INDIAN SCHOOL AL WADI AL KABIR

Class: XII	Department: Commerce
Worksheet No: 4	Topic: National Income Aggregates

MCQ's

1. Calculate Intermediate consumption: Int. Consn=Rs 1500, Imports =Rs 500.
Soln: Int. Consn=Rs 1500

a. 300
b. 900
c. 0
d. 1500

2. If purchase of raw materials from domestic firms= Rs 400, Imports=Rs 200, Int. Consn=?

a. 500
b. 600
c. 100
d. None of these

Soln: Interm. Consn (IC)=Rs 400+Rs 200=Rs 600

3. Purchase of raw materials=Rs2000, Import=Rs 200. Intm consn=?

a. **Rs 2000**

b. Rs 200

c. Rs 1200

d. Rs 800

Soln: Intm consn=Rs 2000 as total purchase of raw materials are given.

4. Calculate value of output with Sales=Rs 2000, export=Rs 400

a. 400
b. 0
c. 2400
d. **2000**

5. Domestic sales=Rs 500, Export =Rs 200; Value of output?

a. **Rs 700**
b. Rs 900
c. Rs 500
d. Rs 200

Soln: 500+200=700

6. Household inventory is:

a. Not included in national income
b. Is a stock concept
c. **Both a and b**
d. None of them

7. Own account production of goods is included in NI because:

a. Goods are tangible.
b. **Their valuation is possible**.
c. Goods are more productive than services.
d. None of these

8. Which of the following is not an element of Final Consumption Expenditure?

a. Household expenditure on food
b. Government Final Consumption expenditure
c. **Expenditure on raw materials**
d. Household expenditure on education

9. Problem of double counting can be avoided by using:

a. Final Output method
b. Value Added Method
c. Both a and b
d. Neither a nor b

10. Remittances from a relative working abroad are:

a. Included in national income
b. Not included in national income
c. Transfer payments
d. **Both b and c**

NUMERICAL PROBLEMS

1. **Calculate the Value Added by firm X and Y.**

Sl No.	Items	Rs Crores
i.	Sales by firm X	100
ii.	Sales by firm Y	500
iii.	Purchase by HH from firm Y	300
iv.	Export by firm Y	50
v.	Change in stock of firm X	20
vi.	Change in stock of firm Y	10
vii.	Imports by firm X	70
viii	Sales by firm Z to firm Y	250
ix.	Purchase by firm Y from firm X	200

Solution: Value added by firm X = 100 + 20 – 70 + 200 = 250

Value added by firm Y = 500 + 10 – 250 -200 = 60

2. Calculate NVAfc

Sl. No.	Item	Rs Crores
i.	Purchase of raw materials	500
ii.	Gross domestic capital formation	200
iii.	Subsidies	60
iv.	Opening Stock	50
V	Sales	800
vi.	Net domestic capital formation	180
vii.	Closing stock	40

Solution: GVAmp = Value of output – IC = Sales + Ch in stock – IC

GVAmp = 800 + (40-50) – 500 = 290

Dep = GDCF – NDCF = 200 – 180 = 20

NIT = IT – Sub = 0 – 60 = - 60

NVAfc = GVAmp – Dep – NIT = 290 – 20 – (-60) = 270 + 60 = 330

3. Calculate Operating Surplus.

Sl. No.	Item	Rs Crores
i.	Sales	4000
ii.	COE	800
iii.	IC	600
iv.	Rent	400
V	Interest	300
vi.	NIT	500
vii.	Depreciation	200
viii.	Mixed Income	400

GDPmp = Value of output – IC = Sales + Ch in stock – IC
= 4000 + 0 – 600 = 3400
NDPfc = GDPmp – Dep – NIT = 2700
NDPfc = COE + OS + MI
OS = 1500
Note: Rent, Interest are redundant data.

