CA INTER

ECONOMICS FOR FINANCE

MISSION **100** SERIES

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CHAPTER 1
DETERMINATION OF NATIONAL INCOME

Question 1:

Find out GDP deflator? Interpret it

Years	Nominal GDP	Real GDP	GDP Deflator
2014	500	500	100
2015	800	650	123.08
2016	1150	800	143.75
2017	1300	950	136.84
2018	1550	1190	130.25
2019	1700	1240	137.10

Answer:

Notice that we use 2014 (base year) prices to compute real GDP of subsequent years. Real GDP has risen over the years from 500 billion in 2014 to 1240 billion in 2019. This indicates that the increase is attributable to an increase in quantities produced because the prices are held constant at base year. A deflator above 100 is an indication of price levels being higher as compared to the base year. From years 2015 through 2019, we find that price levels are higher than that of the base year, the highest being in the year 2016.If the GDP deflator is greater than 100, then nominal GDP is greater than real GDP. If the GDP deflator next year is less than the GDP deflator this year, then the price level has fallen; if it is greater, price levels have increased.

Question 2:

The nominal and real GDP respectively of a country in a particular year are ₹ 3000 Crores and ₹ 4700 Crores respectively. Calculate GDP deflator and comment on the level of prices of the year in comparison with the base year.

Answer:

Nominal GDP = ₹ 3000 Crores

Real GDP = ₹ 4700 Crores

$$GDP\ Deflator = \frac{Nominal\ GDP}{Real\ GDP} \times 100$$

$$\frac{3000}{4700} \times 100 = 63.83$$

The price level has fallen since GDP deflator is less than 100 at 63.83.

Question 3:

Find nominal GDP if real GDP = 450 and price index = 120

Answer:

$$\text{Nominal GDP} = \text{Real GDP} \times \frac{\text{Price Index}}{100}$$

$$\text{Nominal GDP} = 450 \times \frac{120}{100} = 540$$

Question 4:

Suppose nominal GDP of a country in year 2010 is given at ₹ 600 Crores and price index is given as base year 2010 is 100. Now let the nominal GDP increases to ₹ 1200 Crores in year 2018 and price index rises to 110, find out real GDP?

Answer:

$$\text{Real GDP} = \text{Nominal GDP} \times \frac{100}{\text{Price index}}$$

$$= 1200 \times \frac{100}{110} = 1090.9 \text{ Crores}$$

Question 5:

From the following data, calculate NNPFC, NNPMP, GNPMP and GDPMP.

Items	₹ in Crores
Operating surplus	2000
Mixed income of self-employed	1100
Rent	550
Profit	800
Net indirect tax	450
Consumption of fixed capital	400
Net factor income from abroad	-50
Compensation of employees	1000

Answer:

GDP_{MP} = Compensation of employees + mixed income of self-employed + operating surplus + depreciation + net indirect taxes

(Note: operating surplus = rent+ profit + interest)

$\qquad$ =1000 + 1100 + 2000 + 400 + 450 =4950

GNP_{MP} = GDP_{MP} + NFIA = 4950 + (-50) = 4900

NNP_{MP} = GNP_{MP} – consumption of fixed capital = 4900 – 400 = 4500

NNP_{FC} or NI = NNP_{MP} – NIT =4500 – 450 = = 4050 Crores

Question 6:

From the following data, estimate National Income and Personal Income.

Items	₹ . in Crores
Net national product at market price	1,891
Income from property and entrepreneurship accruing to government administrative departments	45
Indirect taxes	175
Subsidies	30
Saving of non-departmental enterprises	10
Interest on National debt	15
Current transfers from government	35
Current transfers from rest of the world	20
Saving of private corporate sector	25
Corporate profit tax	25

Answer:

National Income = Net national product at market price – Indirect taxes + Subsidies = 1,891 – 175 + 30 = 1746crores

Personal Income = National income – Income from property and entrepreneurship accruing to government administrative departments – Saving of non-departmental enterprises + National debt interest + Current transfers from government + Current transfers from rest of the world – Saving of private corporate sector – Corporate profit tax

= 1746 – 45 –10+ 15 + 35 + 20 – 25 – 25 = 1711 Crores

Question 7:

Calculate the aggregate value of depreciation when the GDP at market price of a country in a particular year was ₹ 1,100 Crores. Net Factor Income from Abroad was ₹ 100 Crores. The value of Indirect taxes − Subsidies was ₹ 150 Crores and National Income was ₹ 850 Crores.

Answer:

Given

GDP_{MP} = 1100 Crores, NFIA = 100 Crores, NIT =150 Crores, NNP_{FC} = 850 Crores

∴ GDP_{FC} = GDP_{MP}- NIT = 1100 − 150 = 950

GNP_{FC} = GDP_{FC}+ NFIA = 950 + 100 = 1050

NNP_{FC} = GNP_{FC}- Depreciation

850 = 1050- Depreciation

Depreciation = 1050 − 850 = 200 Crores.

Question 8:

On basis of following information, calculate NNP at market price and Disposable personal income

Items	₹ in Crores
NDP at factor cost	14900
Income from domestic product accruing to government	150
Interest on National debt	170
Transfer payment by government	60
Net private donation from abroad	30
Net factor income from abroad	80
Indirect taxes	335
Direct taxes	100
Subsidies	262
Taxes on corporate profits	222
Undistributed profits of corporations	105

Answer:

NNP at Market price = NNP at factor cost +indirect tax-subsidies

Where NNP at factor cost = NDP_{FC} + NFIA = 14900 + 80=14980

Therefore, NNP $_{MP}$ = Therefore, NNP $_{MP}$ = 14980 + 335 – 262 = 15053

Disposable personal income (DI) = PI- Personal income tax

PI = NI + income received but not earned – income earned but not received
= 14980+ 170+60 +30 -150 -222- 105 = 14763

Therefore, DI= 14763- 100 = 14663 Crores

Question 9:

Calculate National Income by Value Added Method with the help of following data-

Particulars	₹ (in Crores)
Sales	700
Opening stock	500
Intermediate Consumption	350
Closing Stock	400
Net Factor Income from Abroad	30
Depreciation	150
Excise Tax	110
Subsidies	50

Answer:

NVA$_{(FC)}$	= GDP $_{(MP)}$ –Depreciation +NFIA- Net Indirect Tax
Where GVA$_{(MP)}$	= Value of output- intermediate consumption
Value of Output	= Sales+ change in stock
	= 700+ (400-500)=600
GVA$_{(MP)}$	= 600 – 350= 250
Therefore NI	= 250-150 +30-(110-50)
	= 70 Crores

Question 10:

Calculate the Operating Surplus with the help of following data-

Particulars	₹ in Crores
Sales	4000
Compensation of employees	800
Intermediate consumption	600
Rent	400
Interest	300
Net indirect tax	500
Consumption of Fixed Capital	200
Mixed Income	400

Answer:

GVA_{MP} = Gross Value Output$_{MP}$ – Intermediate consumption

= (Sales + change in stock) – Intermediate consumption

= 4000-600 = 3400

GDP_{MP} = GVA_{MP} = 3400 Crores

NDP_{MP} = GDP_{MP} – consumption of fixed capital

= 3400 – 200

= 3200 Crores

NDP_{FC} = NDP_{MP} – NIT

= 3200 – 500 = 2700 Crores

NDP_{FC} = Compensation of employees + Operating surplus + Mixed income

2700 = 800 + Operating Surplus + 400

Operating surplus = 1500 Crores

Why do pensions and other security payments get excluded while calculating National Income?

Answer:

GDP measures what is produced or created over the current time period and excludes all non-production transactions. Only incomes earned by owners of primary factors of production for services rendered in production are included in national income. Transfer payments, both private and government, are made without goods or services being received in return. These payments do not correspond to return for contribution to production because they do not directly absorb resources or create output. Therefore, transfer incomes such as pensions and other social security payments are excluded from national income.

Question 11:

Calculate national income by value added method.

Particulars	(₹ in crores)
Value of output in primary sector	2000
Intermediate consumption of primary sector	200
Value of output of secondary sector	2800
Intermediate consumption of secondary sector	800
Value of output of tertiary sector	1600
Intermediate consumption of tertiary sector	600
Net factor income from abroad	-30
Net indirect taxes	300
Depreciation	470

Answer:

GDP_{MP}= (Value of output in primary sector - intermediate consumption of primary sector) + (value of output in secondary sector - intermediate consumption of secondary sector) + (value of output in tertiary sector - intermediate consumption of tertiary sector)

Value of output in primary sector	=	2000
- Intermediate consumption of primary sector	=	200
+ Value of output in secondary sector	=	2800
- Intermediate consumption in secondary sector	=	800
+ Value of output in tertiary sector	=	1600
- Intermediate consumption of tertiary sector	=	600
GDP $_{MP}$	=	₹ **4800** Crores

NNP_{FC} = GDP_{MP} + NFIA -NIT-Depreciation

NNP_{FC} =National income= 4800+(-30)-300-470= **4000 Crores**

Question 12:

Calculate Net Value Added by Factor Cost from the following data

Items	₹ in Crores
Purchase of materials	85
Sales	450
Depreciation	30
Opening stock	40
Closing stock	30
Excise tax	45
Intermediate consumption	200
Subsidies	15

Answer:

GVA_{MP} = Sales+ change in stock - Intermediate consumption

= 450+ (30-40) -200

= 240Crores

NVA_{MP} = GVA_{MP} – Depreciation

NVA_{MP} = 240-30 = 210 Crores

NVA_{FC} = NVA_{MP} – (indirect tax - subsidies)

= 210 – (45 -15) = 180Crores

Question 13:

Calculate NI with the help of Expenditure method and income method with the help of following data:

Items	₹ in Crores
Compensation of employees	1,200
Net factor income from Abroad	20
Net indirect taxes	120
Profit	800
Private final consumption expenditure	2,000
Net domestic capital formation	770
Consumption of fixed capital	130
Rent	400
Interest	620
Mixed income of self-employed	700
Net export	30
Govt. final consumption expenditure	1100
Operating surplus	1820
Employer's contribution to social security scheme	300

Answer:

By Expenditure method

GDP_{MP} = Private final consumption expenditure + Government final consumption expenditure + Gross domestic capital formation (Net domestic capital formation+ depreciation) + Net export

= 2000 + 1100 + (770+ 130) + 30= 4030Crores

NNP_{FC} or NI = GDP_{MP}- depreciation + NFIA – NIT

= 4030 – 130 + 20 – 120= 3800 Crores

By Income method

NNP_{FC} or NI = compensation of employees+ operating surplus+ Mixed income of self-employed + NFIA

= 1200+ 1820+ 700+ 20= 3740Crores

Question 14:

From the following data calculate (a) Gross Domestic Product at Factor Cost, and (b) Gross Domestic Product at Market price

Items	₹ in Crores
Gross national product at factor cost	61,500
Net exports	(-) 50
Compensation of employees	3000
Rent	800
Interest	900
Profit	1,300
Net indirect taxes	300
Net domestic capital formation	800
Gross domestic capital formation	900
Factor income to abroad	80

Answer:

(a) **GDP at factor cost** = NDP at factor cost + Depreciation

= Compensation of employees+ Rent+ Interest+ Profit +Mixed income+ (Gross domestic capital formation - Net domestic capital formation)

= ₹ 3,000 + ₹ 800 + ₹ 900 + ₹ 1,300 + (₹ 900 - ₹ 800)

= ₹ 6100 Crores

(b) **Gross Domestic Product at Market Price**

= GDP at factor cost + Net Indirect taxes =₹ 6100 + ₹ 300

= 6400 Crores

Question 15:

Calculate NNP$_{FC}$ by expenditure method with the help of following information-

Items	₹ in Crores
Private final consumption expenditure	10
Net Import	20
Public final consumption expenditure	05
Gross domestic fixed capital formation	350
Depreciation	30
Subsidy	100
Income paid to abroad	20
Change in stock	30
Net acquisition of valuables	10

Answer:

Calculation of national income by expenditure method:

GDP$_{MP}$ = Government final consumption expenditure (Public final consumption expenditure) + Private final consumption expenditure + Gross domestic capital formation (Gross domestic fixed capital formation + change stock + Net acquisition of valuables) + Net export (Note: As net import is 20, hence, net export is -20)

= 5 + 10 + [350 + 30 + 10] + (- 20) = 5+10+390-20 = 385 Crores

NNP$_{FC}$ = GDP$_{MP}$ − Depreciation + Net factor income from abroad (Income from abroad − Income paid to abroad) − Net Indirect tax (Indirect tax − subsidies)

= 385 − 30 + [0 − 20] − [0-100] = 385 − 30 − 20 + 100 = 435 Crores.

Question 16:

Calculate 'Sales' from the following data :

Particulars	₹ in Lakhs
Subsidies	200
Opening stock	100
Closing stock	600
Intermediate consumption	3,000
Consumption of fixed capital	700
Profit	750
Net value added at factor cost	2,000

Answer:

Net Value Added at factor cost = Sales + change in stocks - intermediate consumption- depreciation – NIT

2000 = Sales + 500 – 3000 – 700 –(-200)

Sales= 2000- 500 +3000 + 700 – 200= 5000 lakhs

Question 17:

Given the following data, determine the National Income of a country using expenditure method and income method:

Particulars	₹ in Crores
Private Final Consumption Expenditure	1000
Government Final Consumption Expenditure	550
Compensation of Employees	600
Net Exports	-15
Net Indirect Taxes	60
Net Domestic Fixed Investment	385
Consumption of Fixed Capital Formation	65
Net Factor Income from Abroad	-10
Interest	310
Rent	200
Mixed Income of Self-Employed	350
Profit	400

Answer:

Expenditure Method formula:

NDP_{MP} = Private Final Consumption Expenditure + Net Domestic Fixed Investment + Government final consumption expenditure + Net Exports (Exports-imports)

NNP_{MP} = NDP_{MP} + Net factor income from abroad

NNP_{MP} – Indirect Taxes = **NNP $_{FC}$** = **National Income**

Income Method Formula:

NDP_{FC} = Employee compensation + profits + rent + interest + mixed income

NNP_{FC} = NDP_{FC} + NFIA = **National Income**

Particulars	₹ in crores
Expenditure Method	
Private Final Consumption Expenditure	1000
+Government Final Consumption Expenditure	+550
+Net Domestic fixed Investment	+385
+Net Exports	+(-15)
NDP@MP	**=1920**
+Net Factor Income from Abroad	**+(-10)**
NNP@MP	**=1910**
-Net Indirect Taxes	-60
NNP@FC	**= 1850**
Consumption of Fixed Capital	65

Income Method	
Compensation of Employees	600
Interest	+310
Rent	+200
Mixed Income of Self-Employed	+350
Profit	+400
NDP@FC	**=1860**
+Net Factor Income from Abroad	**+(-10)**
NNP@FC	**= 1850**

Question 18:

What will be the value of average propensity to save when –

i.   C = 200 at Y = 1,000

ii. S = 450 at Y = 1,200

Answer:

(i) APS = $\dfrac{S}{Y}$;S = Y – C = 1,000 – 200 = 800. Therefore, APS= $\dfrac{S}{Y}$ = $\dfrac{800}{1000}$ = 0.8

(ii) When S = 450 and Y = 1,200; APS= $\dfrac{S}{Y}$ = 450/1200= = 0.375

Question 19:

Calculate marginal propensity to consume and marginal propensity to save from the following data about an economy which is in equilibrium:

National income = 2500, Autonomous consumption expenditure = 300, Investment expenditure = 100

Answer:

Y = C + I

By putting the value we get, 2500 = C + 100

C = 2500 -100 = 2400

C = $\bar{C}$+ bY

2400 = 300 + 2500 b

2400-300= 2500b

b = 0.84; MPS= 1- MPC = 1- 0.84 = 0.16

Question 20:

An economy is in equilibrium. Calculate national income from the following-
Autonomous consumption = 100; Marginal propensity to save= 0.2; Investment expenditure= 200

Answer:

Y= C + I

Y= $\bar{C}$ + MPC (Y) + I   where MPC = 1-MPS

Y = 100 + 0.8Y + 200= 300 + 0.8Y

Y- 0.8Y = 300

0.2Y=300,

Y= 1500

Question 21:

Suppose the consumption of an economy is given by C = 20+ 0.6 Y and investment I= 10+ 0.2 Y. What will be the equilibrium level of National Income?

Answer:

Y= C + I= 20+ 0.6 Y + 10+ 0.2 Y

Y = 30+ 0.8 Y

Y- 0.8 Y = 30

Y= 150

Question 22:

Suppose the consumption function C= 7+ 0.5Y, Investment is ₹ 100, Find out equilibrium level of Income, consumption and saving?

Answer:

Equilibrium Condition–

Y= C +I, Given C= 7+0.5Y and I= 100

Therefore Y= 7+0.5Y+ 100

Y- 0.5Y= 107

$Y = \dfrac{107}{0.5} = 214$

Y= C+I

214= C+100

C=114

S= Y- C =100

Question 23:

If the consumption function is C= 250 + 0.80 Y and I = 300. Find out equilibrium level of Y, C and S?

Answer:

$$Y = \frac{1}{1-b}(a+\bar{I}) \text{ or } Y = C+I$$

$$Y = \frac{1}{1-.80}(250+300) = \mathbf{2750}$$

$$C = a + \frac{b}{1-b}(a+\bar{I}) \text{ or } C = 250 + 0.80 \text{ Y}$$

C = 250+**0.8(2750**) **C = 2450**

S = Y-C where C = a+ bY

S = Y- (a + bY)

S= -a + (1- b) Y
= - 250 + (1 – 0.80)2750= 300

Or directly,

S=Y- C

S=2750 – 2450= 300.

Question 24:

If saving function S = -10 + 0.2Y and autonomous investment I = 50 Crores. Find out the equilibrium level of income, consumption and if investment increases permanently by ₹ 5 Crores, what will be the new level of income and consumption?

Answer:

S= I

-10 + 0.2Y = 50

0.2Y = 50+ 10

Y = 300 Crores

C= Y- S

Where S= -10 + 0.2 (300) = 50

C= 300-50 = 250 Crores

With the increase in investment by ₹ 5 Crores, the new investment will become equal to ₹ 55 Crores.

S= I

-10 + 0.2Y = 55

Y= 325 Crores

C= 270 Crores

Question 25:

Given the empirical consumption function C= 100+0.75Y and I = 1000, calculate equilibrium level of national income. What would be the consumption expenditure at equilibrium level national income?

Answer:

C= 100+0.75Y and I = 1000,

Y=C+I in equilibrium

$Y= 100+0.75 Y + 1000 => Y = \frac{I}{1-0.75} (100+1000)$

$Y= \frac{I}{1-0.75} (1100) = 1/0.25(1100)= 4400.$

Y=C + I; C= 4400 – 1000 = 3400

Question 26:

In an economy investment expenditure is increased by ₹ 400 Crores and marginal propensity to consume is 0.8. Calculate the total increase in income and saving.

