Student ID: 6304640896

Question 1 Fill in the blanks. You must show your work.

GNP=

Year	2014	2015
Nominal gross national income (GNI) ($ billion)	291.53	319.56
Factor income sent abroad ($ billion)	68.30	75.90
Factor income earned abroad ($ billion)	8.13	9.49
Nominal gross domestic product (GDP) ($ billion)	351.7	358.97
GDP deflator	100	100.88
Real GDP ($ billion)	351.7	355.84

GDP = GNP + NFFI

GNP

GNI

X

M

Nominal $GDP_{2014} = \sum (P_{2014} \times Q_{2014})$

Nominal $GDP_{2015} = \sum (P_{2015} \times Q_{2015})$

$358.97 = \sum (P_{2015} \times Q_{2015})$

$GDP\ deflator_{2015} = \frac{Nominal_{2015}}{Real_{2015}} \times 100$

$100.88 = \frac{358.97}{Real_{2015}} \times 100$

Real $GDP_{2014} = \sum (P_{2015} \times Q_{2014})$

- Real $GDP_{2015} = 355.84$

$GDP\ deflator_{2014} = \frac{Nominal_{2014}}{Real_{2014}} \times 100$

- GNI = GDP − NFFI

  = 291.53 − (8.13 − 68.30)

  = 351.7

$\frac{100}{100} = \frac{Nominal_{2014}}{Real_{2014}}$

$Real_{2014} = Nomal_{2014}$

Question 2 Fill in the blanks. You must show your work.

Year	2012	2013	2014	2015
Consumer price index (CPI)	99.08	100.55	102.51	107.52
Inflation rate (%)	−0.92	1.48	1.95	4.89
Employed (millions)	12.50	12.60	12.85	13.05
Unemployed (millions)	0.99	0.71	0.68	0.61
Population (millions)	20.75	21.48	21.82	22.02
Unemployment rate (%)	7.34	5.33	5.03	4.47

- $Inflation\ rate_{2014} = \frac{CPI_{2014} - CPI_{2013}}{CPI_{2013}} \times 100 = \frac{102.51 - 100.55}{100.55} \times 100 = 1.95$

- $Inflation\ rate_{2015} = \frac{CPI_{2015} - CPI_{2014}}{CPI_{2014}} \times 100 = \frac{107.52 - 102.51}{102.51} \times 100 = 4.89$

- $Unemployment\ rate_{2012} = \frac{unemployed_{2012}}{employed_{2012} + unemployed_{2012}} \times 100 = \frac{0.99}{12.5 + 0.99} \times 100 = 7.34$

- $Unemployment\ rate_{2013} = \frac{unemployed_{2013}}{employed_{2013} + unemployed_{2013}} \times 100 = \frac{0.71}{12.6 + 0.71} \times 100 = 5.33$

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Question 3 Calculate GDP and GNP. You must show your work.

Item	$ billion
Imports	289
Transfer payments	253
Saving	82
Exports	234
Income from employment	1160
Taxation	396
Consumer spending	745
Investment	229
Net factor income from abroad (NFFI	−111
Government spending on goods and services	437

GDP = C + I + G + (X − M)

= 745 + 229 + 437 + 289 − 234

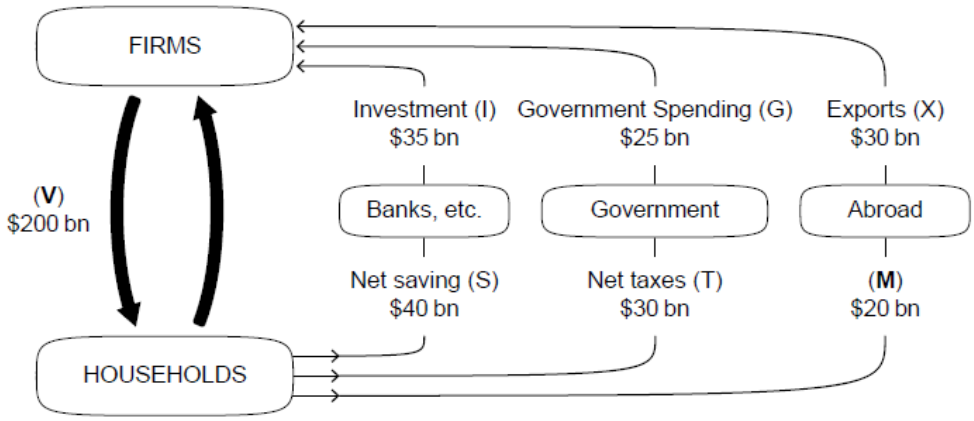
= 1,466

GNP = GDP + NFFI

= 1,466 − 111

= 1,355

Question 4 Answer the following questions.



4.1 What do the flows (V) and (M) represent?

V = income , M = import

4.2 Does the government run a budget deficit or surplus? By how much?

Budget deficit by $5 bn

4.3 Does the country run a trade deficit or surplus? By how much?

Trade surplus by $10 bn

4.4 Is the economy in equilibrium? Why or why not?

The economy is in equilibrium because leakages = Injections

(S + T + M) = I + G + X)

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Question 5 Why does CPI tend to be higher than GDP deflator?

Year	Consumer price index (CPI)	GDP deflator	GDP ($ million)
2014	100	100	4465
2015	105.35	105.11	4814
2016	109.21	108.92	5026

CPI focus on consumer goods and GDP deflator focus on all goods in economy. Price can change all the time but CPI has fixed Quantity. It means if Price change, it will effect to GDP. But it doesn't effect to Quatity of CPI. That's why CPI higher than GDP deflator.

