

Q.1 NNP_{fc} by income and Expenditure

Private final consumption Exp	
Govt final consumption Exp	350
Mixed Income	100
Gross domestic fixed capital formation	35
opening stock	70
compensation of employees	15
Closing stock	250
import	25
Rent	20
depreciation	75
NI T	10
Interest	25
NFIA	25
Export	-5
Profit	10
	100

Q.2 NNP_{fc} = ? by income and Expenditure

Compensation of employees	250
Mixed Income	50
import	20
Gross domestic fixed capital formation	120
Private final consumption Exp	550
Dep	10
NFIA	20
IT	100
A in stock	20
Subsidies	20

To be contd...

Q-2

Rent 100

Int 200

Export 10

Profit 50

Govt final consumption Exp.

Q-3

NNP_{fc} by Expenditure and Income?

Private final consumption Exp = 2000

Net domestic capital formation = 400

Dep = 100

A stock 50

Compensation of employees 1900

Rent 200

Interest 150

Operation surplus = 720

NIT 400

employee's contribution 100

Net Export 20

NFIA -20

Govt final consumption Exp 600

Q-4

NNP_{fc} = ? by income and Exp

Govt final consumption Exp = 100

Subsidies = 10

Rent 200

wages and Salaries 600

Indirect tax 60

Private final consumption Exp 800

Gross domestic consumption Exp 120

Employer's contribution	= 55
Royalty	25
FITA	30
Int	20
Dep	10

Q5. $GDP_{mp} = ?$ by Income and Expenditure method

Govt final consumption Exp	250
A stock	65
ND CF	150
Interest	90
Profit	210
Subsidy Subsidy	25
Import	80
Private final consumption Exp ^h	500
Value of rent for free accommodation to emp	40
Corperation Tax	50
Rent	100
IF FA	20
FITA	40
IT	55
Export	60
Dep	20
COE	450

Q6a) $NDP_{FC} = ?$ b) $COE = ?$

- 1) $NFIA = - 20$
- 2) $Net\ Export = 10$
- 3) $NIT = 50$
- 4) $Rent\ and\ Royalty = 20$
- 5) $Dep = 10$
- 6) $Private\ final\ consumption\ Exp = 400$
- 7) $Corporate\ tax = 10$
- 8) $Interest = 30$
- 9) $Net\ domestic\ capital\ formation = 50$
- 10) $Dividend = 22$
- 11) $Govt\ final\ consumption\ Exp = 100$
- 12) $Undistributed\ profit = 5$
- 13) $Mixed\ Income = 23$

Q7 a) GDP_{mp} by Income Method
b) Closing Stock.

Private final consumption Expenditure	450
Rent	120
Govt final consumption Exp	50
Indirect Tax	60
Interest	150
Mixed Income	20
Profit	250
Dep	30
opening stock	10
Gross domestic fixed Capital formation	300
Compensation of Employees	200

Net Exports
NFIA
Subsidy

-10

-10

10

Q7. Calculate National Income (NNP_{FC}) by income and output method.

Value of output of primary sector 1000

Value of output of other sectors 400

Raw material of primary sector 500

Raw material of other sectors 300

Factor income received from the rest of the world 10

Factor income paid to the rest of the world 15

Dep 55

Indirect taxes 100

Subsidies 20

Mixed Income of the self employed 200

Compensation of employees 170

Rent 40

Interest 30

Profit 25

Q8

Calculate National Income by expenditure and output method.

Gross domestic capital formation	250
Net Exports	-50
Private final consumption exp	1000
Value of output of primary sector	900
Value of output of secondary sector	800
Value of output of tertiary sector	400
Intermediate cons. of primary sector	400
Intermediate cons. of secondary sector	300
Intermediate cons. of tertiary sector	100
Consumption of fixed capital	80
Indirect taxes	100
Govt final cons exp	100
Subsidies	10
Net factor Income from abroad	-20

Q9

NNP_{FC} by expenditure & output

GDCF (Gross domestic Capital formation)	250
Net exports	-50
Private final consumption Expenditure	1000
Value of output of Primary sector	900
Value of output of Secondary sector	800
Value of output of tertiary sector	400
Intermediate consumption of Primary	300
Intermediate consumption of Secondary	100
Intermediate consumption of tertiary	80
Govt final consumption exp	100
Indirect tax	100
Subsidy	10
NPFA	-20

Q10 $NNP_{FC} = ?$

Dep = ?