Answer:

MPC = 0.8; ΔI = 400 Crores

Multiplier (K)= 1 /1- MPC = 1 /1- 0.8 =1/ 0.2= 5

MPS= 1 - MPC = 1 – 0.8 = 0.2

Increase in income (ΔY) = K ×ΔI = 5 × 400=2,000 Crores

Increase in saving= ΔY × MPS = 2,000 × 0.2 = 400Crores

Question 27:

An increase in investment by 400 Crores leads to increase in national income by 1,600 Crores. Calculate marginal propensity to consume.

Answer:

Increase in investment (ΔI) = 400 Crores

Increase in national income (ΔY) = 1,600 Crores

Multiplier (K) = $\Delta Y / \Delta I$ = K = 1,600/ 400 = 4

We know, K= 1 /1 −MPC

4= 1 /1 -MPC

$\Rightarrow$ MPC= 0.75

Question 28:

In an economy, investment is increased by Rs 600 Crores. If the marginal propensity to consume is 0.6, calculate the total increase in income and consumption expenditure.

Answer:

MPC = 0.6; ΔI = ₹ 600 Crores

Multiplier (K) = 1/ 1- MPC = 1/ 1 − 0.6 = 1/ 0.4 =25.

Increase in income (ΔY) = K × ΔI = 2.5 × Rs 600 Crores= Rs1,500 Crores

Increase in consumption (ΔC) =ΔY × MPC = Rs1, 500Crores × 0.6 = ₹ 900 Crores.

Question 29:

Suppose in a country investment increases by ₹ 100 Crores and consumption is given by C = 10 + 0.6Y (where C = consumption and Y = income). How much increases will there take place in income?

Answer:

Multiplier = k = $\dfrac{1}{1-MPC}$ k = $\dfrac{1}{1-0.6}$ = 2.5

Substituting the value of k and ΔI value in $\Delta Y= k\Delta I$

ΔY= 2.5 × 100= ₹ 250Crores

Thus, increase in investment by Rs 100 Crores will cause equilibrium income to rise by ₹ 250 Crores.

Question 30:

Suppose we have the following data about a simple economy:
$C = 10 + 0.75Y_d$, $I = 50$, $G = T = 20$ where C is consumption, I is investment, Y_d is disposable income, G is government expenditure and T is tax.
a. Find out the equilibrium level of national income.
b. What is the size of the multiplier?

Answer:

(a)   Since $G = T$, budget of the government is balanced

Substituting the values of C, I and G in Y we have

$Y = C + I + G$

$Y = a + bY_d + I + G$

$Y = 10 + 0.75 (Y - 20) + 50 + 20$

$Y = 10 + 0.75 Y - 15 + 50 + 20$

or, $Y - 0.75 Y = 65$

or, $Y (1 - 0.75) = 65$

or, $0.25 Y = 65$

or, $Y = 65 / .25 = 260$

The equilibrium value of $Y = 260$

(b)   The value of the multiplier is $= 1/ (1 - MPC) = 1/ (1 - b) = 1/ (1 - 0.75) = 1/0.25 = 4$

Question 31:

Suppose the structural model of an economy is given – $C = 100 + 0.75$ Yd; $I = 200$, $G = T = 100$; $TR = 50$, find the equilibrium level of income?

Answer:

$Y = C + I + G$

$Y = 100 + 0.75 Yd + 200 + 100$

$Y = 100 + 0.75(Y - 100 + 50) + 200 + 100$

$Y = 100 + 0.75Y - 75 + 37.5 + 200 + 100$

$Y = 1450$

Or use $Y = \frac{1}{1-b}(a - bT + bTR + I + G)$ to calculate income.

Question 32:

For a closed economy, the following data is given –
Consumption C = 75 + 0.5 (Y-T); Investment I = 80; Total tax T = 25 + 0.1Y; Government expenditure G = 100.
a. Find out equilibrium income?
b. What is the value of multiplier?

Answer:

a) Y = C+ I+G

Y= 75+ 0.5(Y- 25- 0.1Y) + 80+ 100

Y(1-0.5+0.05)= 75-12.5+80+100

$$Y= \frac{1}{1-0.5+0.05}(242.5)$$

Y= 440.91

b)   Multiplier $= \frac{1}{1-b(1-t)}$ = 1/[1-0.5(1-0.1)] = 1.82

Question 33:

Suppose C= 100 + 0.80 (Y- T + TR); I = 200; T= 25+0.1Y; TR= 50; G = 100 Find out equilibrium level of Income?

Answer:

Y = C + I + G

Y= 100 + 0.80 (Y- T + TR) + I+ G

Y=100 +0.80(Y – 25 - 0.1Y + 50) + 200 + 100

Y – 0.80 Y +0.08 Y = 420

Y(1-0.8+0.08) =420

Y= 1500

Question 34:

The consumption function is C = 40 + 0.8Y_d,T= 0.1Y, I = 60 Crores G = 40 Crores, X = 58 and M = 0.05 Y. Find out equilibrium level of income, Net Export, net export if export were to increase by 6.25.

Answer:

$C = 40 + 0.8Y_d$

$C = 40 + 0.8 (Y - 0.1Y)$

$Y = C + I + G + (X - M) Y = 40 + 0.8(Y - 0.1Y) + 60 + 40 + (58 - 0.05Y)$

$Y = 40 + 0.8(0.9Y) + 60 + 40 + 58 - 0.05Y$

$Y - 0.72Y + 0.05Y = 198$

$Y(1 - 0.72 + 0.05) = 198$

$Y(0.33) = 198$

$Y = 198/0.33 = 600$ Crores

Net Export $= X - M = 58 - 0.05Y$

$58 - 0.05 (600) = 58 - 30 = 28$

If exports increase by 6.25, then exports = 64.25

Then, $Y = 40 + 0.8 (Y - 0.1Y) + 60 + 40 + (64.25 - 0.05Y)$

$Y(1 - 0.72 + 0.05) = 204.5$

$Y(0.33) = 204.5$

$Y = 204.5/0.33 = 619.697$

Then import $= .05 \times 619.697 = 30.98$

Net Export $= 64.25 - 30.98 = 33.27$ Crores

Thus, there is surplus in balance of trade as Net Exports are positive.

Question 35:

An economy is characterised by the following equation-

Consumption	$C = 60 + 0.9Y_d$
Investment	$I = 10$
Government expenditure	$G = 10$
Tax	$T = 0$
Exports	$X = 20$
Imports	$M = 10 + 0.05Y$

What is the equilibrium income?

Calculate trade balance and foreign trade multiplier.

Answer:

$Y = C + I + G + (X - M)$

$\quad = 60 + 0.9(Y - 0) + 10 + 10 + (20 - 10 - 0.05Y)$

$\quad = 60 + 0.9\,Y + 30 - 0.05\,Y$

$Y = 600$

Trade Balance $= X - M = 20 - 10 - 0.05(600) = -20$

Thus, trade balance in deficit.

Foreign trade multiplier $= \dfrac{1}{1 - b + m} = \dfrac{1}{1 - 0.9 + 0.05} = 6.66$

Question 36:

Suppose in an economy

$C = 100 + b(Y - 50 - t\,Y)$; $I = 50$; $G = 50$; $X = 10$; $M = 5 + 0.1Y$; MPC $(b) = 0.8$; Proportional income tax rate $(t) = 0.25$

a. Find the equilibrium national income, foreign trade multiplier, equilibrium value of imports.

b. If equilibrium national income falls short of full employment income by ₹ 50, how much government should increase its expenditure to attain full – employment?

Answer:

(a) $Y = C + I + G + X - M$

$\quad Y = 100 + b\,(Y - 50 - t\,Y) + 50 + 50 + 10 - 5 - 0.1Y$

$\quad Y = 100 + 0.8\,(Y - 50 - 0.25Y) + 105 - 0.1Y$

$\quad Y = 100 + 0.8Y - 40 - 0.2Y + 105 - 0.1Y$

$\quad Y = 165 + 0.8Y - 0.2Y - 0.1Y$

$\quad Y = 165 + 0.5Y$

$\quad Y - 0.5Y = 165$

$\quad Y = 165 / 0.5$

Y = 330

OR

$Y = \dfrac{1}{1 - b(1 - t) + m}\,(a - b\,T + I + G + X - \bar{M})$

$$Y = \frac{1}{1-0.8(1-0.25)+0.1}(100-0.8(50)+50+50+10-5)$$

$$Y = \frac{1}{0.5}(100-40+105)$$

$$Y = 165/0.5 = 330$$

Foreign trade multiplier= $\dfrac{1}{1-b(1-t)+m} = \dfrac{1}{1-0.8(1-0.25)+0.1} = 2$

Equilibrium value of imports can be obtained by substituting the equilibrium income in the import function. Thus,

M = 5 + 0.1 Y = 38

(b) Required increase in government expenditure to attain ₹ 50 increase in income can be obtained as under

ΔY = Foreign trade multiplier × ΔG

$$\Delta Y = \frac{1}{1-b(1-t)+m}\Delta G => \Delta Y = 2. \Delta G$$

ΔG = 50/ 2= 25

Question 37:

Suppose the consumption function is C=50+0.8Yd, I=180 crores, G=190, crores, T=0.20Y
(a) Find the equilibrium level of income.
(b) Find the revenue from taxes at equilibrium. Is the government budget balanced?
(c) Find the equilibrium level of income when investment increases by 120 crores.

Answer:

(a) Y= 50+0.8(Y-.20Y) +180+190,

Ye= 420/.36= 1166.66 Crores

(b) T=0.2 (1166.66) = 233.332 Crores

G=190< T= 233.332, thus, budget is not in balance. There exists a budget Surplus

(c) Change in Y= Change in I/ (1-b+bt) = 120/ (1-.8+.16) = 120/.36= 333.33Crores, So new Y equilibrium:

Y new= 1166.66+333.33 = 1499.99 Crores

Question 38:

Given the following equations:

C=50+0.6Yd, I= 160, T =30, G =28, X-M = 20 -0.05 Y

(a) Find the equilibrium level of income.
(b) Find the net exports at equilibrium.
(c) Find the income and net exports when investment increases to 195.

Answer:

(a) $Y = AE$

$Y = C + I + G + (X - M)$

$Y = 50+0.6(Y-T) + I + G + (X - M)$

$240+.55Y=Y$

$Ye = 533.33$ Crores

(b) $X-M=20- .05(533.33) = -6.66$ Crores

(c) Change in I= 35

Change in Y= 35/(1-b+m) =35/ (1-.6+.05) = 77.77 Crores

Thus, Ye= 533.33+77.77 =611.1 Crores

X-M @ Ye= 611.1= 20-.05(611.1) =10.555 Crores

Question 39:

Is country like India unable to estimate their National Income wholly by one method? Give comments

Answer :

Yes, Countries like India are unable to estimate their national income wholly by one method. There are various sectors in an economy and national income generated by these sectors is estimated by using different methods. For example, in agricultural sector, net value added is estimated by the production method, in small scale sector net value added is estimated by the income method and in the construction sector net value added is estimated by the expenditure method.

Question 40.

The equilibrium level of income of an economy is Rs.2,000 crores. The autonomous consumption expenditure is equal to Rs.100 crores and investment expenditure is Rs.500 crores.

Calculate.

i.   Consumption expenditure level of National Income.
ii. Marginal propensity to save and Marginal propensity to consume
iii. Break-even level of Income.

Answer :

i.   Consumption expenditure at equilibrium level of National Income

   Y = C + I [AD = C + I]

   Putting the value of Investment Expenditure (I) = Rs.500 Crores and Income (Y) = Rs. 2000 crores, we get
   C = 2,000 – 500
   C= Rs.1500 Crores

ii. Marginal Propensity to Save (MPS)Consumption function is given by

   C = a + bY
   1500 = 100 + 2000 b
   2000 b = 1400 MPC = 0.7
   MPS = 1-MPC = 1-0.7 = 0.3

iii. Break-even level of Income attained at break-even point = C = Y

   Putting Y = C
   Y = 100 + 0.7 Y
   0.3Y = 100
   Y = 333.33

Question 41:

Define aggregate demand. How do you derive the Keynesian aggregate demand schedule?

Answer :

Aggregate demand is the total quantity of finished goods and services that all sectors (consumers, firms, government and the rest of the world) together wish to buy under different conditions. The components of aggregate demand are consumption demand, investment demand, government spending and net exports at each level of income. While consumption demand is a function of the level of disposable income, the demand for investment, government spending and net exports are autonomous, i.e. these are determined outside the model and are specifically assumed to be independent of income.

The Keynesian aggregate demand schedule is obtained by vertically adding the demand for consumption, investment demand, government spending and net exports at each level of income.

Question 42.

Distinguish between Personal Income and Disposable Income.

Answer :

Personal income is a measure of actual current income receipts of persons from all sources which may or may not be earned from productive activities during a given period of time. It is the income 'actually paid out' to the household sector, but not necessarily earned. Some people obtain income for which no goods and services are provided in return. Examples of this include transfer payments such as social security benefits, unemployment compensation, welfare payments etc. Individuals also earn income which they do not actually receive; for example, undistributed corporate profits and the contribution of employers to social security. Personal income forms the basis for consumption expenditures and is derived from national income as follows:

PI = NI + income received but not earned - income earned but not received.

Disposable personal income is a measure of amount of the money in the hands of the individuals that is available for their consumption or savings. Disposable personal income is derived from personal income by subtracting the direct taxes paid by individuals and other compulsory payments made to the government.

DI = PI - Personal Income Taxes

Question 43.

Distinguish between Nominal and Real GDP.

Answer :

GDP is essentially a quantity measure and therefore when value of output is measured in terms of market prices, it is sensitive to changes in the average price level. The same physical output will correspond to a different GDP level if the average level of market prices changes. That is, if prices rise, GDP measured at market prices will also rise without any real increase in physical output.

This is misleading because it does not reflect the changes in the actual volume of output. To correct this i.e. to eliminate the effect of prices, in addition to computing GDP in terms of current market prices, termed 'nominal GDP' or 'GDP at current prices', the national income accountants also calculate 'real GDP' or 'GDP at constant prices' which is the value of domestic product in terms of constant prices of a chosen base year. Real GDP changes only when production changes. As a rule, when prices are changing drastically, nominal GDP and real GDP diverge substantially. The converse is true when prices are more or less constant.

Question 44.

How are the following transactions treated in national income calculation? What is the rationale in each case?

i.   Electricity sold to a steel plant.
ii. Electric power sold to a consumer household.
iii. A car manufacturer procuring parts and components from the market.
iv. A computer producer buys a robot produced in the same country and uses it in production of computers.
v.   A set of four tyres produced by MRF in 2017 and sold to Suzuki to be put on a 2017 car.

Answer :

i. Being an intermediate good, electricity sold to a steel plant will not be included in national income calculation. The underlying principle is that only finished goods and services which are directly sold to the consumer for final consumption would be included.

ii. Electric power sold to a consumer household would be included in the calculation of GDP since it is a final good consumed by the end user.

iii. The value of parts and components procured from the market by a car manufacturer will not be included in national income calculation because these are intermediate goods used in car production.

iv. The value of the robot bought by a computer producer for use in the production of computers would be included in national income calculation because the computer producer is the "final consumer" of the robot and the robot is not resold in the market after value addition.

v. The value of parts and components procured from the market by a car manufacturer will not be included in national income calculation because these are intermediate goods used in car production. Value is added to the parts and components through the process of production and the same is resold. The value of the final output, namely car, includes the value of the parts and components. Counting parts and components separately will lead to the error of double counting and exaggerate the value of car production. A set of four tyres produced by MRF in 2017 and sold to Suzuki to be put on a 2017 car will not be included in the national income of 2017.

Question 45:

The equilibrium level of real GDP is Rs 1,000 billion, the full employment level of real GDP is Rs 1,250 billion, and the marginal propensity to consume (MPC) is 0.60. How much government spending ("G) would be needed to raise income to full-employment level?

Answer :

K= 1/1-MPC

= 1/1-0.6

= 2.5

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

$$2.5 = \frac{1250 - 1000}{\Delta G}$$

$$\Delta G = 100 \text{ billion}$$

Question 46:

An Economy is characterised by the following equations:

Consumption (C)	=	100+0.9 Yd
Investment (I)	=	100
Government Expenditure (G)	=	120
Tax (T)	=	50
X (Exports)	=	200
M (Imports)	=	100+ 0.15 Y

i. What is the equilibrium Income?
ii. Calculate trade balance.
iii. What is the value of Foreign Trade Multiplier?

Answer :

i. National Income:

Y	= C+I+G+(X-M)
	= (100+0.9Yd) +100+120+200-(100+0.15Y)
	= 100+0.9(Y-T) +100+120+200-100-0.15Y
	= 100+0.9(Y-50) +100+120+200-100-0.15Y

Y	= 375+0.75Y
Y-0.75Y	= 375
0.25Y	= 375
Y	= 375 ×100/25= 1500.00

ii. Trade balance = X- M

= 200- (100+0.15Y)

Substituting the value of Y We have

Trade Balance = 200-100-225= -125

Trade balance is in deficit of 125.

iii. Value of foreign trade Multiplier = 1/1-b+m

Where b marginal propensity to consume, and m is marginal propensity to import. (Here MPC = 0.9 and marginal propensity to Import (m) = 0.15

Foreign trade Multiplier = 1/1-0.9+0.15 = 4

Question 47:

Explain the leakages and injections in the circular flow of income.

Answer:

Leakages: A leakage is an outflow or withdrawal of income from the circular flow. Leakages are money leaving the circular flow and therefore, not available for spending on currently produced goods and services. Leakages reduce the flow of income.

Injections: An injection is a non-consumption expenditure. It is an expenditure on goods and services produced within the domestic territory but not used by the domestic household for consumption purposes. Injections are exogenous additions to the circular flow and add to the total volume of the basic circular flow. In the two-sector model with households and firms, household saving is the only leakage and investment is the only injection. In the three -sector model which includes the government, saving and taxes are the two leakages and investment and government purchases are the two injections.

In the four-sector model which includes foreign sector also, saving, taxes, and imports are the three leakages; investment, government purchases, and exports are the three injections.

The state of equilibrium occurs when the total leakages are equal to the total injections that occur in the economy. Savings + Taxes + Imports = Investment + Government Spending + Exports

Question 48:

Calculate Personal Income from the following data:

Particulars	In Crore
Undistributed profits of corporation	50
Net domestic product accruing to private sector	700
Corporation tax	65
Net factor income from abroad	10
Net current transfer from rest of the world	20
Net current transfer from the government	25
Interest on national debt	40

Answer :

Personal Income = Net domestic product accruing to private sector + Net factor

income from abroad + Net current transfers from government + Net current transfers from rest of the world + interest on National debt – Corporation tax – Undistributed profits of corporations

= 700 + 10 + 25 + 20 + 40 - 65 - 50 = 680 Crores

Question 49:

Calculate Gross National Disposable income from the following data (in ₹ Crores)

NDP at factor cost	6000
Net factor income to abroad	- 300
Consumption of fixed capital	400
Current transfers from government	200
Net current transfers from rest of the world	500
Indirect taxes	700
Subsidies	600

Answer :

Gross National Disposable Income (GNDI)= GNPMP + Net current transfer received from rest of the world. Net current transfer received from rest of the world is the difference between the current transfer received from rest of the world and current transfers paid to rest of the world. Current transfers from government are not included as they are simply transfers within the economy.

