**Assignment 1**

**A/ Problems**

**Problem 1**

Macrostan is a developing economy located to the North of Kazakhstan. Use the following information on the Macrostanian economy. Quantities are given in millions of Macrostanian dollars (M$).

|  |  |
| --- | --- |
| Non-residential investment | 586.1 |
| Change in business inventories | –30.9 |
| Amount of National Income not going to Households | 366.2 |
| Macrostanian exports of goods and services | 380.8 |
| Personal income taxes | 600.0 |
| Personal consumption expenditures | 3514.8 |
| Government consumption and gross investment | 1589.7 |
| Net factors of production payments to the rest of the world | 0.0 |
| Residential investment | 453.7 |
| National Income | 5,075.7 |
| Macrostanian imports of goods and services | 285.0 |

1. Calculate the Macrostanian Gross Domestic Product (using the expenditure approach).

2. Calculate the Macrostanian Personal Income.

3. Calculate the Macrostanian Disposable Income.

4. Calculate Personal Saving in Macrostan.

5. Use the information above to calculate the Macrostanian Personal Saving rate.

**Problem 2**

Which of the following transactions would be counted in GDP?

a/ General Motors issues new shares of stocks

b/ General Motors builds a new plant

c/ Company A purchases all the assets of company B

d/ You win a $500 bet

e/ You buy a new version of Dante’s “Divine comedy”

f/ You buy a used version of Bach’s “Well tempered clavier”

g/ Domino’s Pizza in your neighborhood buys 30 pounds of mozzarella cheese, keeps it in inventory for one month, and then uses it to make (and sell) new pizzas.

h/ Given your mother’s continuous complaints, you spend the week end cleaning your room.

**Problem 3**

Joe Green is a farmer who lets his cows graze in the pasture. Joe’s cows produce 1000 gallons of milk per week, and he sells this milk to the dairy for $0.80 per gallon (ignore minor purchases such as veterinary services, and consider that Joe’s output is all value added).The dairy processes the raw milk and sells it to the grocer for $2.70 per gallon. The grocer sells the milk for $3.00 per gallon.

1) Compute the value added/gallon at each stage of the “milk-processing chain”

2) What is the market value of the final good (all the gallons sold by the grocer)?

3) Can you obtain the market value of the final good using your answer in question 1? (*hint*: of course you can!)

**Problem 4**

Utopia is a prosperous economy with only two industries: cars and steel. Both industries use workers and capital in the production process. To produce cars, the automobile industry uses steel produced by the steel firm as an intermediate good. The following table summarizes the main economic operations taking place in Utopia

|  |  |
| --- | --- |
| **Steel industry** | |
| Sales revenue ($) | 100 |
| Salaries paid to employees ($) | 80 |
| Profit ($) | 20 |
| **Cars industry** | |
| Sales revenue ($) | 210 |
| Salaries paid to employees ($) | 70 |
| Steel bought from the steel industry ($) | 100 |
| Profit ($) | 40 |

1. What is the value of the Utopian GDP based on the value of the final good produced in this country?
2. Compute the GDP by adding the value added obtained in each one of the industries
3. Compute the GDP by adding the revenues gained by both factors of production in both industries

**B/ Multiple choice questions**

1. Having totaled the other components of the Lebanese GDP, you find that (i) business inventories have fallen during last year while (ii) imports have exceeded exports. (i) will            GDP; (ii) will            GDP.

(a) increase; increase

(b) increase; decrease

(c) decrease; increase

(d) decrease; decrease

2. Bugs Bunny, an avid gardener, buys a new packet of carrot seeds. The packet of seeds            counted in GDP as a final product; the carrots Bugs Bunny grows and consumes            counted in GDP as a final product.

(a) is; are

(b) is; are not

(c) is not; are

(d) is not; are not

Use the following information about prices of goods in Utopia to calculate the economy’s production for the next two questions.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Production** | | | **Prices** | | |
| **Good** | **Year 1** | **Year 2** | **Year 3** | **Year 1** | **Year 2** | **Year 3** |
| Goat milk | 200 | 180 | 160 | 2.00 | 2.40 | 2.50 |
| Bananas | 80 | 90 | 100 | 3.00 | 3.20 | 3.10 |

3. Nominal GDP in Year 1 is            and nominal GDP in Year 2 is            .

(a) 640; 720

(b) 640; 736

(c) 630; 720

(d) 630; 736

4. In Year 1 prices, real GDP in Year 2 is            and real GDP in Year 3 is            .

(a) 640; 620

(b) 640; 630

(c) 630; 640

(d) 630; 620

5. In Lalaland, nominal GDP is 4000 Kopeks and real GDP is 3000 Kopeks. The GDP deflator is

(a) 25.

(b) 33.33.

(c) 75.

(d) 133.33.