NIT	
Net domestic fixed capital formation	5
Net import	100
Govt final consumption Exp	-20
Gross Domestic fixed Capital formation	200
Private final consumption Exp	125
Δ Stock	600
NFIA	10
	5

Q11 Operating Surplus = ?

Compensation of Employees	110
NIT	150
Depreciation	50
NFIA	155
GDPmp	1050
Mixed Income	500

Q12

$NNP_{FC} = ?$

Rent	60
Interest	40
Profit net of corporation Profit-tax	20
corporate profit tax	5
NFIA	-5
Compensation of Employees	600
Indirect tax	80
Subsidies = 10	10
Dividend = 7	7

Q13a) GDPmp = ?

b) Subsidy = ?

Govt final consumption Exp	= 7000
Indirect Tax	= 9000
NNPfc	= 61,700
Mixed Income	= 28,000
Gross domestic fixed capital formation	13,000
Net add to stock	10000
Compensation of Employees	24000
Dep	4000
Private final consumption Expenditure	44000
Export	4800
Import	5600
NFIA	300

Q14 NNPfc = ? (2) Dep = ?

Private Final Consumption Exp	210
GDPmp	320
wages and salaries	170
Employer's Contribution	10
Interest	20
Indirect Tax	30
Subsidy	5
Rent	10
Profit	45
Royalty	15
NFIA	3

Q15 a) Closing stock = ?

b) $NNP_{fc} = ?$

c) Govt final consumption Exp	= ?
Private final consumption Exp	
Net domestic fixed capital formation	900
FITA	2100
NNPmp	40
NIT	5230
opening stock	150
Gross domestic capital formation	100
Dep	2800
Net Export	550
	700

Q16 NNP_{fc} by income and Exp

Govt final consumption Exp	500
Δ in stock	350
Dep	50
Export	200
Private final consumption Exp	900
Gross fixed capital formation	800
Subsidies	50
Mixed Income	850
Import	350

Net property & entrepreneurship	
Income from Rest of the world	-60
Indirect Tax	200
Net compensation of employees from Rest of the world	-10
Operating surplus	550
compensation of employees	800
Cor. Tax	20

Q 17 Operating Surplus = ? NDPFC = ?

Compensation of Employees	2000
Rent and Interest	800
Indirect Tax	120
Corporation Tax	460
Depreciation	100
Subsidies	20
Dividend	940
Undistribution Profit	300
FITA	150
Mixed Income	200

Q 18 GDPFC = ? (Income and Exp)

Private final Consumption Exp	730
wages and salaries	700
Employer's contribution to Social Security Scheme	= 100

Gross business fixed investment 60
profit 100

Gross residential construction investment 60

Govt final Consumption Exp 200

Gross public investment 40

Export 40

Rent = 50

Inventory investment = 20

Interest = 50

Import = 20

NFIA = -10

MI = 100

Dep = 20

Subsidy 10 Indirect Tax 20

Q19 $NNP_{FC} = ?$ (Income and Exp)

Rent	
NFIA	1500
wages and Salaries	56
Indirect Tax	25,000
Govt final Consumption	1,000
Subsidies	11,200
Royalty	300
Net Exports	200
Interest	-200
Corporate Tax	6400
Profit after tax	200
Household final Consumption	4000
Exp	26,000
Δ stock	100
Net Domestic fixed capital Consumption	600
Exp	300
Non-Pvt institution serving household	