Gross National Disposable Income = (National Consumption Expenditure) + (Gross National Saving)

= (Government final consumption expenditure+ expenditure) + (Gross National Saving.)

Calculation:

= NDP at factor cost + Consumption of fixed capital =GDP at factor cost

GDP at factor cost + Net factor income to abroad = GNP at factor cost

GNP at factor cost + (indirect taxes – subsidies) = GNP at market prices

GNP at market prices + Net current transfers from rest of the world

= Gross National Disposable income

= (6000+400) + (- 300) + (700-600) + 500

= 6400 - 300 + 100 + 500 = 6700 Crores

Question 50:

What would happen if aggregate expenditures were to exceed the country's economy's production capacity?

Answer :

Aggregate demand (AD) is the sum of all planned expenditures for the entire economy. When aggregate expenditures exceed an economy's production capacity at full employment level; the resulting strain on resources creates "demand-pull" inflation or higher price level. Nominal output will increase, but it merely reflects higher prices, rather than additional real output.

Question 51:

i.   How the autonomous expenditure multiplier is stated in four sector model?

ii. If an economy has a flat aggregate expenditure function, what would be the nature of the multiplier?

Answer :

i. The autonomous expenditure multiplier in a four sector model includes the effects of foreign transactions and is stated as 1/1-b + v where v is the propensity to import which is greater than zero. The greater the value of v, the lower will be the autonomous expenditure multiplier.

ii. The marginal propensity to consume (MPC) is the determinant of the value of the multiplier and that there exists a direct relationship between MPC and the value of multiplier. Higher the MPC, more will be the value of the multiplier and vice-versa. A flat aggregate expenditure function implies lower MPC and higher MPS for all levels of income. Therefore, the value of multiplier will be small.

Question 52:

Explain the measurement of Net Domestic Product at market price.

Answer

Net domestic product at market prices (NDPMP) is a measure of the market value of all final economic goods and services, produced within the domestic territory of a country by its normal residents and non-residents during an accounting year less depreciation. The portion of the capital stock used up in the process of production or depreciation must be subtracted from final sales because depreciation represents capital consumption and therefore accost of production.

$NDP_{MP} = GDP_{MP} - Depreciation$

Question 53:

Calculate the national income using income and expenditure method from the data given below:

Items:	₹ in crores
(i) Government purchase of goods and services	7,000
(ii) Indirect tax	9,000
(iii) Subsidies	1,800
(iv) Gross business fixed capital	13,000
(v) Inventory Investment	3,000
(vi) Consumption of fixed capital	4,000
(vii) Personal consumption expenditure	51,000
(viii) Export of goods and services	4,800
(ix) Net factor income from aboard	(-) 300
(x) Imports of goods and services	5,600
(xi) Mixed income of self employed	28,000
(xii) Rent, interest and profits	10,000
(xiii) Compensation of employees	24,000

Answer:

Income Method

NNP FC or National Income = Compensation of employees + Operating Surplus (rent + interest+ profit) + Mixed Income of Self- employed+ Net Factor Income from Abroad

= 24000 + 10,000 + 28000 + (-300)

= ₹ 61700 Cr

Expenditure Method:

GDP=C+I+G+(X−M)

= personal consumption expenditure (c) + gross business fixed capital + inventory management (I) + govt purchases (G) + (exports- imports)

GDPMP= 51000+7000+13000+3000+(4800-5600)

= ₹ 73200cr

GNPmp = 73200+Net factor Income from Abroad

=₹ 73200+(-300) **= ₹ 72900cr**

NNPmp = ₹72900 – 4000 **= ₹ 68900 cr**

NNPfc or National Income = ₹ 68900-7200 **= ₹ 61700cr**

Question 54:

The equation of 'consumption function' of an economy is as follows:

C = ₹450 + 0. 70 y

You are required to compute the following:

(1) Consumption when disposable income (y) is ₹3,500 and ₹5,800.

(2) Saving when disposable income (y) is ₹3,500 and ₹5,500.

(3) Amount induced when disposable income is ₹3,200.

Answer:

C = 450 + 0.70y

(1) Consumption when disposable income (y) is ₹ 3,500 and ₹ 5800C = 450 + 0.70 × 3500 = **2900**

C = 450 + 0.70 × 5800 = **4510**

(2) Saving when disposable income (y) is ₹ 3500 & ₹ 5,500 When y = ₹ 3500, C = ₹2900

S = y-c = 3500-2900= **600**

When y = 5500

C = 450 + 0.70 ×5500 = 4300

S = y-c = 5500-4300= **1200**

(3) Amount induced when disposable income is ₹ 3200

Y = C+I

C= 450 + 0.70× 3200 = 2690

3200 = 2690 + I

I = 510

Question 55:

The Nominal GDP and Real GDP of a country in the financial year 2018-19 were ₹ 1,500 crore and ₹ 1,200 crore respectively, you are required to calculate:

(i)   GDP deflator in the financial year 2018-19 and comment.

(ii)   Inflation rate in the financial year 2019-20 assuming. GDP deflator rate in this year is 140 as compared to the year 2018-19.

Answer:

$$\text{GDP Deflator} = \frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$$

$$= \frac{1,500}{1,200} \times 100 = 125$$

GDP deflator for 2018-19 = 125

Comment: A deflator above 100 is an indication of price levels being higher as compared to base year.

Question 56:

The following information is related to an economy:

Particulars	Amount in (₹) crore
Domestic Sales	3600
Opening Stock	800
Exports	1000
Depreciation	300
Closing Stock	200
Net indirect tax	400
Intermediate consumption	600
Net factor income from abroad	10

Calculate the followings:

(i)   Gross Value of Output (GVOMP)

(ii) Gross Value Added (GVAMP)

(iii) Net Value Added (NVAMP)

(iv) Net Domestic Product (NDPFC)·

(v) Net National Product (NNPFC)

Answer:

(i)   Gross Value of Output (GVO$_{MP}$) = (Domestic Sales + Exports) + Change in stock

= 3,600+1,000-600= **₹ 4000 cr**.

(ii) Gross Value Added (GVA$_{MP}$) = GVO$_{MP}$ – Intermediate Consumption

= 4000-600= **₹ 3400cr.**

(iii) Net Value Added (NVA$_{MP}$) = GVA$_{MP}$ – Depreciation

= 3400 – 300= **₹ 3100 cr.**

(iv) Net Domestic Product (NDP$_{FC}$) = NVA$_{MP}$ — Net Indirect Taxes

= 3100– 400 =₹ **2700 cr.**

(v) Net National Product (NNP$_{FC}$) = NDP$_{FC}$ + Net Factor Income from Abroad (NFIA)

= 2700+10= ₹ **2710 cr.**

Question 57:

What do you mean about gross investment of a country?

Answer:

Gross Investment: Gross Investment is that part of country's total expenditure which is not consumed but added to the nation's fixed tangible assets and sto cks. It consists of the acquisition of fixed assets and the accumulation of stocks. The stock accumulation is in the form of changes in stock of raw materials, fuels, finished goods and semi -finished goods awaiting completion.

Thus, gross investment includes:
• final expenditure on machinery and equipment,
• own account production of machinery and equipment,
• expenditure on construction,
• expenditure on changes in inventories, and
• expenditure on the acquisition of valuables such as, jewellery, works of art.

Question 58:

How is aggregate consumption function affected, if:
i. An impending war is expected to result in shortage of goods and an adoption of a rationing system,
ii. Increased cost for steel, oil etc. are expected to result in higher prices for consumer goods, or
iii. The leadership assures that economic policy is bringing the recession to an end.

Answer:

Effect on Aggregate Consumption Function:
i. If an impending war is expected, it will result in shortage of goods and an adoption of a rationing system is essential. As war happens supply will be less, and demand will be high which will lead to increase in prices thereby reducing the disposable income causing reduction in the aggregate consumption. This will shift the aggregate consumption function downwards.
ii. The price of goods and services is determined by the interaction of supply and demand of goods and services. If cost of steel and oil prices go up, naturally the producer is not having any incentive to produce at the earlier levels. This reduces the supply in the economy

resulting in increased demand and prices will go up causing the aggregate consumption function to decline.

iii. The leadership is assuring that economic policy is bringing the recession to an end. But economic policies carry a gestation period to become effective and giving both short-term and long-term result. So mere assurance will not increase the aggregate consumption function till the effect is realised by both the producer and consumer and the price level is maintained at an equilibrium level where the consumer can consume at the pre-recession stage and producer too.

Question 59:

Following information, relating to a particular financial year, are given as under:

	₹ in Crores
Sales	3,500
Intermediate consumption	400
Closing Stock	300
Opening Stock	200
Net indirect tax	600
Mixed income	200
Consumption of fixed capital	400
Compensation of employees	400

Compute: (i) GVAMP (ii) NDPMP (iii) Operating Surplus

Answer:

(i) **GVA_{MP} = Sales + Change in stock - Intermediate Consumption**

= 3,500 + (300 – 200) – 400

= ₹ 3,200 Crores

(ii) **NDP_{MP}** = GDP_{MP} – Consumption of Fixed capital

= 3,200 – 400   [here GDP_{MP} = GVA_{MP}]

= ₹ 2,800 Crores

(iii) NDP_{FC} = NDP_{MP} – Net Indirect Taxes

= 2800 – 600 = ₹ 2,200 Crores

NDP_{FC} = Compensation of employees + Operating surplus + Mixed Income

2,200 = 400 + Operating Surplus + 200

**Operating Surplus = 2,200 – 600 = ₹ 1600 Crores**

Question 60:

Explain the 'Circular Flow of Income'.

Answer:

Circular Flow of Income

Circular flow of income is a process where the national income and expenditure of an economy flow in a circular manner continuously through time. Savings, expenditures, exports, and imports are various components of circular flow of income which are (shown in the figure) in the form of currents and cross currents in such a manner that national income equals national expenditure.

Circular Flow in Two Sector Economy
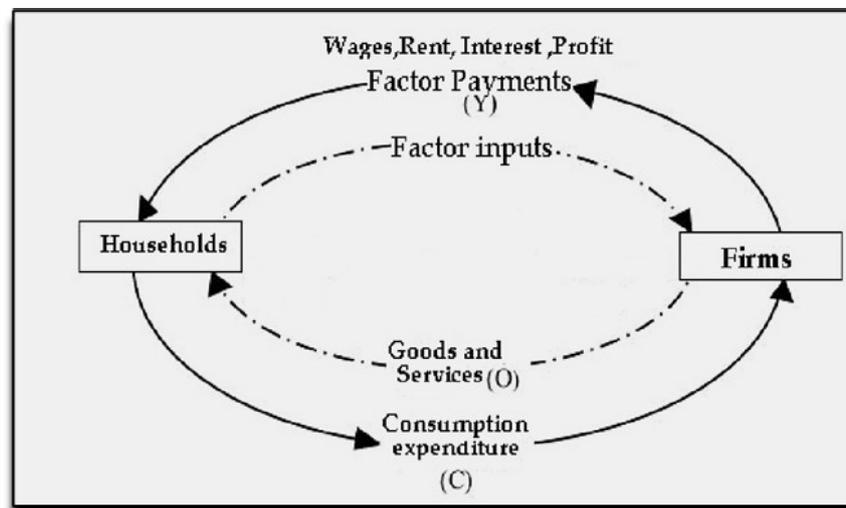
The circular broken lines with arrows show factor and product flows and present 'real flows' and the continuous line with arrows show 'money flows' which are generated by real flows. These two circular flows - real flows and money flows - are in opposite directions and the value of real flows equal the money flows because the factor payments are equal to household incomes. There are no injections into or leakages from the system. Since the whole of household income is spent on goods and services produced by firms, household expenditures equal the total receipts of firms which equal the value of output.

Alternatively:

Circular Flow of Income refers to the continuous circulation of production, income generation and expenditure involving different sectors of the economy. There are three different inter linked phases in a circular flow of income namely, production, distribution and disposition as follows:

i. In the production phase, firms produce goods and services with the help of factor services.

ii. In the income or distribution phase, the flow of factor incomes in the form of rent, wages, interest and profits from firms to the household occurs.

iii. In the expenditure or disposition phase, the income received by different factors of production is spent on consumption of goods and services and investment goods.

Question 61:

What is aggregate Demand Function?

Answer:

Aggregate Demand Function

Aggregate demand (AD) is what economists call total planned expenditure. In a simple two-sector economy, the ex-ante aggregate demand (AD) for final goods or aggregate expenditure consists of only two components:

(i) Ex ante aggregate demand for consumer goods (C), and
(ii) Ex ante aggregate demand for investment goods (I).
Thus, AD = C + I   (i)

Of the two components, consumption expenditure accounts for the highest proportion of the GDP. In a simple economy, the variable I is assumed to be determined exogenously and constant in the short run. Therefore, the short-run aggregate demand function can be written as:

$$AD = C + \bar{I}   \text{(ii)}$$
Where $\bar{I}$ = constant investment.

From the equation (ii), we can infer that, in the short- run, AD depends largely on the aggregate consumption expenditure.

Question 62:

Calculate Multiplier and Marginal Propensity to Consume (MPC) with the help of following information:

Particulars	2020-21 (₹ in Crore)	2021-22 (₹ in Crore)
Investment	1600	2000
National Income	5000	6600

Answer:

Calculation of Marginal Propensity to Consume (MPC)

Increase in investment

$\Delta I = 2,000 - 1,600 = ₹ 400$ Crore

Increase in National Income

$= \Delta Y = 6,600 - 5,000$

$= ₹ 1,600$ Crore

Multiplier $k = \dfrac{\Delta y}{\Delta I} = \dfrac{1,600}{400} = 4$

We know that $k = \dfrac{1}{1-MPC}$

$4 = \dfrac{1}{1-MPC}$

$4(1-MPC) = 1$

$4 - 4MPC = 1$

$3 = 4MPC$

$MPC = \dfrac{3}{4} = 0.75$

MPC = 0.75

Question 63:

Following information, relating to an economy of a country, for the current year are as under:

Particulars	(In Crores ₹)
GDP MP	6550
Gross Investment *(Including Business fixed investment, Residential construction investment, Public & Inventory investment)*	1000
Government Purchases of goods and services	1500
Exports	400
Imports	350
GNPMP	6600
Indirect Taxes	200
Depreciation	200

Find out:

(A) Private Final Consumption Expenditure

(B) Net Factor Income from Abroad

(C) NNP_{FC} or National Income

Answer:

(A) **Private Final Consumption Expenditure:**

GDP_{MP} = Private Final Consumption expenditure + Government final consumption expenditure + Gross domestic Capital formation + Net Export

6,550 = Private Final Consumption expenditure + 1,500+1,000+50

Private Final Consumption expenditure = 6550-2550 = ₹ **4000 crores**

(B) **Net Factor Income from Abroad:**

= GNP_{MP} – GDP_{MP}

= 6,600 – 6,550

= ₹ **50 crores**

(C) **NNP_{FC} or National Income:**

= GDP_{MP} – depreciation + NFIA – NIT

= 6,550 – 200+50-200

= ₹ **6,200 crores**

Question 64:

The equilibrium level of income (Y) of an economy is ₹ 2,000 crores.

The autonomous consumption expenditure (a) is equal to ₹ 100 crores and investment expenditure (I) is ₹ 500 crores.

You are required to calculate:

(i) Consumption expenditure at equilibrium level of National Income.
(ii) Marginal Propensity to Consume (MPC) and Marginal Propensity to Save (MPS).
(iii) Equilibrium level of income if saving function is S = - 10 + 0.2Y.

Answer:

(i) **Consumption expenditure at equilibrium level:**

Y = C + I

C = Y-I

By putting value, we get

= ₹ 2000 – ₹ 500

C = ₹ 1500 Crores

(ii) **MPC and MPS:**

C = a + bY

1500 = 100 + b×2000

b = 1400 ÷ 2000

= 0.7

MPC (b) = 0.7

MPS = 1- MPC

= 1-0.7

MPS = 0.3

(iii) **Equilibrium level of income**

S = Y – C		S = I
-10 + 0.2Y = Y – C		-10 + 0.2Y = 500
0.2Y – Y = -C + 10	**(OR)**	0.2Y = 500 + 10
-0.8Y = -1500 + 10		0.2Y = 510
0.8Y = 1490		Y = 510/0.2
Y = 1490/0.8 = ₹ 1862.5 crores		**Y = ₹2550 crores**

Question 65:

The following data is available for a company:

Particulars	Amount· (in ₹ Crore)
Gross Value Added (GVAMP)	2,750
Sales	3,450
Closing Stock	750
Interest	200
Opening Stock	900
Net indirect taxes	550
Rent	310
Mixed income	380
Compensation to employees	600
Consumption of fixed capital	320

Based on the above information, compute the following:

(i)   Amount of Intermediate Consumption.
(ii) Net Domestic Product at Factor Cost (NDPFC),
(iii) Profit of the company.

Answer:

(i) GVA_{MP} = Sales + Change in Stock – Intermediate Consumption

2750 = 3450 + (750-900)- Intermediate Consumption

2750 = 3300-Intermediate Consumption

Intermediate Consumption = 3300-2750

Intermediate Consumption= ₹ 550 Crores

(ii) Net Domestic Product at Factor cost = NDP_{MP} - Net indirect taxes

NDP_{MP} = GVA_{MP} - Consumption of fixed capital

= 2750 – 320 = ₹2430 Crores

NDP_{FC} = 2430 – 550 = ₹1880 crores

(iii) Operating surplus = Rent + Interest + Profit

Profit = Operating surplus – Rent - Interest

NDP_{FC} = Compensation to employees + Operating surplus + Mixed income

1880 = 600 + Operating surplus + 380

Operating surplus = 1880 – 600 – 380 = ₹900 Crores

Profit = 900 – 310 - 200 = ₹ 390 crores

Question 66:

How are the following transactions treated in National Income Calculation?

A. B sold a used car to C and receive ₹ 80,000. How much of the sale proceeds will be included in National Income calculation?
B. Fees paid to real estate agents and lawyers.
C. Electric power sold to a consumer household.

Answer:

(A) **Sale of used car**: No part of the used car sales proceed of Rs80,000 will be included in national income calculation because sales of used car represents transfer of existing assets which was proceed during some earlier year and was accounted in the national Income calculation of that year

(B) **Fees paid to real estate agents and lawyers**: Fees paid to real estate agents and lawyers represent current production and, therefore, are included in national income.

