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ECO403 Assignment 1 Solution

Fall 2026

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ECO403: Macroeconomics

Assignment No. 1 — Fall 2026 | Total Marks: 10

Name: VU Learning Hub

Case Scenario

Sohni Dharti is a small developing economy. A large number of its citizens work in the Gulf countries and send their earnings back home every month as remittances. At the same time, several foreign companies operate factories and telecom networks inside Sohni Dharti and send their profits back to their home countries. The government also has foreign loans on which it pays interest to foreign lenders.

The Statistics Bureau of Sohni Dharti has collected the following data for the year 2025 (billion Rs.).

Item	Rs. billion
Personal consumption expenditure (C)	4,800
Gross private domestic investment (I)	1,200
Government purchases of goods and services (G)	900
Net exports, exports minus imports (NX)	-400
Factor income earned by citizens abroad	800
Factor income paid to foreigners	350
Depreciation	500
Indirect business taxes	650
Corporate profits	900
Social insurance contributions	200
Net interest	300
Dividends	400
Government transfer payments to individuals	250
Personal interest income	350
Personal taxes	450

Part 1: Gross Domestic Product (GDP)

GDP by the expenditure approach adds consumption, investment, government purchases and net exports.

GDP = 4,800 + 1,200 + 900 + (-400) = Rs. 6,500 billion.

Part 2: Gross National Product (GNP)

Net factor income from abroad is the income citizens earn abroad minus the income paid to foreigners.

Net factor income from abroad = Rs. 800 billion - Rs. 350 billion = Rs. 450 billion.

GNP adds this net income to GDP.

GNP = 6,500 + 450 = Rs. 6,950 billion.

Part 3: Net National Product (NNP) and National Income (NI)

NNP takes depreciation out of GNP.

NNP = 6,950 - 500 = Rs. 6,450 billion.

NI takes indirect business taxes out of NNP.

NI = 6,450 - 650 = Rs. 5,800 billion.

Part 4: Personal Income (PI)

PI starts from NI and takes out the income that never reaches households. It then adds the income households receive without earning it.

PI = 5,800 - 900 - 200 - 300 + 400 + 250 + 350 = Rs. 5,400 billion.

Part 5: Disposable Personal Income (DPI)

DPI is the income left with households after personal taxes.

DPI = 5,400 - 450 = Rs. 4,950 billion.

(GNP - GDP) as a percentage of GDP = 450 / 6,500 x 100 = 6.92%.

GNP is larger than GDP for Sohni Dharti.

Citizens of Sohni Dharti earn more abroad than foreigners earn inside the country. The remittances sent by Gulf workers are the main source of this gap.