Ques1. Below are the solutions and explanations for each

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1. Nominal GDP Calculation

Multiply the quantity of each final good or service by its market price and sum them:

Automobiles:

Clothing outfits:

Food:

Rental of dwelling units:

Attorneys' services:

Medical services:

Now add all values:

$$\text{Nominal GDP} = 10{,}000{,}000{,}000$$
$$+\ 500{,}000{,}000$$
$$+\ 20{,}000{,}000$$
$$+\ 8{,}000{,}000{,}000$$
$$+\ 20{,}000{,}000$$
$$+\ 60{,}000{,}000$$

$$\boxed{\text{Nominal GDP} = \$18.6\ \text{billion}}$$

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2. Does a rise in nominal GDP imply more production or jobs?

No. Nominal GDP measures the value of production using current prices.

Nominal GDP can rise because of:

Higher prices (inflation),

Higher production, or

A combination of both.

Thus, an increase from $5,000 billion to $5,500 billion does not necessarily mean higher output, income, or employment. Real GDP would have to be examined to determine whether production actually increased.

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3. Why including intermediate products would overestimate GDP

GDP includes only final products to avoid double

Intermediate products (like steel used to produce automobiles) already contribute to the value of final goods If both were included:

The value of intermediate goods would be counted multiple times, GDP would be artificially inflated.

This inflation occurs because the value of intermediate goods is already embodied in the final goods' prices

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4. Value Added (GDP)

Total sales in the economy (including intermediates): \$10,000 billion
Value of intermediate goods: \$6,000 billion

Value added = Total sales − Intermediate goods

$$\boxed{\text{GDP} = \$10{,}000\ \text{billion} - \$6{,}000\ \text{billion} = \$4{,}000\ \text{billion}}$$

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5. Gross Private Domestic Investment

GDP identity:

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

Given:

Net exports

Solve for investment :

$4{,}500 = 3{,}000 + I + 1{,}000$

$I = 4{,}500 - 4{,}000 = \boxed{500\ \text{billion}}$

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6. Why government purchases in GDP are lower than total government expenditures

Government purchases (G) include only spending on goods and services that the government uses to produce public services—examples:

Salaries of teachers and police

Military equipment

Infrastructure

However, total government expenditures include many transfer payments, which are not purchases of goods or services. Transfer payments:

Do not represent new production

Therefore are excluded from GDP

Examples of transfer payments not included in GDP:

Social Security benefits

Medicare/Medicaid payments

Unemployment benefits

Welfare payments

Interest on the national debt

Thus, government purchases in GDP ($815B) are less than total government expenditures ($1,400B) because transfer payments are