(C) **Electric power sold to a consumer household**: Electric power sold to a consumer does not require any further processing and does not undergo any further transformation before use. Once a final goods has been sold, it passes out of the active economic flow.

CHAPTER 2
PUBLIC FINANCE

Question 1:

Assume that the MPC is equal to 0.6.

(a) What is the value of government spending multiplier?

(b) What impact would a 50 billion increase in government spending have on equilibrium GDP?

(c) What about a 50 billion decrease in government spending?

Answer:

(a) $\dfrac{1}{MPS} = \dfrac{1}{1-MPC}$

$= 1/(1-0.6) = 1/0.4 = \mathbf{2.5}$

(b) &(c) Change in GDP = Initial Change in Spending x $(1-MPC)$

$50 \times 2.5 = 125$ billion

Question 2:

If country X has a marginal propensity to consume of 0, what is the value of fiscal multiplier?

Answer:

Given MPC=0; MPS = (1-0) = 1
The spending multiplier =1. There is no multiplier effect

Question 3:

Average per capita income of country Y rose from 42,300 to 50,000 and the corresponding figures for per capita consumption rose from 35,400 to 42,500. Find the spending multiplier for this economy.

Answer:

Spending multiplier = 1/(1-MPC).

MPC = Increase in Consumption/ Increase in Income

= (42,500−35,400)/ (50,000 − 42,300)

= 0.922

Multiplier = 1/(1-0.922) = 1/(0.078) = 12.83

Question 4:

What would be the impact on GDP if both government spending and taxes are increased by 5 billion when the MPC is 0.9?

Answer:

MPC= 0.9; MPS=0.1. Therefore, spending Multiplier = $\frac{1}{1-b}$= 10

Change in GDP=Initial Change in Spending x 10 = 5x 10 = 50 billion

Tax multiplier = $\frac{-b}{1-b}$= - 9

Decrease in GDP = Initial Change in Tax x9 = 45 billion

The net result is that output increases by 5 billion.

Question 5:

For an Economy with the following specifications
Consumption, C = 50+0.75 Y_d
Investment, I = 100
Government Expenditure, G = 200
Transfer Payments, R= 110
Income Tax = 0.2Y
Calculate the equilibrium of income and the value of expenditure multiplier.

Answer:

The level of disposable income Y_d is given by

Y_d =   Y-Tax + Transfer Payments, Where, Transfer Payment = 110

    =   Y -0.2 Y +110 = 0.8Y +110,

and C =   50+0.75 Y_d

    =   50+0.75(0.8Y +110)(where Y_d = 0.8Y +110)

    =   50+(0.75×0.8Y) + (0.75X110) =132.50+0.6Y

C   =   132.50+0.6 Y

Now Y =   C+I+G, Where C = 132.50+0.6Y, I = 100 , G = 200(Given)

Y   = (132.50+0.6Y)+100+200

    = 432.50+0.6Y

Y-0.6Y= 0.4Y = 432.50

or Y   = 432.50/0.4 = 1,081.25 Crores

$$\text{Expenditure Multiplier} = \frac{1}{1-b} = \frac{1}{1-0.6} = 2.5 \left(\text{Multiplier in closed economy} \frac{1}{1-b} \right)$$

$$\left(\text{Here b = MPC} = \frac{\Delta C}{\Delta Y} \right)$$

Question 6:

Define Social Good? What is the similarity and dissimilarity between Social Goods and Common Pool Resources?

Answer :

A Social Good is defined as one which all enjoy in common in the sense that each individual's consumption of such a good leads to no subtraction from any other individuals consumption of that good. Similarity between Social Goods and Common Pool Resources is that both are nonexcludable whereas dissimilarity is seen in their nature that is Social Goods are non-rival which means that the use of these goods does not reduce the availability for others, while Common Pool Resources are rival in nature which means that the use of these resources reduce the availability for others.

Question 7:

You are the Finance Minister of India. You find that the country is passing through recession. As Finance Minister what suggestions will you make to the Government of India to bring the country out of recession.

Justify your answer.

Answer :

A recession is said to occur when overall economic activity declines or in other words, when the economy contracts. As a Finance Minister it is my responsibility to frame / suggest fiscal policy for the country at the time of recession or inflation so as to take the country out of it.

Fiscal policy involves the use of government spending, taxation and borrowing to influence both the pattern of economic activity and level of growth of aggregate demand, output and employment.

Fiscal measures could be discretionary and non-discretionary.

During recession, the government has to use discretionary fiscal policies. Discretionary fiscal policy refers to deliberate policy actions on the part of the government to change the levels of expenditure and taxes to influence the level of national output, employment and prices. Since GDP = C + I + G + NX, governments can influence economic activity (GDP), by controlling G (Government Expenditure) directly and influencing C(Private Consumption), I(Private Investment), and NX (Net Exports) indirectly, through changes in taxes, transfer payments and expenditure.

During a recession as a part of government I may initiate a fresh wave of public works. These will involve employment of labour as well as purchase of multitude of goods and services. These expenditures directly generate incomes to labour and suppliers of material and services. Apart from this, there is also indirect effect in the form of working of multiplier.

Besides this, as a finance minister, I may reduce corporate and personal income tax to overcome contractionarily tendencies in the economy. A tax cut increases disposable income of households.

Their inclination to spend a portion of additional disposable income determined by their marginal propensity to consumer and multiplier effect of spending would set out a chain reaction of spending, increased income and consequent increases output. Moreover, these can provide firms and households incentives to engage in investment.

Question 8:

Suppose a fertilizer plant dumps effluents into a river, why is it called an externality?

Answer :

When a fertilizer plant dumps effluents into a river, there is negative externality because it adversely affects the quality of water and reduces the welfare of the people who use it. The users of polluted water are third parties and are not in any way connected with the economic transactions that take place within the fertilizer factory. The fertilizer producer does not bear the true cost of wastewater to the society and the fertilizer prices do not include the costs borne by these third parties. Therefore, the fertilizer producer will have an incentive to produce too much effluents. The price of fertilizer which is equal to the marginal cost of production will be lower than what it would be if the cost of production reflected the effluent cost also.

Question 9:

Why is it difficult for the government to determine the optimal quantity of a public good?

Answer :

It is difficult for the government to determine the optimal quantity of a public good because consumer preferences for these goods are not revealed in the market and a price cannot be charged since they are non rival and non-excludable in consumption and are characterized by indivisibility.

Question 10:

Distinguish between 'pump priming' and 'compensatory spending'

Answer :

A distinction is made between the two concepts of public spending during depression, namely, the concept of 'pump priming' and the concept of 'compensatory spending'. Pump priming involves a

one-shot injection of government expenditure into a depressed economy with the aim of boosting business confidence and encouraging larger private investment. It is a temporary fiscal stimulus in order to setoff the multiplier process. The argument is that with a temporary injection of purchasing power into the economy through a rise in government spending financed by borrowing rather than taxes, it is possible for government to bring about permanent recovery from a slump. Pump priming was widely used by governments in the post-war era in order to maintain full employment; however, it became discredited later when it failed to halt rising unemployment and was held responsible for inflation.

Compensatory spending is said to be resorted to when the government spending is deliberately carried out with the obvious intention to compensate for the deficiency in private investment.

Question 11:

What should be the public revenue and expenditure policy during recession?

Answer :

Government's fiscal policy for stabilization purposes attempts to direct the actions of individuals and organizations by means of its expenditure and taxation decisions.

During recession, an expansionary fiscal policy is resorted to by government through increased aggregate spending to compensate for the deficiency in effective demand.

Increased government expenditure (for example on building infrastructure) injects more money into the economy, initiate a series of productive activities, stimulates overall economic activities, employment and demand.

Production decisions, investments, savings etc can be influenced by government's tax policies. During recession, the government's tax policy is framed to encourage private consumption and investment. A general reduction in income taxes leaves higher disposable incomes with people inducing higher consumption. Low corporate taxes increase the prospects of profits for business and promote further investment.

Question 12:

What do you mean by 'Global Public goods'. Explain in brief.

Answer :

Global Public Goods are those public goods with benefits /costs that potentially extend to everyone in the world. These goods have widespread impact on different countries and regions, population groups and generations throughout the entire globe. Global Public Goods may be:

- final public goods which are 'outcomes' such as ozone layer preservation or climate change prevention, or

- intermediate public goods, which contribute to the provision of final public goods. e.g. International health regulations

The distinctive characteristic of global public goods is that there is no mechanism (either market or government) to ensure an efficient outcome.

The World Bank identifies five areas of global public goods which it seeks to address: namely, the environmental commons (including the prevention of climate change and biodiversity), communicable diseases (including HIV/AIDS, tuberculosis, malaria, and avian influenza), international trade, international financial architecture, and global knowledge for development.

Question 13:

Justify the role of public debt as an instrument of Fiscal Policy.

Answer:

A rational policy of public borrowing and debt repayment is a potent weapon to fight inflation and deflation. Borrowing from the public through the sale of bonds and securities curtails the aggregate demand in the economy. Repayments of debt by governments increase the availability of money in the economy and increase aggregate demand. Public debt may be internal or external; when the government borrows from its own people in the country, it is called internal debt. On the other hand, when the government borrows from outside sources, the debt is called external debt. Public debt takes two forms namely, market loans and small savings.

Question 14:

Describe various types of externalities which cause market failure.

Answer:

There are four major reasons for market failure which are: Market power, Externalities, Public goods, and Incomplete information. Sometimes, the actions of either consumers or producers result in costs or benefits that do not reflect as part of the market price. Such costs or benefits which are not accounted for by the market price are called externalities because they are "external" to the market.

The four possible types of externalities are:

- **Negative production externalities**: A negative externality initiated in production which imposes an external cost on others may be received by another in consumption or in production. As an example, a negative production externality occurs when a factory which produces aluminum discharges untreated waste water into a nearby river and pollutes the water causing health hazards for people who use the water for drinking and bathing.

Additionally, there is no market in which these external costs can be reflected in the price of aluminum.

- **Positive production externalities**: A positive production externality is received in consumption when an individual raises an attractive garden and the persons walking by enjoy the garden. These external effects were not in fact considered when the production decisions were made.

- **Negative consumption externalities**: Negative consumption externalities are extensively experienced by us in our day-to-day life. Such negative consumption externalities initiated in consumption which produce external costs on others may be received in consumption or in production

- **Positive consumption externalities**: A positive consumption externality initiated in consumption that confers external benefits on others may be received in consumption or in production. For example, if people get immunized against contagious diseases, they will confer a social benefit to others as well by preventing others from getting infected.

The presence of externalities creates a divergence between private and social costs of production. When negative production externalities exist, social costs exceed private cost because the true social cost of production would be private cost plus the cost of the damage from externalities. Negative externalities impose costs on society that extend beyond the cost of production as originally intended and borne by the producer. If producers do not take into account the externalities, there will be over- production and market failure.

Externalities cause market inefficiencies because they hinder the ability of market prices to convey accurate information about how much to produce and how much to consume.

Question 15:

Define Common Access Resources. Why they are over-used? Explain.

Answer:

Common access resources or common pool resources are a special class of impure public goods which are non-excludable as people cannot be excluded from using them. These are rival in nature and their consumption lessens the benefits available for others. They are generally available free of charge. Some important natural resources fall into this category. Examples of common access resources are fisheries, forests, backwaters, common pastures, rivers, sea, backwaters biodiversity etc.

Since price mechanism does not apply to common resources, producers and consumers do not pay for these resources and therefore, they overuse them and cause their depletion and degradation. This creates threat to the sustainability of these resources and, therefore, the availability of common access resources for future generations.

Question 16:

Explain the features of Contractionary Fiscal Policy.

Answer:

Contractionary fiscal policy refers to the deliberate policy of government applied to curtail aggregate demand and consequently the level of economic activity. In other words, it is fiscal policy aimed at eliminating an inflationary gap. This is achieved by adopting policy measure that would result in the aggregate demand curve (AD) shifting to the left so the equilibrium may be established at the full employment level of real GDP. This can be achieved either by:

- With decrease in government spending, the total amount of money available in the economy is reduced which in turn trim down the aggregate demand.
- An increase in personal income taxes reduces disposable incomes leading to fall in consumption spending and aggregate demand. An increase in taxes on business profits reduces the surpluses available to businesses, and as a result, firms' investments shrink causing aggregate demand to fall. Increased taxes also dampen the prospects of profits of potential entrants who will respond by holding back fresh investments.
- A combination of decrease in government spending and increase in personal income taxes and/or business taxes.

Question 17:

Discuss the role of government interventions in minimizing the market power .

Answer:

Role of Government intervention in minimizing the market power: Market power is an important factor that contributes to inefficiency because it results in higher prices than competitive prices. Because of the social cost imposed by monopoly governments intervene by establishing rules and regulations designed to promote competition and prohibit actions that are likely to restrain competition. These legislations differ from country to country.

For Eq. in India, we have the Competition Act,2002 (as amended by the Competition (Amendment) Act, 2007) to promote and sustain competition in markets. The Anti - trust laws in US and the Competition Act, 1998 of UK etc. Such legislations generally aim at prohibiting contracts, combinations and collusions among producers or traders which are in restraint of trade and other anticompetitive actions such as predatory pricing.

Question 18:

How does the fiscal policy redress the inequalities of income and wealth of a country?

Answer:

Redressal of inequalities of income & wealth through Fiscal Policy: Fiscal policy involves the use of government spending, taxation and borrowing to influence both the pattern of economic activity and level of growth of aggregate demand, output, and employment. Many developed and developing economies are facing the challenge of rising inequality in incomes and opportunities. The distribution of income in the society is influenced by fiscal policy both directly and indirectly. While current disposable incomes of individuals and corporates are dependent on direct taxes, the potential for future earnings is indirectly influenced by the nation's fiscal policy choices. Therefore, the tax structure has to be carefully framed to mitigate possible adverse impacts on production and efficiency, and also the redistributive fiscal policy and the extent of spending on redistribution should be consistent with the macro-economic policy objectives of the nation.

Question 19:

Discuss the meaning and consequences of negative production externalities.

Answer:

Negative Production Externalities

Meaning:

A negative externality initiated in production which imposes an external cost on others may be received by another in consumption or in production. As a n example, a negative production externality occurs when a factory which produces aluminium discharges untreated waste water into a near-by river.

Consequences:

a. It pollutes the water causing health hazards for people who use the water for drinking and bathing.
b. Pollution of river also affects fish output as there will be less catch for fisher men due to loss of fish resources.

The former is a case where a negative production externality is received in consumption and the latter presents a case of a negative production externality received in production.

Question 20:

Discuss the three branch taxonomy of the role of Government in market economy.

Answer:

Three - branch taxonomy of the role of Government in market economy: Richard Musgrave, in his classic treatise 'The Theory of Public Finance' (1959), int roduced the three-branch

taxonomy of the role of government in a market economy. Musgrave believed that, for conceptual purposes, the functions of the government are to be separated into three, namely, resource allocation, (efficiency), income redistribution (fairness) and macroeconomic stabilization.

The allocation function aims to correct the sources of inefficiency in the economic system, while the distribution role ensures that the distribution of wealth and income is fair. Monetary and fiscal policies, the problems of macro-economic stability, maintenance of high levels of employment and price stability etc fall under the stabilization function.

Government intervention to direct the functioning of the economy is based on the belief that the objective of the economic system and the role of government is to improve the well-being of individuals and households. The allocation and distribution functions are primarily microeconomic functions, while stabilization is a macro -economic function.

Question 21:

Comment on the role of Government intervention for equitable distribution.

Answer:

Role of Government Intervention for Equitable Distribution: A major function of the present-day governments therefore involves changing the pattern of distribution of income, wealth, and opportunities from what the market would put forward to a more socially optimal and egalitarian one. Governments can redistribute either through the expenditure side or through the revenue side of the budget. On the expenditure side, governments may provide free or subsidized education, healthcare, housing, food, and basic goods etc. to deserving people. On the revenue side, redistribution is done through progressive taxation.

Inequality and the resulting loss of social welfare is sought to be tackled by government through an appropriately framed tax and transfer policy. This involves progressive taxation combined with provision of subsidy to low- income households. Proceeds from progressive taxes may be used to finance public services, especially those such as public housing, which particularly benefit low-income households. Few examples are supply of essential food grains at highly subsidized prices to BPL households, free or subsidised education, healthcare, housing, rations, and basic goods etc. to the deserving people.

Question 22:

Differentiate between Non-Discretionary and discretionary Fiscal policy.

Answer:

Distinction between Non-Discretionary and Discretionary Fiscal Policy

S. No.	Non-Discretionary Fiscal Policy	Discretionary Fiscal Policy
1	These are called automatic Stabilizers. Changes tend to occur automatically without any explicit action by the Government.	These are deliberate policy action by the Government to change the level of expenditure and taxes in order to influence the level of National output employment and prices.
2	Personal income tax, corporate income taxes and transfer payments by Government constitute the major examples.	Specific export subsidies and concessions are examples.
3	Nondiscretionary fiscal policy is that set of policies that are built into the system to stabilize the economy when growth is either too fast or too slow.	Discretionary fiscal policy consists of actions taken at the time of a problem to alter the economy of the moment. Thus, the aim can be anti-cyclical (decrease) or pro cyclical (increase).
4	Non-Discretionary Fiscal Policy ensures self-correcting fiscal response.	Discretionary policy usually implies implementation lags and is not automatically reversed when economic conditions change.

Alternatively:

Discretionary fiscal policy refers to deliberate policy actions on the part of the government to change the levels of expenditure and taxes to influence the level of national output, employment, and prices. Non-discretionary fiscal policy or automatic stabilizers are part of the structure of the economy and are 'built-in' fiscal mechanisms that operate automatically to reduce the expansions and contractions of the business cycle. Changes in fiscal policy do not always require explicit action by government. In most economies, changes in the level of taxation and level of government spending tend to occur automatically. These are dependent on and are determined by the level of aggregate production and income, such that the instability caused by business cycle is automatically dampened without any need for discretionary policy action.

However, automatic stabilizers that depend on the level of economic activity alone would not be sufficient to correct instabilities. The government needs to resort to discretionary fiscal policies. Discretionary fiscal policy for stabilization refers to deliberate policy actions on the part of government to change the levels of expenditure, taxes to influence the level of national output, employment, and prices. Governments influence the economy by changing the level and types of taxes, the extent and composition of spending, and the quantity and form of borrowing.

Question 23:

What are the common objectives of fiscal policy?

Answer:

Common Objectives of Fiscal Policy

Fiscal policy is in the nature of a demand-side policy. An economy which is producing at full-employment level does not require government action in the form of fiscal policy.

The most common objectives of fiscal policy are:

- achievement and maintenance of full employment,
- maintenance of price stability,
- acceleration of the rate of economic growth and development, and
- equitable distribution of income and wealth.

