/Bank Rate : Both repo rate and bank rate are the rate at which the central bank lends money to the commercial banks. However, more often it is the repo rate which is used as a policy instrument to correct the situations of excess demand and deficient demand. To correct the situation of excess demand, repo rate is increased. As a follow-up action, the commercial banks raise the market rate of interest (the rate at which the commercial banks lend money to the consumer and the investors). This reduces demand for credit. Consequently, consumption expenditure and investment expenditure are reduced. Implying a reduction in AD, as required to correct excess demand.



Output/Employment/Income

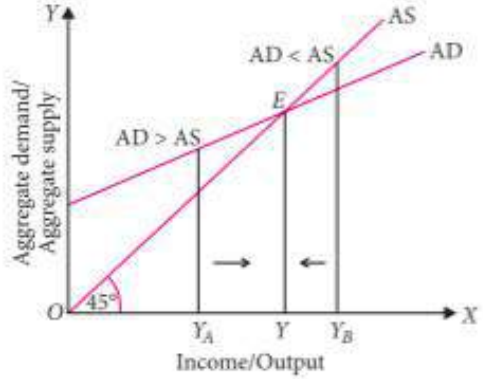
82. Deficient demand refers to a situation when aggregate demand falls short of aggregate supply at full employment level. The problem of deficient demand can be solved through various fiscal and monetary measures which are discussed below :



Income/Output (GDP)

Changes in bank rate : For controlling deficient demand, the Central Bank should decreases the bank rate. A decreases in bank rate lowers the rate of interest and credit becomes cheap. Accordingly, the demand for credit expands and aggregate demand increases and thus the problem of deficient demand can be solved.

83. When AD > AS. It means consumers and firms together would be buying more goods then firm are willing to produce. As a result, the planned inventory would fall below desired level due to which employment level rises till AD = AS. When AD < AS, it means consumer's and firm are buying less goods. Firms are willing to produce, due to which stock will pick up due to which producer will cut down the production level due to which employment level falls till AD = AS.



CBSE Sample Questions

1. (c) : Both statements I and II are true. **(1)**

2. (d) : Equal to zero **(1)**

3. (b) : Both A and R are true but R is not the correct explanation of A. **(1)**

4. Given ΔI = ₹ 1,000 Crore
MPC = 0.8
As we know,

$$\text{Multiplier (K)} = \frac{1}{1-MPC} = \frac{1}{1-0.8} = \frac{1}{0.2} = 5 \text{ times}$$

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

$$5 = \frac{\Delta Y}{1000}$$

ΔY = ₹ 5,000 Crore **(2)**

5. (a) : C = 30 + 0.75Y **(1)**

6. (d) : A is false but R is true. Ex-ante investment refers to desired investment or planned investment. **(1)**

7. Given Consumption function is,
C = 100 + 0. Y
Autonomous investments = 500 Crore
We know, at equilibrium level
Y = C + I
Y = 100 + 0.8 Y + 500
Y – 0.8Y = 600
0.2 Y = 600
Y = ₹ 3,000 Crore **(2)**

8. At a 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 the psychological behavior of a consumer (rational), people tend to consume less and save more for future uncertainty. **(2)**

9. Given MPC = 0.75, ΔY = ₹ 2000 Crore

$$K = \frac{1}{1-MPC} = \frac{1}{1-0.75} = \frac{1}{0.25} = 4$$

According to the question :

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

$$4 = \frac{2000}{\Delta I}$$

$$\Delta I = \frac{2000}{4} = ₹\,500 \text{ Crore}$$

Therefore, increase in investment (ΔI) required = ₹500 Crore **(4)**

10. Given, Consumption function (C) = 200 + 0.5Y, Investment (I) = 400, Level of income (Y) = 1500
At Equilibrium level AD = AS
Y = C + I
thus, Y = (200 + 0.5Y) + 400
Y – 0.5 Y = 600
Y = 600/0.5 = ₹ 1200 Crore.
The equilibrium level of income = ₹ 1200 Crore.
The given income (₹ 1500 Crore) is greater than equilibrium level of income (₹ 1200 Crore). Therefore, the economy is not in equilibrium. **(4)**

11. The situation suggest that Aggregate Demand is less than Aggregate Supply. Following two fiscal measures may be taken to control it :
(a) **Decrease in Taxes** – To curve the situation, the government may decrease the taxes. This may increase the purchasing power in the hands of the general public. This may increase the Aggregate Demand in the economy to bring it equal to the Aggregate Supply. **(2)**
(b) **Increase in Government Expenditure** – The government may also increase its expenditure. This may increase the purchasing power in the hands of the general public which in turn may increase the Aggregate Demand in the economy to bring it equal to the Aggregate Supply. **(2)**

12. 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.
By selling off the government securities, RBI withdraws money from circulation and thereby reducing the lending capacity of the commercial banks. In this process, the economy will experience contraction of credit, leading to reduction in consumption and investment demand. Consequently, the inflationary pressure in the economy will get eased out. **(6)**