Question 6 Answer the following questions.

	Price per unit in dollars ($)	
	2013	2014
Pizza	12.50 ×10	12.90 ×10
Chocolate milk (litres)	1.15 ×100	1.25 ×100
Jazz concert	45.00 ×10	46.00 ×10
Total cost of the typical basket	690	714

The typical basket of goods purchased by an average consumer consists of 10 pizzas, 100 litres of chocolate milk and 10 jazz concerts.

6.1 With 2013 as the base year, calculate CPI of 2013 and 2014.

$$CPI = \frac{\text{Market Basket in Desired year}}{\text{Market Basket in Base year}} \times 100$$

$$CPI_{2013} = \frac{690}{690} \times 100 = 100 \%$$

$$CPI_{2014} = \frac{714}{690} \times 100 = 103.48 \%$$

6.2 Calculate the inflation rate of 2014.

$$\text{Inflation rate} = \frac{CPI_{NEW} - CPI_{OLD}}{CPI_{OLD}} \times 100\%$$

$$\text{Inflation rate}_{2014} = \frac{103.48 - 100}{100} \times 100\% = 3.48\%$$

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Question 7 Fill in the blanks. You must show your work.

Year	Nominal GDP ($ billions)	GDP deflator	Real GDP ($ billions)	Annual real growth rate (%)	Population	Real GDP per capita ($)
2014	308.12	98.9	311.55		13273644	2.35×10^{-5}
2015	321.99	100	321.99	3.35	13340012	2.41×10^{-5}
2016	332.65	102.2	325.49	1.09	13473412	2.42×10^{-5}

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

2014 : $98.9 = \frac{308.12}{\text{Real GDP}_{2014}} \times 100$

$= 311.55$

2015 : $100 = \frac{321.99}{\text{Real GDP}_{2015}} \times 100$

$= 321.99$

2016 : $102.2 = \frac{332.65}{\text{Real GDP}} \times 100$

$= 325.49$

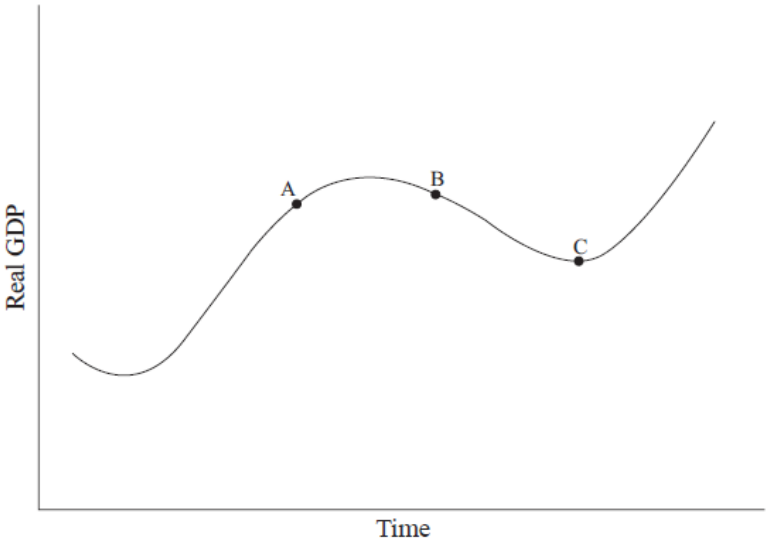
Real GDP per capita = $\frac{\text{Real GDP}}{\text{Population}}$

- 2014 = $\frac{311.55}{13,273,644} = 2.33 \times 10^{-5}$
- 2015 = $\frac{321.99}{13,340,012} = 2.41 \times 10^{-5}$
- 2016 = $\frac{325.49}{13,473,412} = 2.42 \times 10^{-5}$

Annual Growth Rate = $\frac{\text{Real GDP}_{new} - \text{Real GDP}_{old}}{\text{Real GDP}_{old}} \times 100\%$

- 2014 → 2015 : $\frac{321.99 - 311.5}{311.5} \times 100\% = 3.35\%$
- 2015 → 2016 : $\frac{325.49 - 321.99}{321.99} \times 100\% = 1.09\%$

Question 8 Based on the data above, which position – A, B, or C – best describes the economy in 2016? Why?



The economy in 2016 is B because Real GDP in 2016 is highest.

$MPC = \frac{\Delta C}{\Delta Y_d}$ $MPS = \frac{\Delta S}{\Delta Y_d}$ Student ID: 630464089 6

Question 9 Answer the following questions.

$MPS = 0.25$

Country A is a closed economy with no government. The marginal propensity to save in the country is 0.25.

9.1 Calculate the value of the (investment) multiplier.

$MPS + MPC = 1$ | $MPC = 0.75$

$0.25 + MPC = 1$

$\frac{\Delta Y^*}{\Delta I} = \frac{1}{1 - MPC} = \frac{1}{1 - 0.75} = \frac{1}{0.25} = 4$ #

9.2 Due to the initial investment made by firms and the multiplier effect, the (equilibrium) output in the economy has increased by $200m. Calculate the value of the initial investment.

$Y \uparrow 4$ $I \uparrow 1$ | so if y increase by 4 units, I increases by 1 unit

$Y \uparrow 200$ $I \uparrow 50$ | when y increase by 200 units, I increase by 50 units

Country B is an open economy with government. Govern Income ↓

9.3 Do you think the multiplier effect in Country B will be larger than that of Country A? Why or why not?

The multiplier effect in Country B will be smaller that that of Country A because when we have government, we will have less income (pay taxes).