CBSE Test Paper-03

Chapter 03 Determination of Income and Employment

1. If income is Rs 1000 and consumption expenditure is Rs 1200, APS will be **(1)**
   a. 0.4
   b. -0.2
   c. 0.3
   d. -0.5
2. APC+APS= **(1)**
   a. 1.0
   b. 3
   c. 2
   d. 4
3. Multiplier tells us what will be the **(1)**
   a. Final change in the income, as a result of change in consumption
   b. Final change in the consumption, as a result of change in investment
   c. Final change in the income, as a result of change in investment
   d. Change in investment results in the change in income
4. In C = a+ b (Y), 'b' denotes **(1)**
   a. MPC
   b. MPS
   c. 1 + MPC
   d. 1 - MPC
5. Name any two components of Aggregate Demand. **(1)**
6. Define Cash Reserve Ratio (CRR). **(1)**
7. What is the relationship between Marginal Propensity to Save and Marginal Propensity to Consume? **(1)**
8. What is Marginal Efficiency of Investment? **(1)**

9. Calculate Marginal Propensity to Consume from the following: **(3)**
   Equilibrium income = Rs. 350
   Consumption expenditure at zero income = Rs. 20
   Investment = Rs. 50.

10. Give the meaning of Average Propensity to Save. What is its relation with Average Propensity to Consume? **(3)**

11. Explain two fiscal measures by which excess demand in an economy can be reduced. **(4)**

12. An economy is in equilibrium. Find 'autonomous consumption' from the following **(4)**
    National Income = Rs 1,000
    Marginal Propensity to Consume =0.8
    Investment Expenditure = Rs 100

13. An economy is in equilibrium. Calculate Marginal Propensity to save from the following: **(4)**
    National Income = Rs 1,000
    Autonomous consumption = Rs 100
    Investment expenditure = Rs 200

14. Complete the following table. **(6)**

Income (Y)	**Consumption Expenditure (C)**	**Marginal Propensity to Save |(MPS)**	**Average Propensity to Save (APS)**
0	80	-	-
100	140	0.4	-
200	-	-	0
-	240	-	0.20
-	260	0.8	0.35

15. Distinguish between excess demand and deficient demand. **(6)**

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Answers

1. b. -0.2

   Explanation: APC=C/Y=1200/1000=1.2

   Now, APS=1-APC

   APS=1-1.2=-0.2

2. a. 1.0

   Explanation: We know, APS=S/Y

   APC=C/Y. Also, Y=C+S , because income is either consumed or saved.

   Now, C/Y+S/Y=C+S/Y=Y/Y=1.

3. c. Final change in the income, as a result of change in investment

   Explanation: Multiplier implies change in income as a result of change in investment,

   $\mathrm{K} = \frac{\Delta \mathrm{Y}}{\Delta \mathrm{I}}$ or $\mathrm{K} \times \Delta \mathrm{I} = \Delta \mathrm{Y}$

   Where K is multiplier,

   $\mathrm{K} = \frac{1}{1-\mathrm{MPC}}$ or $\mathrm{K} = \frac{1}{\mathrm{MPS}}$

4. a. MPC

   Explanation: 'bY 'denotes induced consumption where 'b' denotes marginal propensity to consume.

5. The components of Aggregate Demand are as follows :

   i. Net exports.
   ii. Household consumption expenditure.

6. **Cash Reserve Ratio** (**CRR**) is a certain minimum amount of deposit that the commercial banks have to hold as **reserves** with the central bank. **CRR** is set according to the guidelines of the central bank of a country.

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

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

Add (i) and (ii)

MPS+MPC=$\frac{\Delta S}{\Delta Y} + \frac{\Delta C}{\Delta Y} = \frac{\Delta S + \Delta C}{\Delta Y}$

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

$MPS + MPC = \frac{\Delta Y}{\Delta Y} = 1$

8. It refers to the expected rate of return from an additional investment. In other words it is the estimsted net returns from an additional investment in a project.

9. Given National Income Y = Rs. 350, Investment, I = Rs. 50; $\overline{C}$ = Rs. 20

   Now, Y = C + bY + I

   350 = 20+ b(350) + 50

   $\Rightarrow$ 350 = 70+ b (350)

   350 -70 = b (350)

   $\Rightarrow$ 280 = b (350), $b = \frac{280}{350} = 0.8$

   MPC = b = 0.8. Therefore Marginal Propensity to Consume is equal to 0.8

10. Average Propensity to Consume (APC) is the ratio of the total consumption to total income and Average Propensity to Save (APS) is the ratio of total saving to total income.

