CBSE Test Paper-02

Chapter 03 Determination of Income and Employment

1. The equation of propensity to consume is **(1)**

   a. S = - a + (1 - b)
   b. S = - a + (1 - b) Y
   c. C = a + by
   d. C = f(Y)

2. In C = a + b (Y), 'a' denotes **(1)**

   a. Consumption expenditure
   b. Automatic consumption expenditure
   c. Autonomous consumption expenditure
   d. Annual consumption expenditure

3. The "planned" value of the variables like consumption, investment, output, etc, is known as: **(1)**

   a. none of these
   b. ex post measures
   c. ex ante measures
   d. ex pre measures

4. What can be the minimum value of the investment multiplier? **(1)**

   a. 0
   b. 1.0
   c. 2
   d. 3

5. What is Aggregate Supply? **(1)**

6. What is meant by Average Propensity to Consume (APC)? **(1)**

7. If marginal propensity to save is 0.1, calculate the value of multiplier. **(1)**

8. What are the components of AS? **(1)**

9. As a result of increase in investment by Rs. 60 crore, National Income rises to Rs.240 crore. Calculate Marginal Propensity to Consume. **(3)**

10. From the following data calculate Marginal Propensity to Consume. **(3)**
    Equilibrium level of income = Rs. 2,000
    Autonomous consumption = Rs. 200
    Investment expenditure = Rs. 800

11. An economy is in equilibrium. Find Marginal Propensity to Consume from the following: **(4)**
    National Income = Rs 2,000
    Autonomous Consumption = 1400
    Investment Expenditure = Rs 200

12. Calculate 'Investment Expenditure' from the following data about an economy which is in equilibrium: **(4)**
    National Income = Rs 700
    Marginal Propensity to Consume = 0.8
    Autonomous consumption expenditure = Rs 70

13. Explain the concept of consumption function. **(4)**

14. Given a consumption curve, outline the steps required to be taken in deriving a saving curve from it. Use the diagram. **(6)**

15. In an economy consumption function (C) = 75 + 0.9Y and investment expenditure of Rs. 400 crore. Calculate: **(6)**

    i. Equilibrium level of income
    ii. Saving at equilibrium level of national income.

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Answers

1. c. C = a + by

   Explanation: Propensity to consume in economics means the tendency of consumers to spend income. Since, tendency is either of autonomous consumption or induced consumption, denoted by 'a' and 'bY' respectively

2. c. Autonomous consumption expenditure

   Explanation: Here, 'a' is a constant which denotes autonomous consumption.This consumption is not induced by income changes.

3. b. ex post measures

   Explanation: ex post measures

4. b. 1.0

   Explanation: Referring to the formula of investment multiplier below, if MPS=1, K=1. It means when consumption is zero or all income is saved, then there is no investment hence ,no change in income.

   $K = \frac{1}{1-\frac{dC}{dY}} = \frac{1}{1-MPC} = \frac{1}{1-MPS}$

5. Aggregate supply is the money value of the final goods and services that all producers intend to supply in an economy during a given time period. It is equal to income generated. So that: AS = Y = C + S, where C= consumption and S= savings.
6. Average propensity to consume is the ratio of aggregate consumption expenditure to aggregate income.

   $APC = \frac{C}{Y}$
7. Multiplier$(k) = \frac{1}{1-MPS} = \frac{1}{0.1} = 10$
8. i. Consumption (C)

   ii. Saving (S)
9. Here, Change in Investment (ΔI) = Rs. 60 crore,

   Change in Income (ΔY) = 240 crore

   Hence, Multiplier $(K) = \frac{\Delta Y}{\Delta I} = \frac{240}{60} = 4$

   Now, K = 1/1-MPC or $4 = \frac{1}{1-MPC}$

or 4 - 4 MPC=1

or 4 MPC = 4 - 1

or $\mathrm{MPC} = \frac{3}{4}$

MPC =0.75. Therefore Marginal Propensity to Consume(MPC) = 0.75

10. We have equillibrium level of income (Y) = Rs. 2,000;

    Autonomous Consumption $\overline{C}$ = Rs. 200,

    Investment (I) = Rs. 800,

    In order to calculate MPC we use following formula,

    Consumption Expenditure (C) = $\overline{C}$ + (MPC)Y and Y = C + I

    Y = $\overline{C}$ + (MPC)Y + I

    2,000 = 200 + (MPC) 2,000 + 800 Or MPC(2,000) = 2,000 - 1000 Or

    $\mathrm{MPC} = \frac{1,000}{2,000} = 0.5$. Therefore Marginal Propensity to Consume is equal to 0.5.