Question 24:

Identify the market outcomes for each of the following situations:

(A) Playing of loud music at night resulting in inability to sleep.
(B) Wearing of mask during covid-19 pandemic.

Answer:

Situations and Market outcomes:

(A) Playing of loud music at night resulting in inability to sleep
Market Outcome: Negative Consumption externality, over production.
(B) Wearing of mask during COVID-19 pandemic
Market Outcome: Positive consumption externality as it prevents others from getting infected.

Question 25:

What is the difference between price ceiling and price floor?

Answer:

Price Ceiling: When prices of certain essential commodities rise excessively, government may resort to controls in the form of price ceilings for making a resource or commodity available to all at reasonable prices. For example: maximum prices of food grains and essential items are set by government during times of scarcity. A price ceiling which is set below the prevailing market clearing price will generate excess demand over supply.

Price Floor: Government usually intervenes in many primary markets which are subject to extreme as well as unpredictable fluctuations in price. For example, in India, in the case of many crops the government has initiated the Minimum Support Price (MSP) programme as well as procurement by government agencies at the set support prices. The objective is to guarantee steady and assured incomes to farmers. In case the market price falls below the MSP, then the guaranteed MSP will prevail. The following diagram will illustrate the effects of a price floor.
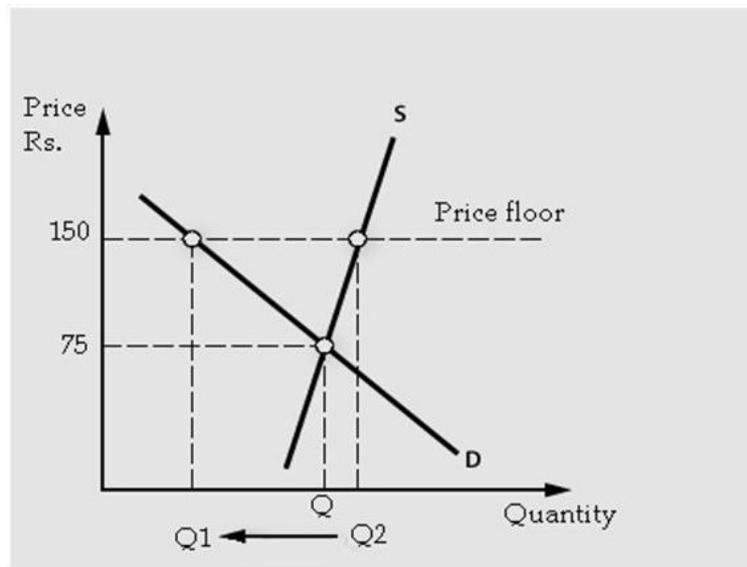
Market Outcome of Minimum Support Price

When price floors are set above market clearing price, suppliers are encouraged to over - supply and there would be an excess of supply over demand. At price ₹ 150/ which is much above the market determined equilibrium price of ₹ 75, the market demand is only Q1, but the market supply is Q2.

Question 26:

One of the biggest problem with using discretionary policy to counteract fluctuations is the different types of lags involved in fiscal policy action. What are these lags?

Answer:

Lags in fiscal policy:

One of the biggest problems with using discretionary fiscal policy to counteract fluctuations is the different types of lags involved in fiscal-policy action. There are significant lags are:

Recognition lag: The economy is a complex phenomenon, and the state of the macro-economic variables is usually not easily comprehensible. Just as in the case of any other policy, the government must first recognize the need for a policy change.

Decision lag: Once the need for intervention is recognized, the government has to evaluate the possible alternative policies. Delays are likely to occur to decide on the most appropriate policy.

Implementation lag: even when appropriate policy measures are decided on, there are possible delays in bringing in legislation and implementing them.

Impact lag: impact lag occurs when the outcomes of a policy are not visible for some time.

Question 27:

Explain briefly the Deflationary Gap.

Answer:

Deflationary Gap: If the aggregate demand is for an amount of output less than the full employment level of output, then we say there is deficient demand. Deficient demand gives rise to a 'deflationary gap'.

Deflationary gap is thus a measure of the extent of deficiency of aggregate demand, and it causes the economy's income, output, and employment to decline, thus pushing the economy to under- employment equilibrium. The macro- equilibrium occurs at a level of GDP less than potential GDP; thus, there is cyclical unemployment i.e. rate of unemployment is higher than the natural rate.
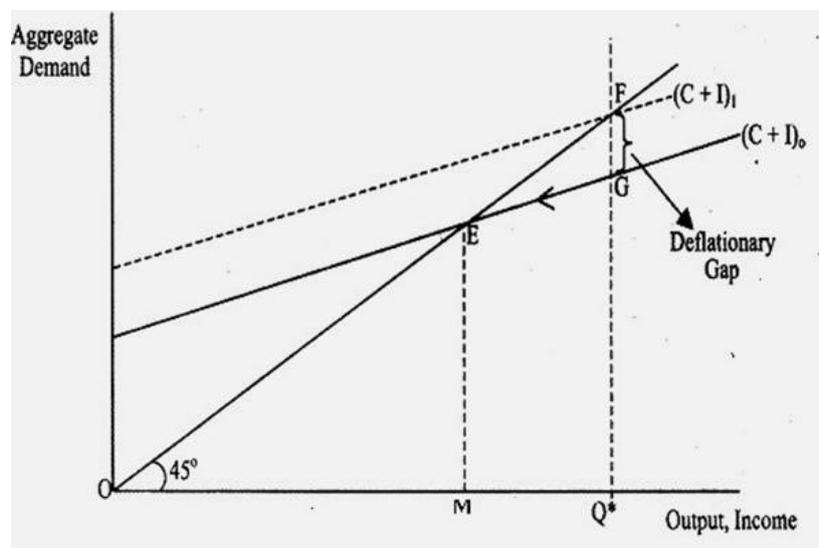
Deficient Demand: Deflationary Gap

Question 28:

Write down the name of fiscal function of the Government in Economic System, for the following cases:

(a)   Government imposes higher taxes on tobacco products in Union Budget.
(b)   Government scheme providing free ration to BPL families.
(c)   Government providing subsidy to farmers in purchasing of Urea for agricultural purpose.
(d) Increase in Government expenditure in the time of recession.

Answer:

Fiscal Functions of Government

(i) Allocation function

(ii) Redistribution/distribution function

(iii) Allocation function

(iv) Stabilization function

Question 29:

Mention the name of the externalities (along with reason in brief) covered in the following acts:

i.   A Road Construction Company provides training to its employees to learn latest technology for durable road construction.

ii.   People taking COVID Booster Dose happily.

Answer:

i.   As an example of positive production externality received in production, we can cite the case of a firm which offers training to its employees for increasing their skills. The firm generates positive benefits on other firms when they hire such workers as they change their jobs.

ii.   A positive consumption externality initiated in consumption that confers external benefits on others may be received in consumption or in production. For example, if people taking COVID Booster Dose happily against contagious diseases, they would confer a social benefit to others as well by preventing others from getting infected.

Question 30:

Markets are amazingly competent in organizing the activities of an economy as they are generally efficient and capable of achieving optimal allocation of resources. However, market failure occurs. Discuss briefly any two reasons leading to market failure.

Answer:

Reasons leading to market failure:

Market power: Market power or Monopoly power is the ability of a firm to profitably raise the market price of a good or service over its marginal cost . The firms that have market power are price makers and therefore can charge a price that gives them positive economic profits.

Externalities: It is something that one individual does, may have at the margin some effect on others. It is not the part of the market price mechanism. There is an externality when a consumption or production activity has an indirect effect on other's consumption or production activities and as such effects are not reflected directly in market prices.

Public goods: Public goods have no meaningful demand curve for them. Because of the peculiar characteristics of public goods such as indivisibility, non-excludability and non-rivalry, competitive private markets will fail to generate economically efficient outputs of public goods. If individual's make no offer to pay for public goods, there will be market failure.

Incomplete information: Asymmetric information, adverse selection and moral hazard affect the ability of markets to efficiently allocate resources and therefore, lead to market failure.

Question 31:

Discuss with examples the major aspects of market failures.

Answer:

Major aspects of market failures

There are two aspects of market failures namely, demand-side market failures and supply side market failures.

Demand- side market failures are said to occur when the demand curves do not take into account the full willingness of consumers to pay for a product. For example, though we experience the benefit, none of us will be willing to pay to view a wayside fountain because we can view it without paying.

Supply-side market failures happen when supply curves do not incorporate the full cost of producing the product. For example, a thermal power plant that uses coal may not have to include or pay completely for the costs to the society caused by fumes it discharges into the atmosphere as part of the cost of producing electricity.

CHAPTER 3
MONEY MARKET

Question 1:

Calculate M
Velocity 19
Price 108.5
Volume of transactions 120 billion

Answer:

MV = PT,
M x 19 = 108.5 x 120;   Therefore M 685.26

Question 2:

What will be the effect on money supply if velocity is 25?

Answer:

For V =25, with given p and T, M will be   520.8

Question 3:

Calculate velocity of money
Money Supply   5000   billion
Price   110
Volume of transaction   200

Answer:

MV=PT;
5000 x V = 110x200, Therefore V = 4.4

Question 4:

What will be the outcome if volume of transaction increases to225?

Answer:

If Volume of transaction 225, then V= 4.95

Question 5:

Calculate Narrow Money (M_1) from the following data

Currency with public	₹ 90000 crore
Demand Deposits with Banking System	₹ 200000 crore
Time Deposits with Banking System	₹ 220000 crore
Other Deposits with RBI	₹ 280000 crore
Saving Deposits of Post office saving banks	₹ 60000 crore

Answer:

M_1 = Currency with public + Demand Deposits with Banking System + Other Deposits with the RBI

= 90000 crore + 200000 crore + 280000 crore = 57 0000crore

Question 6:

Compute credit multiplier if the required reserved ratio is 10% and 12.5% for every ₹ 1, 00,000 deposited in the banking system. What will be the total credit money created by the banking system in each case?

Answer:

Credit Multiplier is the reciprocal of required reserved ratio.

$$\text{Credit Multiplier} = \frac{1}{\text{Required Reserverd Ratio}}$$

For RRR = 0.10 i.e. 10% the credit multiplier = $\frac{1}{0.10}$ = 10

For RRR = 0.125 i.e. 12.5% the credit multiplier = $\frac{1}{0.125}$ = 8

$$\text{Credit creation} = \text{Initial deposits} * \frac{1}{RRR}$$

For RRR 0.10 credit creation will be 1, 00,000× 1/0.10 = Rs, 10, 00,000

For RRR 0.125 credit creation will be 1, 00,000× 1/0.125 = Rs, 8, 00,000

Question 7:

Calculate currency with the Public from the following data (₹ Crore)

1.1 Notes in Circulation	2496611
1.2 Circulation of Rupee Coin	25572
1.3 Circulation of Small Coins	743
1.4 Cash on Hand with Banks	98305

Answer:

Currency with the Public (1.1 + 1.2 + 1.3 − 1.4) =(2496611+25572+743) − 98305 =2424621

Question 8:

Calculate M_2 from the following data

	(₹ Crore)
Notes in Circulation	2420964
Circulation of Rupee Coin	25572
Circulation of Small Coins	743
Post Office Saving Bank Deposits	141786
Cash on Hand with Banks	97563
Deposit Money of the Public	1776199
Demand Deposits with Banks	1737692
'Other' Deposits with Reserve Bank	38507
Total Post Office Deposits	14896
Time Deposits with Banks	178694

Answer:

M2 = M1+ Post Office Saving Bank Deposits
where M1 = (Notes in Circulation + Circulation of Rupee Coin + Circulation of Small Coins - Cash on Hand with Banks) + Deposit Money of the Public
= (2420964+25572+743+97563- 97563) +1776199 =4125915
M2 = M1+ Post Office Saving Bank Deposits = 4125915 +141786= 4267701

Question 9:

If the required reserve ratio is 10 percent, currency in circulation is ₹ 400 billion, demand deposits are ₹ 1000 billion, and excess reserves total ₹ 1 billion, find the value of money multiplier

Answer:

r = 10% = 0.10

Currency = 400 billion

Deposits = 1000 billion

Excess Reserves = 1 billion

Money Supply is M = Currency + Deposits = 1400 billion

c = C/D = 400 billion/1000 billion = 0.4 or depositors hold 40 percent of their money as currency

e= 1billion /1000 billion = 0.001 or banks hold 0.1% of their deposits as excess reserves.

Multiplier   = 1+0.4/ 0.1+0.001+0.4 = 1.5/ 0. 501 =2.79

Therefore, a 1 unit increase in MB leads to a 2.79 units increase in M.

Question 10:

i.   Outline different components of monetary policy framework for India?

ii. Write a note on two major components of Reserve Money

Answer :

i. The central bank in its execution of monetary policy, functions within an articulated monetary policy framework which comprises of:

- the objectives of monetary policy, such as maintenance of price stability (or controlling inflation) and achievement of economic growth

- the analytics of monetary policy which focus on the transmission mechanisms, or the ways in which monetary policy actions get transmitted to the real economy and

- the operating procedure which relates to all aspects of implementation of monetary policy namely, choosing the operating target, choosing the intermediate target, and choosing the policy instruments.

ii. Reserve money has two major components – currency in circulation and reserves. Currency in circulation comprises currency with the public and cash in hand with banks. Reserves are bank deposits with the central bank.

Question 11:

What would be the effect of automatic stabilizers on multiplier?

Answer :

An automatic stabilizer is any feature of an economy that automatically reduces the changes in spending during the multiplier process, making the multiplier smaller. As GDP increases, an automatic stabilizer would reduce the increases in spending in each round of the multiplier making the final increase in GDP less than what would otherwise be. Therefore, automatic stabilizers reduce the size of the multiplier, and consequently reduce fluctuations in GDP and employment, making the economy more stable in the short run. Briefly put, automatic stabilizers diminish the impact of spending changes on real GDP.

Question 12:

Explain how higher of interest rate affect the demand for money.

Answer :

The demand for money is a decision about how much of one's given stock of wealth should be held in the form of money rather than as other assets such as bonds. Demand for money is actually demand for liquidity and a demand to store value.

Demand for money is in the nature of derived demand; it is demanded for it purchasing power.

Basically people demand money because they wish to have command over real goods and services with the use of money.

Demand for money has an important role in the determination of interest, prices and income in an economy. Higher the interest rate, higher would be opportunity cost of holding cash and lower the demand for money. Similarly, lower the interest rate, lower will be the opportunity cost of holding cash and higher the demand for money.

Question 13:

Define money supply. Describe the different components of money supply.

Answer :

The measures of money supply vary from country to country, from time to time and from purpose to purpose.

The high-powered money and the credit money broadly constitute the most common measure of money supply, or the total money stock of a country. High powered money is the source of all other forms of money. The second major source of money supply is the banking system of the country.

Money created by the commercial banks is called 'credit money'. Measurement of money supply is essential from a monetary policy perspective because it enables a framework to evaluate whether the stock of money in the economy is consistent with the standards for price stability, to understand the nature of deviations from this standard and to study the causes of money growth. The stock of money always refers to the total amount of money at any particular point of time i.e. it is the stock of money available to the 'public' as a means of payments and store of value and does not include inter-bank deposits.

The monetary aggregates are:

M1 = Currency and coins with the people + demand deposits of banks (Current and Saving accounts) + other deposits of the RBI;

M2 = M1 + savings deposits with post office savings banks,

M3 = M1 + net time deposits of banks and

M4 = M3 + total deposits with the Post Office Savings Organization (excluding National Savings Certificates)

Question 14:

Explain how Reserve Bank of India acts as a 'lender of last resort 'to commercial banks? Or Explain the operation of Marginal Standing Facility?

Answer :

The Marginal Standing Facility (MSF) is the last resort for banks to obtain funds once they exhaust all borrowing options including the liquidity adjustment facility on which the rates are lower compared to the MSF. Under this facility, the scheduled commercial banks can borrow additional amount of overnight money from the central bank over and above what is available to them through the LAF window by dipping into their Statutory Liquidity Ratio (SLR) portfolio up to a limit (a fixed per cent of their net demand and time liabilities deposits (NDTL) liable to change) at a penal rate of interest. The scheme has been introduced by RBI with the main aim of reducing volatility in the overnight lending rates in the inter-bank market and to enable smooth monetary transmission in the financial system. This provides a safety valve against unexpected liquidity shocks to the banking system.

Question 15:

Explain the Cambridge Version of Cash Balance Approach Md = k P Y

Answer :

In the early 1900s, Cambridge Economists Alfred Marshall, A.C. Pigou, D.H. Robertson and John Maynard Keynes (then associated with Cambridge) put forward a fundamentally different approach

to quantity theory, known neoclassical theory or cash balance approach. The Cambridge version holds that money increases utility in the following two ways:

1. enabling the possibility of split-up of sale and purchase to two different points of time rather than being simultaneous, and

2. being a hedge against uncertainty.

While the first above represents transaction motive, just as Fisher envisaged, the second points to money's role as a temporary store of wealth. Since sale and purchase of commodities by individuals do not take place simultaneously, they need a 'temporary abode' of purchasing power as a hedge against uncertainty. As such, demand for money also involves a precautionary motive in Cambridge approach. Since money gives utility in its store of wealth and precautionary modes, one can say that money is demanded for itself.

Now, the question is how much money will be demanded? The answer is: it depends partly on income and partly on other factors of which important ones are wealth and interest rates. The former determinant of demand i.e. income, points to transactions demand such that higher the income, the greater the quantity of purchases and as a consequence greater will be the need for money as a temporary abode of value to overcome transactions costs. The Cambridge equation is stated as:

$Md = k\ PY$, Where Md = is the demand for money

Y = real national income

P = average price level of currently produced goods and services

PY = nominal income

k = proportion of nominal income (PY) that people want to hold as cash balances

The term 'k' in the above equation is called 'Cambridge k'. The equation above explains that the demand for money (M) equals k proportion of the total money income.

Thus we see that the neoclassical theory changed the focus of the quantity theory of money to money demand and hypothesized that demand for money is a function of money income.

Both these versions are chiefly concerned with money as a means of transactions or exchange, and therefore, they present models of the transaction demand for money.

Question 16:

Why empirical analysis of money supply is important?

Answer :

Empirical analysis of money supply is important for two reasons:

1. It facilitates analysis of monetary developments in order to provide a deeper understanding of the causes of money growth.

2. It is essential from a monetary policy perspective as it provides a framework to evaluate whether the stock of money in the economy is consistent with the standards for price stability and to understand the nature of deviations from this standard. The central banks all over the world adopt monetary policy to stabilise price level and GDP growth by directly controlling the supply of money. This is achieved mainly by managing the quantity of monetary base. The success of monetary policy depends to a large extent on the controllability of money supply and the monetary base.