    As we know that, Income

    (Y) = Consumption (C) + Saving (S)

    Dividing throughout by Y, we get,

    $\frac{Y}{Y} = \frac{C}{Y} + \frac{S}{Y}$

    1=APC + APS

    or APC= 1 - APS

    and APS= 1- APC

    i. Average propensity to consume (APC). APC is the ratio of total consumption expenditure to total income. It is the percentage (or ratio) of income which is spent on consumption. Thus, it gives the average consumption-income relationship at different levels of income. It is worked out by dividing total consumption expenditure (C) with total income (Y). Symbolically:

    ii. Symbolically, Average Propensity to Save (APS) = $\frac{\text{Saving (S)}}{\text{Income (Y)}}$

- For instance, if aggregate income of an economy is ₹ 5,000 crores and aggregate consumption is ₹ 4,500 crores, then:
- $APC = \frac{C}{Y} = \frac{4500}{5000} = 0.90$ or 90%
- It shows 90% of income is spent on consumption.

11. Excess demand refers to a situation in which aggregate demand exceeds aggregate supply corresponding to full employment. This gives rise to an inflationary gap which causes a rise in the price level leading to inflation. The two fiscal measures to reduce excess demand are as follows :

    i. **Reduction in Government Expenditure:** It is the principal component of fiscal policy. When there is excess demand government expenditure on public works, education, defence, maintenance on law and order should be reduced. A reduction by government will reduce a pressure on aggregate demand and it will shift downward. The fall in govt expenditure should be equal to the inflationary gap.
    ii. **Increase in taxes:** The Government should levy new taxes and enhance the rate of the existing ones. This will reduce disposable income of the people and will result in reduction in aggregate demand.

12. Given: An economy is in equilibrium,
    ∴ Saving = Investment
    ∵ Y = C + 1
    or $\mathrm{Y} = \overline{\mathrm{C}} + \mathrm{bY} + \mathrm{I}$ ..... (i)
    $\therefore \mathrm{C} = \overline{\mathrm{C}} + \mathrm{bY}$
    On substituting the given variables in equation (i), we get
    $1,000 = \overline{C} + 0.8(1,000) + 100$
    $1,000 = \overline{C} + 800 + 100$
    $\overline{C} = Rs100$
    Autonomous Consumption' = Rs. 100 in an equilibrium economy.

    i. National Income (Y) = Rs 1,000
    ii. Investment Expenditure (I) = Rs 100
    iii. Marginal Propensity to Consume (MPC/b) =0.8

13. Calculation of Marginal Propensity to save

It is given that

Since the economy is in equilibrium level, Saving = Investment

Y = C + I, (as S = I)

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

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

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

$\Rightarrow$ 1000 = 100 + b(1000) + 200

or 1000 = 300 + 1000b

1000 - 300 = 1000b

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

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

Now,Marginal Propensity to Save (MPS) = 1 - MPC

= 1 - 0.7

$\therefore$ ***MPS = 0.3***

i. Investment expenditure (I) = 200
ii. Autonomous Consumption $(\overline{C})$ =100
iii. National Income (Y) = Rs 1,000

14.

Income (Y) (C+S)	**Consumption Expenditure (C) (Y-S)**	**Saving (S) (Y-C)**	**Change in Saving (ΔS)**	**Change in Income (ΔY)**	**Marginal Propensity to Save (MPS)**	**Average Propensity to Save (APS)**
0	80	-80	-	-	-	-
100	140	-40	40	100	0.4	-0.4
200	200	0	40	100	0.4	0
300	240	60	60	100	0.6	0.20
400	260	140	80	100	0.8	0.35

Formulae used:

i. C=Y-S, S = Y-C
ii. $\text{MPS} = \frac{\Delta \text{S}}{\Delta \text{Y}}, \text{APS} = \frac{\text{S}}{\text{Y}}$

15. Deficient demand and excess demand can be distinguished from each other in the following manner:
    i. Deficient demand is a situation, which occurs due to excess of aggregate supply of output over the aggregate demand for output at the level of full employment. On the other hand, excess demand is a situation, which occurs due to the excess of aggregate demand for output over the supply of output at the level of full employment.
    ii. Deficient demand generates a deflationary gap. But excess demand generates an inflationary gap.
    iii. Deficient demand leads to a fall in output, employment, and price level. But excess demand leads only to an increase in the price level. Between the two – excess demand and deficient demand, the latter is worse.