Q20 GNP_{mp} by Income and Exp

Private final Cons ⁿ Exp	2940
Social Security Contribution by Employees	108
Net Indirect Tax	216
Govt expenditure on goods and services	864
Rent	168
Interest	156
Undistributed Profit	252
Dividend	192
wages and Salaries in Cash	2544
Tax on corporate profit	228
Net domestic investment	396
Dep	324
Net Export	36
Income of self employed	372
NFIA	15

Q21

a) GDP_{FC} = ?

b) FITA =

Compensation of employees	800
Profit	200
Dividend	50
GNP _{mp}	1400
Rent	150
Interest	100
Gross domestic capital formation	300
Net Fixed Capital Formation	200
Δ stock	50
Factor Income received from Abroad	60
Net Indirect Tax	120

Q.22

GNP_{mp} & FITA = ?

Profit	500
Exp	40
COE =	1500
GNP _{FC}	2800
Rent	300
Interest	400
Factor Income paid to Abroad	120
Net Indirect tax	250
Net Domestic capital formation	650
Gross Domestic fixed Capital formation	700
Δ stock	50

Q23

Imports = ?

NDP_{mp} = ?

Sales	3450
Export	800
Gross fixed capital formation	150
Intermediate consumption	1650
Provision for replacement of fixed Capital = 100	100
A stock	250
NI T	220
Household consumption Expenditure	500
Expenditure Incurred by NPO serving Household.	50
Purchase of goods by govt	250
Compensation of employees paid by govt	200
Production of self consumption.	50

Q24

NNP_{FC}, Mixed Income, GVA_{FC} = ?

Final consumption expenditure of Household	5000
Intermediate consumption	2200
Import	80
Interest	600
Wages and Salaries	700
Subsidy	200
Gross Domestic Capital formation	350
Final consumption Expenditure by non Profit interest	700
Net Increase in stock	10
Direct tax	200
Royalty	100
Gross export	30
Factor income received from Abroad	50
Govt. purchase of goods and services	300
Net ↑ in stock	10
Direct tax	200
Royalty	100
Gross export	30
Factor income received from Abroad	50
Govt purchase of goods and services	300
Net domestic fixed capital formation	140
Rent	900
Net earned income from abroad	-20
Indirect tax	100
Profit	400
Net unearned income from abroad	17

25) GDP_{mp} = ?

b) FIFFA = ?

c) Gross Domestic Cap. Formation

Profit before tax	500
Export	40
Compensation of Employees	1500
GNI PFC	2800
Net current transfer to Rest of the world	-90
Rent	300
Interest	400
Factor income paid to Abroad	150
Capital construction allowance	100
Direct tax	1000
A Stock	50
Corporate tax	35
Gross Business Fixed Inventory	600
Gross Residential Construction Inventory	25
Gross Public Investment Inventory	75

Precautions of Income Method

- 1) Transfer Income (like scholarships, donations, charity, old age pensions, etc) are not included in the National income because they are not dealing with productive activity.
- 2) Income from sale of second hand goods will not be included in national income as their original sale has already been counted and it could lead to double counting if they are added again.
However any brokerage or commission received by brokers or sale of second hand goods will be included in national income as they are rendering the productive services.
- 3) Income from sale of shares, bonds and debentures will not be included as such transactions do not contribute to current flow of goods and services.
- 4) Windfall gains like, lottery, horse race are included as there is no productive activity concerned with it.

- 5) Imputed values of services provided by owners of production unit will be included eg. imputed value of owners occupied houses, interest on own capital production for self consumption etc will be included as they add to flow of goods and services.
- 6) Payment out of past saving (death duties, gift taxes, int tax etc) are not included in National income as they are paid out of wealth or past savings.

Difference blw. Net exports & NFIA

Basis	Net Exports	NFIA
Meaning	$\text{Net export} = \text{Export} - \text{Import}$	$\text{NFIA} = \text{FIFA} - \text{FITA}$
Concept	Domestic concept	National concept
Factor/Non factor services	It includes non factor services.	It includes factor services.