4. Calculate NNPfc.

Sl. No.	Item	Rs Crores
i.	Social security Contribution by employees	90
ii.	Wages and salaries	800
iii.	Net current transfer to abroad	(-) 30
iv.	Rent n Royalty	300
V	NFItA	50
vi.	Social security Contribution by employers	100
vii.	Profit	500
viii.	Interest	400
ix.	Consumption of fixed capital	200
x.	NIT	250

Solution: NDPfc = Wages and salaries + Social security Contribution by employers + Rent n Royalty + Interest + Profit + MI
= 800 + 100 + 300 + 500 + 400 = 2100
NFIfA = (-) NFItA = (-) 50

NNPfc = NDPfc + NFIfA = 2100 – 50 = 2050

5. Calculate NNPfc.

Sl. No.	Item	Rs Crores
i.	Net change in stock	50
ii.	GFCE	100
iii.	Net current transfer to abroad	30
iv.	GDFCF	200
V	PFCE	500
vi.	Net Imports	40
vii.	Depreciation	70
viii.	Net factor income to abroad	(-) 10
ix.	Net capital transfer to abroad	25
x.	NIT	120

SOLUTION: GDPmp = PFCE + GFCE + GDCF + Net Export
= 500 + 100 + GDFCF + Net change in stock + (-) **Net Import**
= 600 + 200 + 50 – 40 = 810
NFIfA = (-) NFItA = + 10

NI = NNPfc = GDPmp – Dep + NFIfA – NIT = 810 – 70 + 10 – 120 = 630

6. Calculate i. National Income ii. Depreciation.

Sl. No.	Item	Rs Crores
i.	NIT	5
ii.	NDFCF	100
iii.	Net Imports	(-) 20
iv.	GFCE	200
V	GDFCF	125
vi.	PFCE	600
vii.	Change in stock	10
viii.	NFIfA	5

Solution: **GDPmp = PFCE + GFCE + GDFCF + Ch in stock + Net Export**
= 600 + 200 + 125 + 10 + (20) = 955
Dep = GDFCF – NDFCF = 125 – 100 = 25

NNPfc = GDPmp – Dep + NFIfA – NIT = 955 – 25 + 5 – 5 = 930

7. Calculate i. Closing Stock ii. NI iii. GFCE.

Sl. No.	Item	Rs Crores
i.	PFCE	900
ii.	NDFCF	2100
iii.	NFItA	40
iv.	NNPmp	5230
V	NIT	150
vi.	Opening Stock	100
vii.	GDCF	2800
viii.	Depreciation	550
ix.	Net Exports	

Solution: Dep = GDCF – NDCF = GDCF – (NDFCF + Δin stock)
550 = 2800 – 2100 - Δin stock
Δin stock = 150 ; Closing stock – 100 = 150 or Closing stock = 250

8. Calculate NI by i. Income Method ii. Expenditure Method.

Sl. No.	Item	Rs Crores
i.	Interest	150
ii.	Rent	250
iii.	GFCE	600
iv.	PFCE	1200
v.	Profit	640
vi.	COE	1000
vii.	NFItA	30
viii.	Net Indirect Taxes	60
ix.	Net Export	(-) 40
x.	Depreciation	50
xi.	NDCF	340

Solution: Income Method: NDPfc = **NDPfc =** Wages and salaries + Social security Contribution by employers + Rent n Royalty + Interest + Profit + MI = 150 + 250 + 640 + 1000 = 2040
NNPfc = NDPfc + NFIfA = 2040 – 30 = 2010

Expenditure Method: GDPmp = PFCE + GFCE + GDCF + Net Export
= 1200 + 600 + NDCF + Dep + (-) 40 = 1800 + 340 + 50 -40 = 2150

NNPfc = GDPmp – Dep + NFIfA – NIT
= 2150 -50 + (-) 30 – 60 = 2010

9. If the nominal GDP is 600 and Price Index (base = 100) is 125, calculate Nominal GDP.
Solution:

The formula used for conversion of **nominal GDP into real GDP** is:

$$\textbf{Real GDP} = \frac{\textbf{Nominal GDP}}{\textbf{Price Index}} \textbf{ X 100}$$

* Price index is an index number which shows the change in price level relating to two different years (i.e. current year and base year).

* Remember, price index of the base year is always equal to be equal to 100.

$$\text{Real GDP} = 100 \text{ X } \frac{600}{120} = 500$$

10. If the Real GDP is 200 and Nominal GDP is 210, calculate Price Index (base = 100)

Solution:

The formula used for conversion of **nominal GDP into real GDP** is:

$$\textbf{Real GDP} = \frac{\textbf{Nominal GDP}}{\textbf{Price Index}} \textbf{ X 100}$$

$$\text{Price Index} = 100 \text{ X } \frac{210}{200} = 105$$