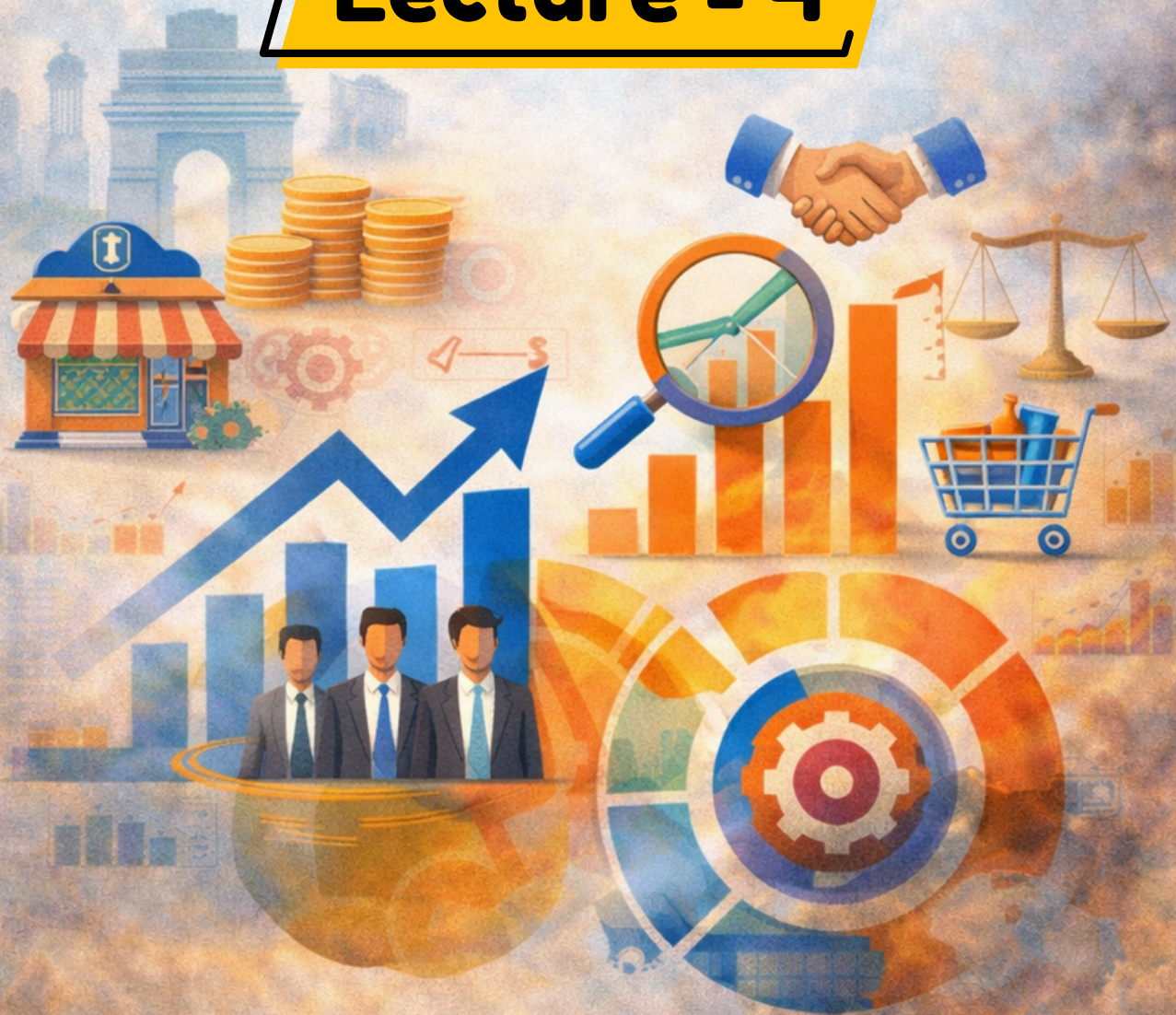
PARMAR SSC

NATIONAL INCOME

Lecture - 4



BY PARMAR SIR

FUNDAMENTALS & HISTORICAL CONTEXT

What is National Income?

- **Definition:** National Income is the total monetary value of all final goods and services produced by a country's residents (nationals) within a specific period, typically a financial year.
- **Scope:** It is a Macroeconomic concept. Unlike microeconomics, which studies individual consumers or firms (e.g., utility derived by one person), macroeconomics analyzes the economy as a whole to understand how the entire country operates.