Precautions of Expenditure Method

- 1) Intermediate goods will not be included in National income as it is already counted in the final value. If included again it will lead to double counting.
- 2) Transfer payments are not included as such payments are not connected with any productive activity and there is no addition to the value.
- 3) Purchase of second hand goods will not be included as their value has already been included in the year in which they were produced.
- 4) Purchase of financial assets will not be included as it does not lead to current flow of goods and services.
Any commissions on such financial assets is a productive service.
- 5) Expenditure on own account production (like self consumption, imputed value of owner's occupied houses, free services from general govt and private non profit institution serving household) will be included in National income since these are productive services.

Q1 Govt incurred expenditure to popularise yoga among the masses. Analyse its impact on GDP & Welfare.

Govt expenses on yoga

↓
GDP ↑ $\Rightarrow$ Govt final consumption Expenditure

Welfare $\Rightarrow$ Yoga $\Rightarrow$ healthy $\Rightarrow$ Human capital formation $\Rightarrow$

↓
Efficiency ↑

Q2 Sale of petrol & diesel cars is rising particularly in big cities. Analyse its impact on GDP and welfare.

Ans Sale of cars $\Rightarrow$ GDP ↑ through final products
↓
convenience for transportation

Welfare ↓ $\rightarrow$ traffic jams increases $\rightarrow$ Pollution increases $\rightarrow$ Health Hazards

Q3 Suppose a ban is imposed on construction of tobacco. Examine its impacts on GDP & welfare

Ans GDP ↑ through Govt final consumption expenditure. Welfare ↑ because it is protection from hazardous disease health increases
+ externality.

Q How does increase in inequalities in distribution of income affect welfare of the society.

A ↑ in inequalities → gap between rich and poor ↑
↓
utility of money is higher among poor than rich

may not lead to ↑ in welfare ← ↑ in inequalities

Difference between National Income at Current Price (Nominal NY) and National Income at constant Price (Real NY)

Basis	National Income at Current Price / Nominal NY	NY at constant Price / Real NY
Meaning	Money value of final goods and services produced by normal residents of a country, measured at current year prices	Money value of final goods and services produced by normal residents of a country in a year measured at prices of base year.
Index of economic growth	It is not a good tool for measuring the economic growth of a country.	It is better tool for measuring the economic growth of a country.
Causes of change	It is affected by change in both price and quantity.	It is affected by change in quantity only.
comparison	It is not a suitable tool for comparing NY of different years.	It is generally used for comparing NY of different years
Calculation	$P_1 \times Q_1$	$P_0 \times Q_1$

* Current Price Index = $\frac{\text{NY at current Price} \times 100}{\text{NY at constant Price}}$

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

Q-1 Nominal GDP = 1200
Price Index = 120
Real GDP = ?

$$\text{Price Index} = \frac{\text{GDP at current Price (Nominal)}}{\text{GDP at constant Price (Real)}} \times 100$$

$$120 = \frac{1200}{\text{Real GDP}} \times 100$$

$$\text{Real GDP} = \frac{1200 \times 100}{120} = \frac{120000}{12} = 10000$$

Q-2 Real GDP = 300 GDP at constant price
Nominal GDP = 330 GDP at current price
Price Index ??

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

$$= \frac{330}{300} \times 100$$

$$= 110$$

Q-3 Real GDP = 500
Price Index = 125
Nominal GDP = ?

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

$$125 = \frac{\text{Nominal GDP}}{500} \times 100$$

$$\frac{125 \times 500}{100} = \text{Nominal GDP}$$

$$625 = \text{Nominal GDP}$$

SP-2018

BSE
8-4

year

2014-15

2015-16

2016-17

Nominal GDP

6.5

8.4

9

GDP Deflator

100

140

125

- ① For which year is real GDP and Nominal GDP same and why?
- ② Calculate Real GDP for given years. Is there any year for which Real GDP falls.

Q.5

Only one product X is produced in a country. Its output during the year 2012-13 was 100 and 110 units respectively. The market price of the product during the year was 50 and 55. Calculate % change in real and nominal GDP in year 2013 using 2012 as base year.