11. Given, Since the economy is in equilibrium,

    Saving = Investment

    Y = C + I

    or $\mathrm{Y} = \overline{\mathrm{C}} + \mathrm{bY} + \mathrm{I}$

    $\because \quad C = \overline{C} + bY$

    On substituting the given variables in equation (i),we get

    2000 = 400 + b(2000) + 200

    2000b = 1400

    $\mathrm{b} = \frac{1,400}{2,000}$ = 0.7

    $\therefore$ **Marginal Propensity to Consume (MPC) = 0.7**

    i. Investment expenditure (I) = 200

    ii. Autonomous consumption $\overline{C}$ =$=$ 400

    iii. National Income (Y) = 2000

12. **Calculation of Investment Expenditure:**

    Given, Since the economy is in equilibrium level,

    Saving = Investment

    $\therefore$ Y = C + I or $\mathrm{Y} = \overline{\mathrm{C}} + \mathrm{bY} + \mathrm{I}$ ..... (i)

    $\because C = \overline{C} + bY$

    On substituting the given variables in equation (i), we get

    700 = 70 + 0.8 $\times$ 700 + I

700 = 70 + 560 + I

700 = 630 + I

$\Rightarrow$ I = 700 - 630 = 70

$\therefore$ **Investment Expenditure = Rs 70.**

i. Autonomous Consumtion Expenditure $(\overline{C})$ = 70

ii. Marginal Propensity to Consume (MPC or b) = 0.8

iii. National Income (Y) = 700

13. i. Consumption function shows the relation between consumption and income.

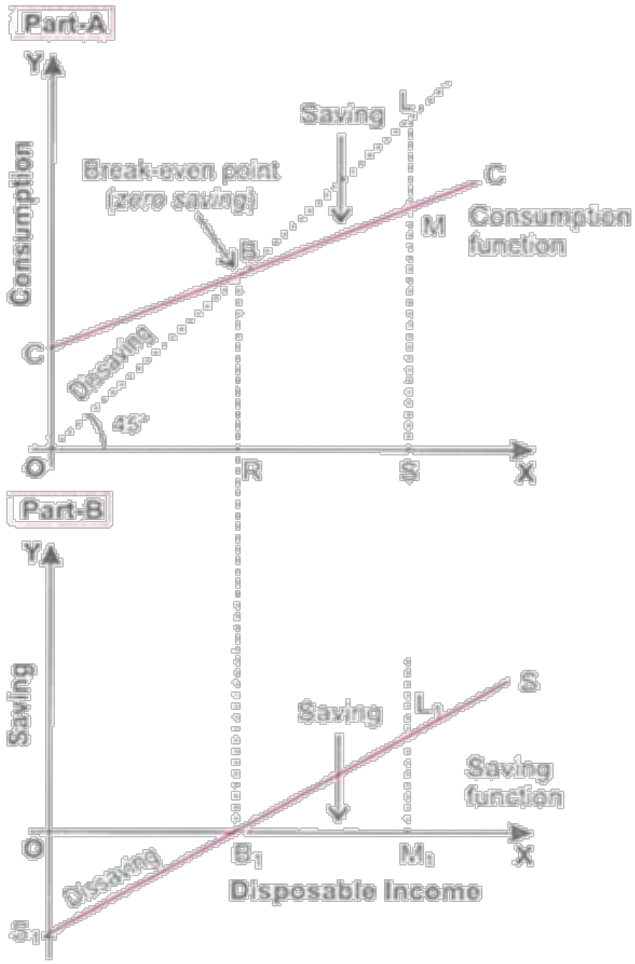
ii. Consumption function is expressed in the following two ways:

iii. C = f (Y) Where, C = Consumption, Y=Income; Or

iv. C = a + bY Where, a = Autonomous Consumption, b = Propensity to Consume

14. Consumption + savings = income.

It implies consumption and savings curves representing consumption and saving functions are complementary curves. Therefore, saving function or curve can be directly derived from the consumption curve.



In part A, CC curve shows consumption function corresponding to each level of income whereas 45^o line represents income. Recall that each point on 45^o line is equidistant from X-axis and Y- axis. C curve intersects 45^o line at point B where consumption = Income. Therefore, point B is called Break-even point showing zero saving.

It emphasises that saving curve must intersect X-axis at the same income level where consumption curve and 45^o line intersect. Further, it will be seen that to the left of point B, consumption function lies above 45^o line showing that consumption is more than income ie. Negative saving and to the right of point B, consumption function lies below 45^o line showing positive saving.

In Part B, we derive saving function in the form of saving curve. In Part A, the amount of saving is the vertical distance between C curve and 45^o line. By plotting Part B, the vertical distance of Part A representing saving and by joining them, we derive a saving curve.

Similarly, at OR level of income Part A, the vertical distance at point B being nil is shown as point B_1 on X-axis in lower part of the figure. Likewise, LM vertical distance of Part A is shown as L_1M_1 in Part B. By joining points S, B_1 and L_1 in lower segment, we get saving curve. Thus, saving curve/function is diagrammatically derived from consumption curve/function.

15. i. For equilibrium

Y = C + I

Y = (75 + 0.9Y) + 400

Y - 0.9Y = 475 or 0.1Y = 475

$Y = \frac{475}{0.1} = 4750$

∴ National Income = Rs. 4,750

ii. C = 75 + 0.9Y (Given)

=200 + [0.9 x 4750]

∴ Consumption = Rs. 4,475

Now, Savings = National Income(Y) - Consumption(C)

= 4750 - 4475 = 275

∴ Savings = Rs. 275