Question 17:

What is high powered money? Calculate it from the following data:

Components in Million (₹)

Net RBI Credit to the Government	41561.2
RBI credit to the Commercial sector	18459.3
RBI's net non-monetary liabilities	24981.2
RBI's claims on banks	31456.2
RBI's Net foreign assets	10456.1
Government's currency liabilities to the public	21417.1

Answer :

High powered money is also known as reserve money which determines the level of liquidity and price level in the economy.

Reserve Money = Net RBI Credit to the Government + RBI credit to the Commercial sector+ RBI's claims on banks+ RBI's Net foreign assets+ Government's currency liabilities to the public- RBI's net non- monetary liabilities

= 41561.2 + 18459.3 + 31456.2 + 10456.1 + 21417.1 - 24981.2 = 98368.7 million

Question 18:

Which of the functions of money do the following items satisfy?

i. A credit card.

ii. A token of specified amount of money which can be used for shopping

Answer :

i. A credit card is a medium of exchange

ii. A token of specified amount of money which can be used for shopping satisfies all 3 functions of money, which are store of value, unit of account, and medium of exchange.

Question 19:

Explain the function of SLR? What are the eligible securities of SLR?

Answer :

The Statutory Liquidity ratio (SLR) is an instrument of monetary policy and aims to control liquidity in the domestic market by means of manipulating bank credit. Changes in the SLR chiefly influence the availability of resources in the banking system for lending. A rise in the SLR which is resorted to during periods of high liquidity, tends to lock up a rising fraction of a bank's assets in the form of eligible instruments, and this reduces the credit creation capacity of banks. A reduction in the SLR during periods of economic downturn has the opposite effect. The SLR requirement also facilitates a captive market for government securities.

Following are the eligible securities of SLR;

i. Cash

ii. Gold valued at a price not exceeding the current market price,

<div align="center">or</div>

iii. Investments in un-encumbered Instruments that include:

    a. Treasury-bills of the Government of India.

    b. Dated securities including those issued by the Government of India fromtime to time under the market borrowings programme and the Market Stabilization Scheme (MSS).

    c. State Development Loans (SDLs) issued by State Governments under their market borrowings programme.

    d. Other instruments as notified by the RBI.

Question 20:

Explain the Monetary Policy Framework Agreement.

Answer :

The Reserve Bank of India (RBI) Act, 1934 was amended in 2016, for giving a statutory backing to the Monetary Policy Framework Agreement. It is an agreement reached between the Government of India and the RBI on the maximum tolerable inflation rate that the RBI should target to achieve price stability.

The amended RBI Act (2016) provides for a statutory basis for the implementation of the 'flexible inflation targeting framework' by abandoning the 'multiple indicator' approach. T he inflation target is to be set by the Government of India, in consultation with the Reserve Bank, once in every five years.

Accordingly,

- The Central Government has notified 4 per cent Consumer Price Index (CPI) inflation as the target for the period from August 5, 2016 to March 31, 2021 with the upper tolerance limit of 6 per cent and the lower tolerance limit of 2 per cent.

- The RBI is mandated to publish a Monetary Policy Report every six months, explaining the sources of inflation and the forecasts of inflation for the coming period of six to eighteen months.

Question 21:

Calculate liquidity aggregate L2 when the following information is given-

Particulars	₹ in crore
Term deposits with term lending institutions	750
Term borrowing by refinancing institutions	450
All deposits with post office savings banks	1320
Term deposits with refinancing institutions	590
Certificate of deposits issued by FIs	290
Public deposits of non-banking financial companies	450
NM3	2650
National saving certificates	240

Answer :

L2 = L1 + Term deposits with term lending institutions + Term deposits with refinancing institutions + Term borrowing by refinancing institutions + Certificate of deposits issued by FIs

Where L1	= NM3 + All deposits with post office savings banks
	= 2650 + 1320
	= 3970 crore

Therefore L2	= 3970 + 750 +590 + 450 + 290
	= 6050 crore

Question 22:

In the context of India, measure money supply	(In crores of)
(M3) as per guidelines published by Reserve Bank of India.	₹
(i) Currency notes and coins with the public	24,637.20
(ii) Demand deposits of Banks	2,01,589.60
(iii) Net time deposits with post office saving accounts	28,116.40
(iv) Other deposits with Reserve Bank	420.10
(v) Saving deposits with post office saving banks	415.25

Answer:

M_3 = M_1 + time deposits with banking System

= Currency notes and coins with the people + demand deposits with the banking system (Current and Saving deposit accounts) + other deposits with the RBI + time deposits with banking System

= 24637.20 + 201589.60 + 28116.40 + 420.10

= ₹ 254763.3 Cr

Question 23:

Justify the following statements in the light of holding cash balance.

1. For investment in interest bearing assets
2. In the prevailing scenario, usually all transactions are made through online or E-banking.
3. Money is a unique store of value

Answer:

1. **For Investment in interest bearing assets**: The speculative motive reflects people's desire to hold cash in order to be equipped to exploit any attractive investment opportunity requiring cash expenditure. According to Keynes, people demand to hold money balances to take advantage of the future changes in the rate of interest, which is the same as future changes in bond prices.

2. In the prevailing scenario, usually all transactions are made through online or E banking: The transactions motive for holding cash relates to 'the need for cash for current transactions for personal and business exchange.' The need for holding money arises because there is lack of synchronization between receipts and expenditures.

3. Money is a unique store of value: Many unforeseen and unpredictable contingencies involving money payments occur in our day-to-day life. Individuals as well as businesses keep a portion of their income to finance such unanticipated expenditures. The amount of money demanded under the precautionary motive depends on the size of income, prevailing economic as well as political conditions and personal characteristics of the individual such as optimism/ pessimism, farsightedness etc.

Question 24:

Fisher's equation of exchange is: MV =PT. If velocity (V) = 25, Price (P) 110.5 and volume of transaction (T) = 200 billion.

Calculate:

(1) Total money supply (m)

(2) Effect on M when velocity (V) increases to 75

(3) Velocity (V) when the volume of transactions increases to 325 billion.

Answer:

(1) MV = PT

M× 25 = 110.5 ×200

Therefore,25 M = 22100

Then M = 22100÷25 = 884 bn

Total supply supply (m) **= 884**bn

(2) M ×75 = 110.5 × 200

M = 110.5 × 200÷ 75 **= 294.66**bn

Hence supply of money will reduce from 884bn to 294.66bn

(3) MV = PT

884× V= 110.5×325V **= 40.62**bn

When Volume of transaction increases to 325bn velocity (v) will be 40.62bn

Question 25:

Describe the differences between Liquidity Adjustment Facility (LAF) and Marginal Standing Facility (MSF).

Answer:

The Liquidity Adjustment Facility (LAF) enables the RBI to modulate short -term liquidity under varied financial market conditions to ensure stable conditions in the overnight (call) money market. The LAF consists of overnight as well as term repo auctions. The aim of term repo is to help develop the inter-bank term money market. Currently, the RBI provides financial accommodation to the commercial banks through repos/reverse repos under the Liquidity Adjustment Facility (LAF).

The Marginal Standing Facility (MSF) announced by the Reserve Bank of India (RBI) in its Monetary Policy, 2011-12 refers to the facility under which scheduled commercial banks can borrow additional amount of overnight money from the central bank over and above what is available to them through the LAF window by dipping into their Statutory Liquidity Ratio (SLR) portfolio up to a limit (a fixed per cent of their net demand and time liabilities deposits (NDTL) liable to change every year) at a penal rate of interest.

The MSF would be the last resort for banks once they exhaust all borrowing options including the liquidity adjustment facility on which the rates are lower compared to the MSF.

Question 26:

The following information is given:

Particulars	Amount in (₹) Crore
Notes in Circulation	25,00,000
Circulation of Rupee Coins	26,000
Circulation of Small Coins	850
Cash on hand with Banks	95,000
Bankers' Deposits with RBI	4,500
Other Deposits with RBI	180
Total Post office Deposits	12,000
Time Deposits with Banks	15,000

You are required to compute:

(i) Currency with the Public; and

(ii) Reserve Money.

Answer:

(i) Currency with Public = Notes in Circulation + Circulation of Rupee coins + Circulation of small coins - Cash on hands with banks

= 25,00,000+ 26,000+850-95,000

= 24,31,850 cr.

(ii) Reserve Money = Currency in circulation (Currency with the Public + Cash on Hand with Banks) + Bankers deposits with the RBI + Other deposits with the RBI

= 25,00,000+95,000+26,000+850+4,500+180

= 26,26,530 cr.

Question 27:

Calculate Narrow Money(M_1) from the following information:

	(₹ in Crore)
Currency with public	2,80,000
Demand Deposits with banks	4,00,000
Time Deposits with banks	3,40,000
Other deposits with RBI	5,80,000
Post Office Savings Deposits	90,000

Answer:

Narrow Money (M_1)

= Currency with Public + Demand deposits with Banks + Other deposits with RBI

= 2,80,000+4,00,000+5,80,000 = ₹ 12,60,000 cr.

Question 28:

Calculate Money Multiplier with the help of following information:

Reserve Ratio (r) = 10% Currency = ₹ 200 billion

Deposits = ₹ 400 billion

Excess Reserve = ₹ 800 million

Answer:

Calculation of Money Multiplier:

Currency (C)   = 200 billion

Deposits (D)   = 400 billion

r = 10% = 0.1

Excess reserve =₹ 800 million = ₹ 0.8 billion

Money supply M = Currency + Deposits = ₹ 600bn.

Currency Ratio (c) $= \dfrac{C}{D} = \dfrac{200}{400} = \textbf{0.5}$

Excess Reserve Ratio (e) = Excess reserve / Deposits = $\dfrac{0.8}{400\ billion}$ =**0.002 bn**

$$\text{Money Multiplier (M)} = \frac{1+c}{r+e+c}$$

$$= \frac{1+0.5}{0.1+0.002+0.5}$$

$$= 2.492$$

Question 29:

Explain Friedman's Restatement of Quantity Theory with reference to demand for money?

Answer:

Friedman's Restatement of Quantity Theory with reference to Demand for money: Milton Friedman extended Keynes' speculative money demand within the framework of asset price theory. Friedman treats the demand for money as nothing more than the application of a more general theory of demand for capital assets. Demand for money is affected by the same factors as demand for any other asset, namely:

1. Permanent income.

2. Relative returns on assets.

Friedman maintains that it is permanent income–and not current income as in the Keynesian theory–that determines the demand for money. Permanent income which is Friedman's measure of wealth is the present expected value of all future income. To Friedman, money is a good as any other durable consumption good and its demand is a function of a great number of factors.

Friedman identifies following four determinants of the demand for money:

- The nominal demand for money is a function of total wealth, which is represented by permanent income divided by the discount rate, defined as the average return on the five asset classes in the monetarist theory world, namely money, bonds, equity, physical capital, and human capital.
- It is positively related to the price level, P. If the price level rises the demand for money increases and vice-versa.
- It rises if the opportunity costs of money holdings (i.e., returns on bonds and stock) decline and vice-versa.
- It is influenced by inflation, a positive inflation rate reduces the real value of money balances, thereby increasing the opportunity costs of money holdings.

Question 30:

What is speculative motive for holding cash?

Answer:

The Speculative Motive for Holding Cash: The speculative motive reflects people's desire to hold cash in order to be equipped to exploit any attractive investment opportunity requiring cash expenditure. The speculative demand for money and interest are inversely related. According to Keynes, people demand to hold money balances to take advantage of the future changes in the rate of interest, which is the same as future changes in bond prices.
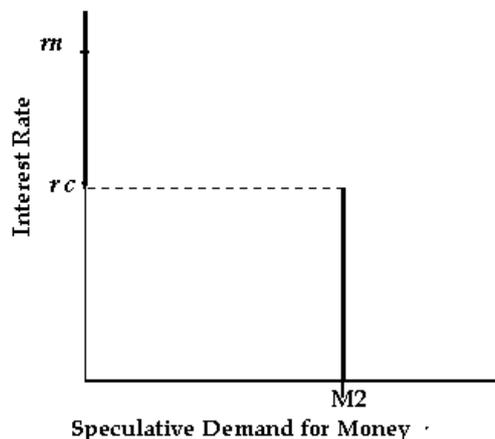
Individual's Speculative Demand for Money

So long as the current rate of interest is higher than the critical rate of interest, a typical wealth-holder would hold in his asset portfolio only government bonds, and if the current rate of interest is lower than the critical rate of interest, his asset portfolio would consist wholly of cash. When the current rate of interest is equal to the critical rate of interest, a wealth-holder is indifferent to holding either cash or bonds.

Question 31:

Describe the precautionary motive for money.

Answer:

Precautionary Motive for Money: Many unforeseen and unpredictable contingencies involving money payments occur in our day-to-day life. Individuals as well as businesses keep a portion of their income to finance such unanticipated expenditures. The amount o f money demanded under the precautionary motive depends on the size of income, prevailing economic as well as political conditions and personal characteristics of the individual such as optimism/ pessimism, farsightedness etc. Keynes regarded the precautionary balances just as balances under transactions motive as income elastic and by itself not very sensitive to rate of interest.

The sum of the transaction and precautionary demand, and the speculative demand, is the total demand for money. An increase in income increases the transaction and precautionary demand for money and a rise in the rate of interest decreases the demand for speculative demand money.

Question 32:

What will be the total money credit created by the commercial banking system for an initial deposit of ₹ 500 if the required reserve ratio is 0.04, 0.06 and 0.10 percent respectively. Compute credit multiplier.

Answer:

$$\text{Credit multiplier} = \frac{1}{\text{Required Reserve Ratio}}$$

Credit multiplier when RRR is 0.04 = **25**

Credit multiplier when RRR is 0.06 = **16.67**

Credit multiplier when RRR is 0.10 = **10**

Credit Creation = Initial Deposit x Credit Multiplier

$$\text{Credit creation} = 500 \times \frac{1}{0.04} = \mathbf{12,500}$$

$$\text{Credit creation} = 500 \times \frac{1}{0.06} = \mathbf{8,333.33}$$

$$\text{Credit Creation} = 500 \times \frac{1}{0.10} = \mathbf{5,000}$$

Question 33:

Calculate the volume of Transaction:
Price = 105
Velocity of money = 4.2
Money supply 4500 billion
What will be the outcome if volume of transaction increases to 240?

Answer:

Calculation of Volume of Transaction

$MV = PT$

$4500 \times 4.2 = 105 \times T$

$T = (4500 \times 4.2) / 105 = \mathbf{180}$

Now if volume of transaction increase to 240 then-

$4500 \times v = 105 \times 240$

$$V = \frac{105 \times 240}{4,500} = \mathbf{5.6}$$

Question 34:

State the nature of the monetary policy for the following actions taken by the RBI of the country:

(A) Reduction in the cash reserve ratio.
(B) Selling of securities in the open market.
(C) Increase of repo rate by 50 base point.
(D) Increase in the supply of currency and coins.

Answer:

Nature of Monetary Policy

		Nature of Monetary Policy
A	Reduction in cash reserves ratio.	Expansionary
B	Selling of securities in the open market.	Contractionary
C	Increase of repo rate by 50 base point.	Contractionary
D	Increase in the supply of currency and coins.	Expansionary

Question 35:

The monetary authority of an economy has provided the following data:

Particulars	₹ in Crore
Notes in Circulation	2,42,09,645
Rupee Coin in Circulation	3,25,572
Small Coins in Circulation	7,434
Post Office Saving Bank Deposits	14,17,868
Cash in Hand with banks	9,75,635
Deposit Money of the Public	1,77,61,992
Demand Deposited with banks	1,73,76,925
Other Deposits with Reserve Bank	3,85,074
Total Post Office Deposits	1,48,966
Time Deposits with Banks	17,86,969

You are required to calculate (i) M1; and (ii) M2.

Answer:

Calculation of M1 and M2

M1 = (Notes in Circulation + Rupee coin in circulation + small coins in circulation – cash in hands with banks) + demand deposit with bank + other deposit with RBI

= 2,42,09,645 + 3,25,572 +7,434 - 9,75,635 +1,73,76,925+3,85,074

= ₹ 4,13,29,015 Crores

M2 = M1+ Post Office Savings Bank Deposits

= 4,13,29,015 +14,17,868

= ₹ 4,27,46,883 Crores

Question 36:

Define 'Money Multiplier'. Use of e-wallets is increasing at fast pace nowadays. How this enhanced use of e-wallets is affecting money multiplier and money supply?

Answer:

Money multiplier:

Money multiplier m is defined as a ratio that relates the changes in the money supply to a given change in the monetary base. It is the ratio of the stock of money to the stock of high-powered money. It denotes by how much the money supply will change for a given change in high-powered money.

Money multiplier (m) = Money Supply / Monetary base

E wallet will affect the money supply in the real world. People hold less cash and more deposits thus reducing the currency-deposit ratio; increasing the money multiplier causing the money supply to increase.

Question 37:

Explain the operation of Cash Reserve Ratio.

Answer:

Operation of Cash Reserve Ratio (CRR):

Cash Reserve Ratio (CRR) refers to the average daily balance that a bank is required to maintain with the Reserve Bank of India as a share of its total net demand and time liabilities (NDTL).

Higher the CRR with the RBI, lower will be the liquidity in the system and vice versa. During slowdown in the economy, the RBI reduces the CRR in order to enable the banks to expand credit

and increases the supply of money available in the economy. In order to contain credit expansion during period's high inflation, the RBI increases the CRR.

Question 38:

What do you understand by "Liquidity Adjustment Facility (LAF)"?

Answer:

Liquidity Adjustment Facility (LAF): In line with the financial sector reforms, the system of sector-specific refinance schemes (except export credit refinance scheme) was withdrawn. From June 2000, the RBI has introduced Liquidity Adjustment Facility (LAF)

The LAF consists of overnight as well as term repo auctions. The aim of term repo is to help develop the inter-bank term money market. This move is expected to set market-based benchmarks for pricing of loans and deposits, and hence improve transmission of monetary policy.

The introduction of LAF is an important landmark since it triggered a rapid transformation in the monetary policy operating environment in India. As a key element in the operating framework of the RBI, its objective is to assist banks to adjust their day-to-day mismatches in liquidity. Currently, the RBI provides financial accommodation to the commercial banks through repos/reverse repos under the Liquidity Adjustment Facility (LAF).

Question 39:

Briefly explain the concept of "Liquidity Trap".

Answer:

Liquidity trap

At a very high interest rate, say r*, the opportunity cost of holding money (in terms of foregone interest) is high and therefore, people will hold no money in speculative balances. When interest rates fall to very low levels, the expectation is that since the interest rate is very low it cannot go further lower and that in all possibility it will move upwards. In other words, investors would maintain cash savings rather than hold bonds. The speculative demand becomes perfectly elastic with respect to interest rate and the speculative money demand curve becomes parallel to the X axis. This situation is called a 'Liquidity trap'.
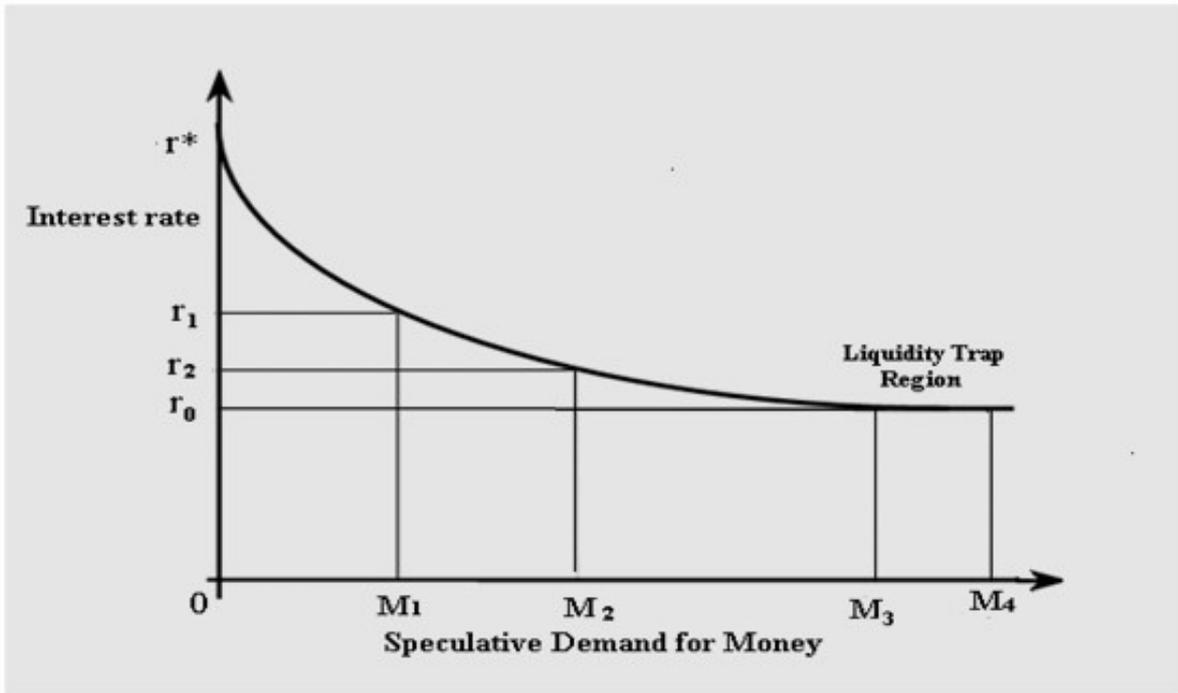
Aggregate Speculative Demand for Money

Question 1:

Countries Rose Land and Daisy land have a total of 4000 hours each of labour available each day to produce shirts and trousers. Both countries use equal number of hours on each good each day. Rose Land produces 800 shirts and 500 trousers per day. Daisy land produces 500 shirts and 250 trousers per day.

In the absence of trade:

i.   Which country has absolute advantage in producing
  a. Shirts
  b. Trousers
ii. Which country has comparative advantage in producing
  a. Shirts
  b. Trousers

Answer:

Goods produced by each country

Country	Shirts	Trousers
Rose Land	800	500
Daisy Land	500	250

Each country has 4000 hours of labour and uses 2000 hours each for both the goods. Therefore, the number of hours spent per unit on each good

Country	Shirts	Trousers
Rose Land	2.5	4
Daisy Land	4	8

Since Rose Land produces both goods in less time, it has absolute advantage in both shirts and trousers.

Comparative advantage; comparing the opportunity costs of both goods we have

Rose Land

Opportunity cost of Shirts =2.5/4 = 0.625 trousers
If 4 hours are used up in 1 trouser, trousers given up in 2.5 hours are (1/4)*2.5 = 0.625 trousers.

Similarly, Opportunity cost of Trousers = 4/2. 5 =1.6 shirts

Daisy Land

Opportunity cost of Shirts 4/8 = 0.5 trousers
Opportunity cost of Trousers 8/4 =2 shirts

For producing shirts

Daisy Land has lower opportunity cost for producing shirts (0.5<0.625), therefore Daisy Land has comparative advantage

For producing Trousers

Rose Land has lower opportunity cost for producing Trousers (1.6<2), therefore Rose Land has comparative advantage

Question 2:

The price index for exports of Bangladesh in the year 2018-19 (based on 2010-11) was 233.73 and the price index for imports of it was 220.50 (based on 2010-11) What do these figures mean ?

Answer :

The figures represent foreign trade price indices which are compiled using prices of specified group of commodities exported from and imported by Bangladesh in the year 2018-19. Both indices have a base year of 2010 -11 (=100) and the price changes are measured in relation to that figure. In the current year, the import price index of 220.50 indicates that there has been a 120.50 percent increase in price since 2010-11 and export price index shows that there is 133.73 percent increase in export prices. These indices track the changes in the price which firms and countries receive / pay for products they export/ import and can be used for assessing the impact of international trade on the domestic economy.

Question 3:

What is the crux of Heckscher-Ohlin theory of International Trade?

Answer :

The Heckscher-Ohlin theory of trade, also referred to as Factor-Endowment Theory of Trade or Modern Theory of Trade, states that comparative advantage in cost of production is explained exclusively by the differences in factor endowments.

A country tends to specialize in the export of a commodity whose production requires intensive use of its abundant resources and imports a commodity whose production requires intensive use of its scarce resources.

Accordingly, a capital abundant country will produce and export capital intensive goods relatively more cheaply and a labour-abundant country will produce and export labour intensive goods relatively more cheaply than another country.

Question 4:

Explain the effect of currency devaluation? Do you think a weak currency is advantageous to a country?

Answer :

Devaluation is a deliberate downward adjustment in the value of a country's currency relative to another currency, group of currencies or standard. It is a policy tool used by countries that have a fixed exchange rate or nearly fixed exchange rate regime and involves a discrete official reduction in the otherwise fixed par value of a currency. The monetary authority formally sets a new fixed rate with respect to a foreign reference currency or currency basket.

Devaluation is primarily an expenditure switching policy. Ceteris paribus, the weakening of currency can have positive effects on an economy's trade balance.

Devaluation increases the price of foreign goods relative to goods produced in the home country and diverts spending from foreign goods to domestic goods.

Devaluation implies that foreigners pay less for the devalued currency and that the residents of the devaluing country pay more for foreign currencies. By lowering export prices, devaluation helps increase the international competitiveness of domestic industries and increases the volume of exports.

Devaluation lowers the relative price of a country's exports, raises the relative price of its imports, increases demand both for domestic import-competing goods and for exports, leads to output expansion, encourages economic activity, increases the international competitiveness of domestic industries, increases the volume of exports and promotes trade balance.

Question 5:

Assume that 15% specific tariff is levied by the government on every sunglass which is imported into India, and if 2000 sunglasses are imported and price of each sunglass is Rs.1000/- , then find out the amount of total tariff revenue collected by the government?

Answer :

Specific tariff is an import duty which levied as a fixed charge per unit of the good imported. Therefore amount in total tariff revenue = 2000 × 15% = Rs. 300/- In this case, total Rs. 300/- is collected, whether the price of a sunglass is of Rs. 1000 or Rs. 2000 for different brand.

Question 6:

The table below shows the number of labour hours required to produce wheat and cloth in two countries X and Y.

Commodity	Country X	Country Y
1 unit of cloth	4	1.0
1 unit of wheat	2	2.5

i. Compare the productivity of labour in both countries in respect of both commodities

ii. Which country has absolute advantage in the production of wheat?

iii. Which country has absolute advantage in the production of cloth? What is meant by Crowding out?

Answer :

i. Productivity of labour (output per labour hour = the volume of output produced per unit of labour input)

= output / input of labour hours

Output of commodity	Units in	Units in
	Country X	Country Y
Cloth	0.25	1.0
Wheat	0.50	0.4

ii. A country has an absolute advantage in producing a good over another country if it requires fewer resources to produce that good. Since one hour of labour time produces 0.5 units of wheat in country X against 0.4 units in country Y. Therefore, Country X has absolute advantage in production of wheat.

iii. Since one hour of labour time produces 1.0 units of rice in country Y against 0.25 units in country X.

Therefore, Country Y has absolute advantage in production of cloth.

Question 7:

i. What's meant by Foreign Portfolio investment?

ii. Explain the Real Exchange Rate.

Answer :

i. Foreign Portfolio Investment: Foreign portfolio investment is the flow of 'financial capital' rather than 'real capital' and does not involve ownership or control on the part of the investor.

Examples of foreign portfolio investment are the deposit of funds in an Indian or a British bank by an Italian company or the purchase of a bond (a certificate of indebtedness) of a Swiss company or of the

Swiss government by a citizen or company based in France. Unlike FDI, portfolio capital, in general, moves to investment in financial stocks, bonds and other financial instruments and is effected largely by individuals and institutions through the mechanism of capital market. These flows of financial capital have their immediate effects on balance of payments or exchange rates rather than on production or income generation.

ii. **Real Exchange Rate**: The' real exchange rate' describes 'how many' of a good or service in one country can be traded for 'one' of that good or service in a foreign country. It is calculated as :

Real exchange rate = Nominal exchange rate X Domestic price Index /Foreign price Index

Real Exchange Rate (RER) incorporates changes in prices.

Question 8:

Please refer to the table below.

i. Which of the three exporters engage on anticompetitive act in the international market while pricing its export of goods X to Country D?

ii. What would be effect of such pricing on domestic producers of Good X? Advise remedy available for country D?

Good X	Country A(In $)	Good X(In $)	Country A(In $)
Average Cost	30.5	29.4	30.9
Price per unit for domestic sales	31.2	31.1	30.9
Price Charged in Country D	31.9	30.6	30.6

Answer :

i. Dumping by Country B and Country C. B because it sells at a lower price than that in domestic market; Country C because it is selling at a price which is less than the average cost of production.

ii. Adverse effects on domestic industry as they will lose competitiveness in their markets due to unfair practice of dumping. Country D may prove damage to domestic industries and charge anti-dumping duties on goods imported from Country B and Country C so as to raise the price and make it at par which similar goods produced by domestic firms.

Question 9:

Define quantitative restrictions? Are QRs allowed under the WTO? What are the exceptions?

Answer :

Quantitative restrictions are limits or quotas imposed by importing / exporting countries on the amount or value of particular products that can be imported or exported from one country to another during a given period. For example, an import quota. Article XI of GATT 1994 prohibits the use of QRs (though there are certain exceptions) to this rule.

In certain circumstances, however, quotas, export or import licenses or other similar measures are allowed, e.g.:

i.   QRs temporarily imposed for prevention or relief of critical food shortages

ii. QRs necessary to the application of standards or regulations for goods, classification, grading or making of commodities in international trade.

iii. Import restrictions on any agricultural or fisheries products necessary to enforcement of governmental measures which operate to achieve specified purposes.

Question 10:

What are the objectives of the Agreement on Agriculture (AOA)?

Answer :

The Agreement on Agriculture (AoA) is an international treaty of the World Trade Organization negotiated during the Uruguay Round.

It contains provisions in three broad areas of agriculture and trade policy: market access, domestic support and export subsidies. The Agreement aims to:

i.   establish fair and market oriented agricultural trading system, and

ii. provide for substantial and progressive reduction in agricultural support and export subsidies with a view to remove distortion in the world market. These are to be achieved through enhancement of market access, reduction of domestic support and elimination of export subsidies.

Question 11:

"World Trade Organisation (WTO) has a three-tier system of decision making."Explain.

Answer :

The World Trade Organization has a three- tier system of decision making. The WTO's top level decision-making body is the Ministerial Conference which can take decisions on all matters under any of the multilateral trade agreements.

The Ministerial Conference meets at least once every two years. The next level is the General Council which meets several times a year at the Geneva headquarters.

The General Council also meets as the Trade Policy Review Body and the Dispute Settlement Body. At the next level, the Goods Council, Services Council and Intellectual Property (TRIPS) Council report to the General Council. These councils are responsible for overseeing the implementation of the WTO agreements in their respective areas of specialisation. The three also have subsidiary bodies.

Numerous specialized committees, working groups and working parties deal with the individual agreements.

Question 12:

Examine why General Agreement in Tariff & Trade (GATT) lost its relevance.

Answer :

The GATT lost its relevance by 1980s because:

- It was obsolete to the fast evolving contemporary complex world trade scenario characterized by emerging globalisation

- International investments had expanded substantially

- Intellectual property rights and trade in services were not covered by GATT

- World merchandise trade increased by leaps and bounds and was beyond its scope

- The ambiguities in the multilateral system could be heavily exploited

- Efforts at liberalizing agricultural trade were not successful

- There were inadequacies in institutional structure and dispute settlement system

- It was not a treaty and therefore terms of GATT were binding only insofar as they are not incoherent with a nation's domestic rules

Question 13.

Explain the principle motivations of a country seeking FDI?

Answer :

Motivations for a country seeking investments occurs when:

i. Producers have saturated sales in their home market

ii. Firms want to ensure market growth and to find new buyers and larger markets with sizable population.

iii. Technological developments and economies arising from large scale production necessitate greater ability of the market to support the expected demand on which the investment is based. The minimum size of market needed to support technological development in certain industries is sometimes larger than the largest national market.

iv. There are substantial barriers to exporting from the home country

v. Firms identify country-specific consumer preferences and favourable structure of markets elsewhere.

vi. Firms realize that their products are unique or superior and that there is scope for exploiting this opportunity by extending to other regions.

Question 14:

How does the WTO agreement ensure market access?

Answer :

The principal objective of the WTO is to facilitate the flow of international trade smoothly, freely, fairly and predictably. The WTO agreement aims to increase world trade by enhancing market access by the following:

i. The agreement specifies the conduct of trade without discrimination. The Most-favoured-nation (MFN) principle holds that if a country lowers a trade barrier or opens up a market, it has to do so for the same goods or services from all other WTO members.

ii. The National Treatment Principle requires that a country should not discriminate between its own and foreign products, services or nationals. With respect to internal taxes, internal laws, etc. applied to imports, treatment not less favourable than that which is accorded to like domestic products must be accorded to all other members.

iii. The principle of general prohibition of quantitative restrictions.

iv. By converting all non- tariff barriers into tariffs which are subject to country specific limits.

v. The imposition of tariffs should be only legitimate measures for the protection of domestic industries, and tariff rates for individual items are being gradually reduced through negotiations' on a reciprocal and mutually advantageous' basis.

vi. In major multilateral agreements like the Agreement on Agriculture (AOA), specific targets have been specified for ensuring market access.

Question 15:

What is Arbitrage? What is the outcome of Arbitrage?

Answer :

Arbitrage refers to the practice of making risk-less profits by intelligently exploiting price differences of an asset at different dealing places. On account of arbitrage, regardless of physical location, at any given moment, all markets tend to have the same exchange rate for a given currency.

Question 16:

How does trade increase economic efficiency and which view argued that trade is a zero- sum game and how?

Answer:

Economic efficiency increases due to quantitative and qualitative benefits of extended division of labour, economies of large scale production, betterment of manufacturing capabilities, increased competitiveness and profitability by adoption of cost reducing technology and business practices and decrease in the likelihood of domestic monopolies. Efficient deployment of productive resources - natural, human, industrial and financial resources ensures productivity gains.

Mercantilist argued that trade is a zero sum game. Mercantilism advocated maximizing exports in order to bring in more precious metals and minimizing imports through the state imposing very high tariffs on foreign goods. This view argues that trade is a 'zero-sum game', with winners who win does so only at the expense of losers and one country's gain is equal to another country's loss, so that the net change in wealth or benefits among the participants is zero.

Question 17:

What are the main advantages of fixed rate regime in an open economy?

Answer :

In an open economy, the main advantages of a fixed rate regime are, firstly, a fixed exchange rate avoids currency fluctuations and eliminates exchange rate risks and transaction costs that can impede international flow of trade and investments. A fixed exchange rate can thus greatly enhance international trade and investment.

Secondly, a fixed exchange rate system imposes discipline on a country's monetary authority and therefore is more likely to generate lower levels of inflation.

Thirdly, the government can encourage greater trade and investment as stability encourages investment.

Fourthly, exchange rate peg c an also enhance the credibility of the country's monetary policy. And

lastly, in the fixed or managed floating (where the market forces are allowed to determine the exchange rate within a band) exchange rate regimes, the central bank is required to stand ready to intervene in the foreign exchange market and, also to maintain an adequate amount of foreign exchange reserves for this purpose.

Question 18:

What do you understand by the term 'Most-Favored-Nation' (MFN)?

Answer :

When a country enjoys the best trade terms given by its trading partner it is said to enjoy the Most Favoured Nation (MFN) status. Originally formulated as Article 1 of GATT, this principle of non-discrimination states that any advantage, favour, privilege or immunity granted by any contracting party to any product originating in or destined for any other country shall be extended immediately and unconditionally to the like product originating or destined for the territories of all other contracting parties. Under the WTO agreements, countries cannot normally discriminate between their trading partners. If a country improves the benefits that it gives to one trading partner, (such as a lower a trade barrier, or opens up a market), it has to give the same best treatment to all the other WTO members too in respect of the same goods or services so that they all remain 'most-favoured'. As per the WTO agreements, each member treats all the other members equally as "most-favoured" trading partners.

Question 19:

Compare and contrast between devaluation and depreciation in the context of exchange rate.

Answer:

Devaluation is a monetary policy tool used by countries that have a fixed exchange rate or nearly fixed exchange rate regime and involves a discrete official reduction in the otherwise fixed par value of a currency. The monetary authority formally sets a new fixed rate with respect to a foreign reference currency or currency basket.

Depreciation lowers the relative price of a country's exports, raises the relative price of its imports, increases demand both for domestic import- competing goods and for exports, leads to output expansion, encourages economic activity, increases the international competitiveness of domestic industries, increases the volume of exports, and improves trade balance.

Devaluation is a deliberate downward adjustment in the value of a country's currency relative to another country's currency or group of currencies or standard, in contrast depreciation is a decrease in a currency's value (relative to other major currency benchmarks) due to market forces of demand and supply under a floating exchange rate and not due to any government or central bank policy actions.

Question 20:

Mention any four sectors in which foreign direct investment is prohibited.

Answer:

Apart from being a critical driver of economic growth, foreign direct investment (FDI) is a major source of non-debt financial resource for the economic development of India. Currently, an Indian company may receive foreign direct investment either through 'automatic route' without any prior approval either of the Government or the Reserve Bank of India or through 'government route' with prior approval of the Government. The sectors in which foreign direct investment is prohibited are as follows:

i.   Lottery business including Government / private lottery, online lotteries, etc.
ii.   Gambling and betting including casinos etc.
iii. Chit funds
iv.   Nidhi company
v.   Trading in Transferable Development Rights (TDRs)
vi.   Real Estate Business or Construction of Farmhouses
vii. Manufacturing of cigars, cheroots, cigarillos, and cigarettes, of tobacco or of tobacco substitutes
viii. Activities / sectors not open to private sector investment e.g., atomic energy and railway operations (other than permitted activities).

Question 21:

Briefly describe any two advantages of fixed exchange rate regime in the context of open economy.

Answer:

A fixed exchange rate, also referred to as pegged exchange rate, is an exchange rate regime under which a country's government announces, or decrees, what its currency will be worth in terms of either another country's currency or a basket of currencies or another measure of value, such as gold. A fixed exchange rate avoids currency fluctuations and eliminates exchange rate risks and transaction costs, enhances international trade and investment, and lowers the levels of inflation. But the central bank has to maintain an adequate amount of reserves and be always ready to intervene in the foreign exchange market.

Question 22:

Explain in brief any four effects of Tariffs on importing and exporting countries.

Answer:

Tariffs, also known as customs duties, are basically taxes or duties imposed on goods and services which are imported or exported. They are the most visible and universally used trade

measures that determine market access for goods. Instead of a single tariff rate, countries have a tariff schedule which specifies the tariff collected on every particular good and service.

Effect of tariff on importing and exporting countries is as follows:

- Tariff barriers create obstacles to trade, decrease the volume of imports and exports and therefore of international trade. The prospect of market access of the exporting country is worsened when an importing country imposes a tariff.
- By making imported goods more expensive, tariffs discourage domestic consumers from consuming imported foreign goods. Domestic consumers suffer a loss in consumer surplus because they must now pay a higher price for the good and also because compared to free trade quantity, they now consume lesser quantity of the good.
- Tariffs encourage consumption and production of the domestically produced import substitutes and thus protect domestic industries.
- Producers in the importing country experience an increase in well-being as a result of imposition of tariff. The price increase of their product in the domestic market increases producer surplus in the industry. They can also charge higher prices than would be possible in the case of free trade because foreign competition has reduced.
- The price increase also induces an increase in the output of the existing firms and possibly addition of new firms due to entry into the industry to take advantage of the new high profits and consequently an increase in employment in the industry.
- Tariffs create trade distortions by disregarding comparative advantage and prevent countries from enjoying gains from trade arising from comparative advantage. Thus, tariffs discourage efficient production in the rest of the world and encourage inefficient production in the home country.
- Tariffs increase government revenues of the importing country by the value of the total tariff it charges.

Question 23:

Briefly explain the advantages of two key concepts of New Trade theories to countries when importing goods to compete with products from the home country.

Answer:

New Trade Theory helps in understanding why developed and big countries trade partners are when they are trading similar goods and services. This is particularly true in key economic sectors such as electronics, IT, food, and automotive.

According to New Trade Theory, two key concepts give advantages to countries that import goods to compete with products from the home country:

- Economies of Scale: As a firm produces more of a product, its cost per unit keeps going down. So, if the firm serves domestic as well as foreign market instead of just one, then

it can reap the benefit of large scale of production consequently the profits are likely to be higher.

- Network effects refer to the way one person's value for a good or service is affected by the value of that good or service to others. The value of the product or service is enhanced as the number of individuals using it increases. A good example will be Mobile App such as What's App and software like Microsoft Windows.

Question 24:

Mention any three key objectives of World Trade Organisation.

Answer:

The WTO does its functions by acting as a forum for trade negotiations among member governments, administering trade agreements, reviewing national trade policies, cooperating with other international organizations, and assisting developing countries in trade policy issues through technical assistance and training programmes. The WTO, accounting for about 95% of world trade, currently has 164 members, of which 117 are developing countries or separate customs territories.

The WTO has six key objectives:

- to set and enforce rules for international trade
- to provide a forum for negotiating and monitoring further trade liberalization
- to resolve trade disputes
- to increase the transparency of decision-making processes
- to cooperate with other major international economic institutions involved in global economic management, and
- to help developing countries benefit fully from the global trading system.

Question 25:

Distinguish between horizontal, vertical and conglomerate type of foreign investments.

Answer:

Based on the nature of foreign investments, FDI may be categorized as horizontal, vertical, or conglomerate.

A horizontal direct investment is said to take place when the investor establishes the same type of business operation in a foreign country as it operates in its home country, for example, a cell phone service provider based in the United States moving to India to provide the same service.

A vertical investment is one under which the investor establishes or acquires a business activity in a foreign country which is different from the investor's main business activity yet in some way supplements its major activity. For example, an automobile manufacturing company

may acquire an interest in a foreign company that supplies parts or raw materials required for the company.

A conglomerate type of foreign direct investment is one where an investor makes a foreign investment in a business that is unrelated to its existing business in its home country. This is often in the form of a joint venture with a foreign firm already operating in the industry, as the investor has no previous experience.

Question 26:

Explain the concept of 'Voluntary Export Restraints'. Under which circumstances exporters commit to voluntary export restraint? Discuss.

Answer:

Voluntary Export Restraints (VERs) refer to a type of informal quota administered by an exporting country voluntarily restraining the quantity of goods that can be exported out of that country during a specified period of time.

The inducement for the exporter to agree to a VERs is mostly to appease the importing country and to avoid the effects of possible retaliatory trade restraints that may be imposed by the importer. VERs may arise when the import- competing industries seek protection from a surge of imports from exporting countries. VERs cause, as do tariffs and quotas, domestic prices to rise and cause loss of domestic consumer surplus.

Question 27:

Mention any four arguments made in favour of Foreign Direct Investment to developing economy like India.

Answer:

Foreign direct investment (FDI), according to IMF manual on 'Balance of payments' is "all investments involving a long-term relationship and reflecting a lasting interest and control of a resident entity in one economy in an enterprise resident in an economy other than that of the direct investor".

Arguments in favour of foreign Direct Investment to developing economy like India are as follows:

- the increasing interdependence of national economies and the consequent trade relations and international industrial cooperation established among them
- desire to reap economies of large-scale operation arising from technological growth
- shared common language or common boundaries and possible saving in time and transport costs because of geographical proximity
- promoting optimal utilization of physical, human, financial and other resources

- desire to capture large and rapidly growing high potential emerging markets with substantially high and growing population
- stable political environment and overall favourable investment climate in the host country
- lower level of economic efficiency in host countries and identifiable gaps in development
- tax differentials and tax policies of the host country which support foreign direct investment. However, a low tax burden cannot compensate for a generally fragile and unattractive FDI environment.

Question 28:

Explain the concept of Real Exchange Rate.

Answer:

The 'real exchange rate' incorporates changes in prices and describes 'how many' of a good or service in one country can be traded for 'one' of that good or service in a foreign country.

For calculating real exchange rate, in the case of trade in a single good, we must first use the nominal exchange rate to convert the prices into a common currency. The real exchange rate (RER) between two currencies is the product of the nominal exchange rate and the ratio of prices between the two countries

$$\text{Real exchange rate} = \text{Nominal exchange rate} \times \frac{\text{Domestic price}}{\text{Foreign price Index}}$$

Question 29:

Describe the types of transactions in the forex-market and also distinguish between forward premium and forward discount.

Answer:

In the foreign exchange market, there are two types of transactions:

i. **current transactions** which are carried out in the spot market and the exchange involves immediate delivery, and

ii. **future transactions** wherein contracts are agreed upon to buy or sell currencies for future delivery which are carried out in forward and/or futures markets.

Forward Premium Vs. Forward Discount

A forward premium is said to occur when the forward exchange rate is more than a spot exchange rates. On the contrary, if the forward trade is quoted at a lower rate than the spot rate, then there is a forward discount.

Question 30:

How is the nominal exchange rate determined? Explain.

Answer:

Determination of Nominal Exchange Rate: Usually, the supply of and demand for foreign exchange in the domestic foreign exchange market determines the external value of the domestic currency, or in other words, a country's exchange rate.

Individuals, institutions and governments participate in the foreign exchange market for a number of reasons. On the demand side, people desire foreign exchange to:

- Purchase goods and services from another country
- for unilateral transfers such as gifts, awards, grants, donations or endowments
- to make investment income payments abroad
- to purchase financial assets, stock or bonds abroad
- to open a foreign bank account
- to acquire direct ownership of real capital and
- for speculative and hedging activities related to risk taking or risk avoidance.

The participants on the supply side operate for similar reasons. Thus, the supply of foreign currency to the home country results from:

- purchases of home exports;
- unilateral transfers to home country;
- investment income payments;
- foreign direct investments and portfolio investments;
- placement of bank deposits and speculation.

Similar to any standard market, the exchange market also faces a downward sloping demand curve and an upward-sloping supply curve.

Determination of Nominal Exchange
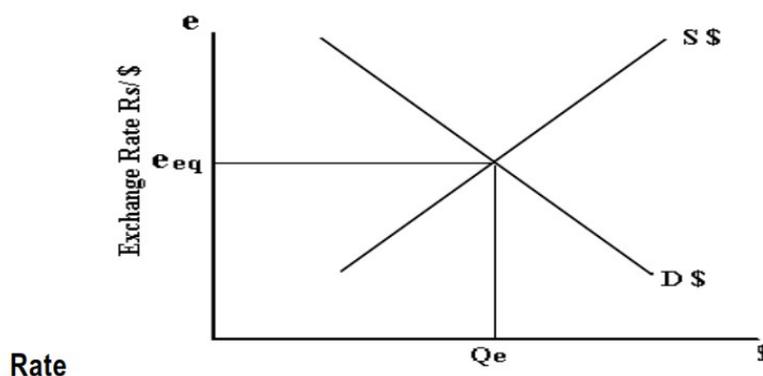
The equilibrium rate of exchange is determined by the interaction of the supply and demand for a particular foreign currency.

Question 31:

Discuss the salient features of bilateral trade agreements.

Answer:

Bilateral Trade Agreements are agreements which set rules of trade between two countries, two trading blocs or a bloc and a country. These may be limited to certain goods and services or certain types of market entry barriers. E.g., EU -South Africa Free Trade Agreements; ASEAN–India Free Trade Area.

Question 32:

Discuss the non-technical measures adopted by the countries with reference to (i) Trade related investment measures; and (ii) Price control measures.

Answer:

Non-technical measures relate to trade requirements, for example, shipping requirements, custom formalities, trade rules, taxation policies, etc.

i. **Trade-Related Investment Measures**: These measures include rules on local content requirements that mandate a specified fraction of a final go od should be produced domestically.
    * requirement to use certain minimum levels of locally made components, (25 percent of components of auto mobiles to be sourced domestically)
    * restricting the level of imported components, and
    * limiting the purchase or use of imported products to an amount related to the quantity or value of local products that it exports. (A firm may import only up to 75 % of its export earnings of the previous year)

ii. **Price Control Measures**: Price control measures (including additional taxes and charges) are steps taken to control or influence the prices of imported goods in order to support the domestic price of certain products when the import prices of these goods are lower. These are also known as 'para-tariff' measures and include measures, other than tariff measures, that increase the cost of imports in a similar manner, i.e.by a fixed percentage or by a fixed amount.
    Example: A minimum import price established for sulphur.

Question 33:

Discuss the salient features of Escalated tariff.

Answer:

Salient Features of escalated tariff: Escalated Tariff structure refers to the system wherein the nominal tariff rates on imports of manufactured goods are higher than the nominal tariff rates on intermediate inputs and raw materials, i.e., the tariff on a product increases as that product moves through the value -added chain.

For example, a four percent tariff on iron ore or iron ingots and twelve percent tariff on steel pipes. This type of tariff is discriminatory as it protects manufacturing industries in importing countries and dampens the attempts of developing manufacturing industries of exporting countries. This has special relevance to trade between developed countries and developing countries. Developing countries are thus forced to continue to be suppliers of raw materials without much value addition.

Question 34:

State the features of Foreign Portfolio Investment.

Answer:

Features of Foreign Portfolio Investment:

- Investment is only in financial assets
- Only short-term interest and generally remain invested for short periods
- Relatively easy to withdraw
- Not accompanied by technology transfer
- No direct impact on employment of labour and wages
- No abiding interest in management and control
- Securities are held purely as a financial investment and no significant degree of influence on the management of the enterprise
- Speculative in nature.

Question 35:

Write a brief note on Countervailing Duties.

Answer:

Countervailing Duties

Countervailing duties are tariffs that aim to offset the artificially low prices charged by exporters who enjoy export subsidies and tax concessions offered by the governments in

their home country. If a foreign country does not have a comparative advantage in a particular good and a government subsidy allows the foreign firm to be an exporter of the product, then the subsidy generates a distortion from the free-trade allocation of resources. In such cases, CVD is charged in an importing country to negate the advantage that exporters get from subsidies to ensure fair and market-oriented pricing of imported products and thereby protecting domestic industries and firms.

Question 36:

What do you mean by 'Bound Tariff'? Explain.

Answer:

Bound Tariff

The bound tariff rate is specific to individual products and represents the maximum level of import duty that can be levied on a product imported by that member. Under this, a WTO member binds itself with a legal commitment not to raise tariff rate above a certain level. By binding a tariff rate, often during negotiations, the members agree to limit their right to set tariff levels beyond a certain level. A member is always free to impose a tariff that is lower than the bound level. Once bound, a tariff rate becomes permanent, and a member can only increase its level after negotiating with its trading partners and compensating them for possible losses of trade. A bound tariff ensures transparency and predictability.

Question 37:

Explain 'Sanitary and Phytosanitary (SPS) Measures'.

Answer:

Sanitary and Phytosanitary (SPS) Measures

SPS measures are applied to protect human, animal or plant life from risks arising from additives, pests, contaminants, toxins or disease-causing organisms and to protect biodiversity.

These include ban or prohibition of import of certain goods, all measures governing quality and hygienic requirements, production processes, and associated compliance assessments. For example, prohibition of import of poultry from countries affected by avian flu, meat and poultry processing standards to reduce pathogens, residue limits for pesticides in foods etc.

Question 38:

Explain 'Embargos'.

Answer:

Embargos: An embargo is a total ban imposed by government on import or export of some or all commodities to particular country or regions for a specified or indefinite period. This may be done due to political reasons or for other reasons such as health, religious sentiments. This is the most extreme form of trade barrier.

Question 39:

What are the two forms, through which foreign capital may flow into an economy, as an investment?

Answer:

Forms of foreign capital into an economy

The two forms through which foreign capital may flow into an economy as investments are:

Foreign portfolio investment (FPI) in bonds, stocks and securities, and Foreign direct investment (FDI) in industrial, commercial, and similar other enterprises.

Foreign direct investment is defined as a process whereby the resident of one country (i.e., home country) acquires ownership of an asset in another country (i.e., the host country) and such movement of capital involves ownership, control as well as management of the asset in the host country.

Foreign portfolio investment is the flow of 'financial capital' with stake in a firm at below 10 percent and does not involve manufacture of goods or provision of services, ownership management or control of the asset on the part of the investor.

Question 40:

The Rupee dollar exchange rate for two different periods of a particular financial year are as follows:

(1)   In the month of January it is $ 1 = ₹ 65; and

(2)   In the month of April it is $ 1 = ₹ 70

A.   What does this indicate?
B.   Who will be benefited, either residents of India or foreigners?
C.   Explain the impact of exchange fluctuations in terms of appreciation of currency on inflation.

Answer:

A.   It indicates the depreciation of Rupee and appreciation of Dollar

B.   Exports become cheaper and more attractive to foreigners; imports will be discouraged as they become costlier to import.

C.   Impact on inflation:

An appreciation may cause reduction in the levels of inflation because imports are cheaper. Lower price of imported capital goods, components and raw materials lead to a decrease in cost of production which reflects on decrease in prices. Additionally, decrease in aggregate demand tends to lower demand pull inflation. Living standards of people are likely to improve due to availability of cheaper consumer goods.

Question 41:

"Net Exports" can be negative or positive. How is it significant for the economy of a country?

Answer:

The Net Exports: Net exports are the difference between exports and imports of a country during the accounting year. It can be positive or negative.

The net export component of GDP is equal to the value of exports (X) minus the value of imports (M). The gap between exports and imports is also called the trade balance. If a country's exports are larger than its imports, then a country is said to have a trade surplus else it will be trade deficit.

Net exports are the difference between exports and imports of a country during the accounting year. It can be positive or negative. Export stimulates economic growth by creating jobs which could potentially reduce poverty and augmenting factor incomes and in so doing raising the standard of livelihood and overall demand for goods and services.

Question 42:

Tariffs are basically taxes or duties on goods and services which are imported or exported. Briefly explain Preferential, Applied and Escalated tariff.

Answer:

Tariffs are basically taxes or duties imposed on goods and services which are imported or exported. It is defined as a financial charge in the form of a tax, imposed at the border on goods going from one customs territory to another. Different tariffs are generally applied to different commodities.

Preferential Tariff: Nearly all countries are part of at least one preferential trade agreement, under which they promise to give another country's products lower tariffs than their MFN rate. These agreements are reciprocal.

Applied Tariff: An 'applied tariff' is the duty that is actually charged on imports on a Most-Favoured Nation (MFN) basis. A WTO member can have an applied tariff for a product that differs from the bound tariff for that product as long as the applied level is not higher than the bound level.

Escalated Tariff: Escalated Tariff structure refers to the system wherein the nominal tariff rates on imports of manufactured goods are higher than the nominal tariff rates on intermediate inputs and raw materials, i.e. the tariff on a product increases as that product moves through the value-added chain.

Question 43:

Discuss with example the following types of Foreign Direct Investment.

(A) Horizontal Direct Foreign Investment

(B) Vertical Direct Foreign Investment

(C) Two-way Direct Foreign Investment

Answer:

A. **Horizontal Direct Foreign Investment**: A horizontal direct investment is said to take place when the investor establishes the same type of business operation in a foreign country as it operates in its home country, for example, a cell phone service provider based in the United States moving to India to provide the same service.

B. **Vertical Direct Foreign Investment**: A Vertical Investment is one under which the investor establishes or acquires a business activity in a foreign country which is different from the investor's main business activity yet in some way supplements its major activity. For example, an automobile manufacturing company may acquire an interest in a foreign company that supplies parts or raw materials required for the company.

C. **Two – way Direct Foreign Investment**: Two- Way Direct Foreign Investments' which are reciprocal investments between countries. These investments occur when some industries are more advanced in one nation (for example, the computer industry in the United States), while other industries are more efficient in other nations (such as the automobile industry in Japan).

Question 44:

What are the guiding principles of World Trade Organization (WTO).

Answer:

Right from its inception, the WTO has been driven by a number of fundamental principles which are the foundations of the multilateral trading system. Following are the major guiding principles:

- Trade without discrimination
- The National Treatment Principle (NTP)
- Freer trade
- Predictability
- Principle of general prohibition of quantitative restrictions
- Greater competitiveness
- Tariffs as legitimate measures for the protection of domestic industries
- Transparency in Decision Making
- Progressive Liberalization:
- Market Access
- Special privileges to less developed countries
- Protection of Health &Environment
- A transparent, effective, and verifiable dispute settlement mechanism.