The Financial Year

Period: In India, the calculation of National Income corresponds to the Financial Year, which runs from **April 1st to March 31st** of the next calendar year.

The term "**Budget**" is not explicitly mentioned in the Constitution; instead, **Article 112** refers to it as the "**Annual Financial Statement**".

Historical Evolution of National Income in India

- The journey of estimating India's income began in the colonial era and was institutionalized after independence.

The Pioneer: Dadabhai Naoroji

- **First Estimation:** The concept of National Income in India was first introduced by Dadabhai Naoroji.

Key Contributions:

- He authored the seminal book "**Poverty and Un-British Rule in India**", where he propounded the "**Drain Theory**," explaining how British colonial rule was draining India's wealth.
- He established the East India Association (1866) in London.

Political Legacy

- He was the first Asian to become a member of the British Parliament.
- He presided over three sessions of the Indian National Congress (including the famous 1906 session in Calcutta).
- **Newspaper:** He published the paper Rast Goftar.

Institutionalization: P.C. Mahalanobis

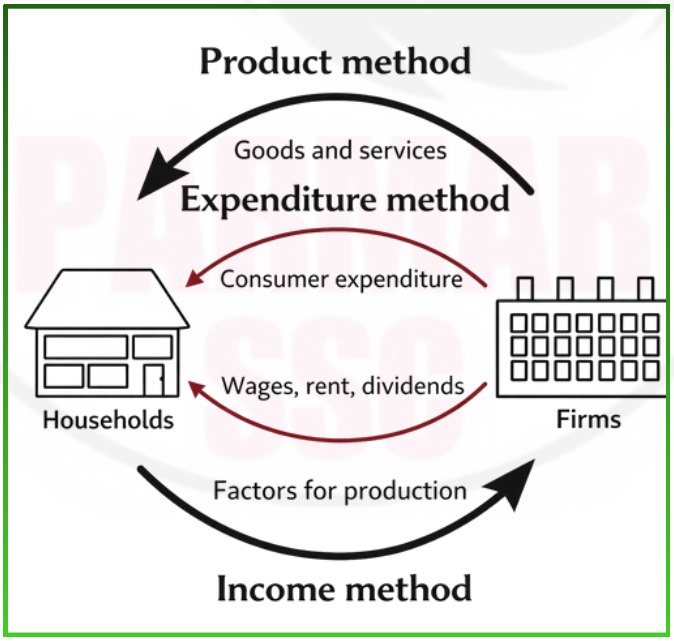
- **National Income Committee (1949):** After independence, the need for formal data collection led to the formation of the National Income Committee in 1949. It was chaired by P.C. Mahalanobis.

Key Contributions:

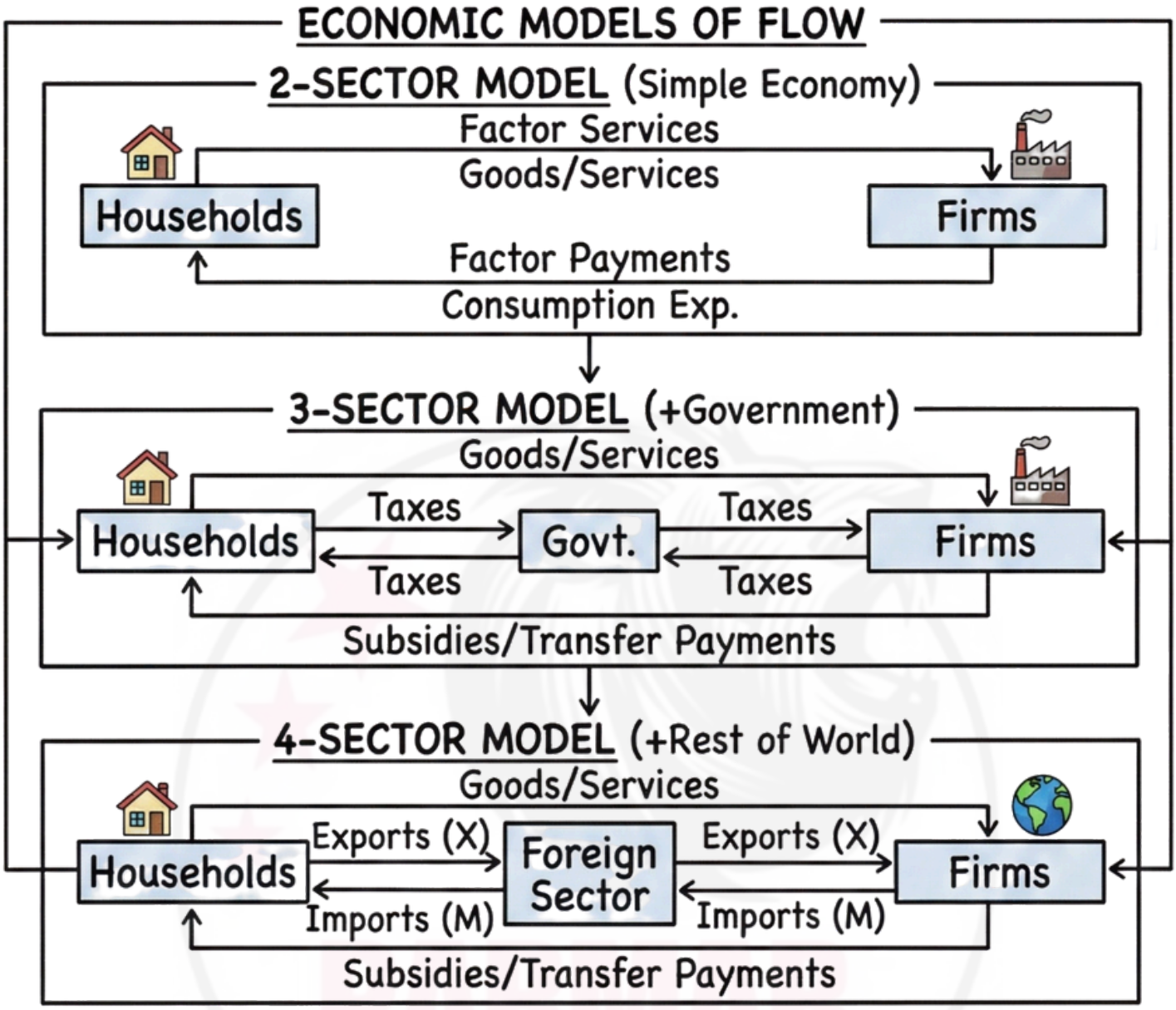
- He is known as the "**Father of Statistics in India**".
- He established the Indian Statistical Institute (ISI).
- **Economic Planning:** The Second Five-Year Plan of India was based on the Mahalanobis Model.

CIRCULAR FLOW OF INCOME

- The "Circular Flow of Income" is a model used to describe the continuous movement of goods, services, resources, and money within an economy.
  - **Fundamental Idea:** The economy operates as a continuous loop where expenditure by one sector becomes the income of another.
  - **The Cycle:** Households provide resources to firms ⇒ Firms provide goods/services to households ⇒ Households spend money on goods ⇒ Firms pay income to households.



Factors of Production	Factors of Payment
Land	Rent
Labour	Wages
Capital	Interest
Entrepreneurs	Profit



DYNAMICS OF FLOW: INJECTIONS VS. LEAKAGES

- The volume of the circular flow expands or contracts based on Injections and Leakages.

Injections (Money Entering)

- Injections are additional funds entering the economy, which increase total spending and boost economic growth.
- **Investment (I):** Businesses spending on capital goods (machinery, buildings) to expand production.
- **Government Spending (G):** Expenditure on public services, defense, and infrastructure.
- **Exports (X):** Money entering the domestic economy from foreign buyers.

Injections > Leakages ⇒ Economy Grows/Expands

Leakages (Money Leaving)

- Leakages (or withdrawals) are funds that exit the circular flow, which reduce total spending and slow down economic growth.
- **Savings (S):** Income kept aside by households/firms instead of being spent.
- **Taxes (T):** Compulsory payments to the government (money leaves the private sector).
- **Imports (M):** Spending on foreign-produced goods (money leaves the domestic economy).

Leakages > Injections ⇒ Economy Contracts/Slows Down

METHODS OF CALCULATING NATIONAL INCOME

- There are three distinct approaches to measuring National Income. Theoretically, all three methods should yield the same result, as they view the same flow of income from different perspectives (Production, Distribution, and Disposition).

1. Value Added Method (Production / Output Method)

- This method focuses on the production side of the economy. It calculates the aggregate value of all goods and services produced by deducting the cost of inputs.
- The Concept of Value Added:
  - Value Added represents the contribution of a firm to the final product.
  - **Formula:** **Value Added = Value of Output - Intermediate Input (Consumption)**
- **Example:** The Cotton-Shirt Chain

- **Logic:** If we simply added the total output value of each stage (100 + 200 + 400 + 800), the total would be ₹1,500, which is incorrect because the value of the cotton is counted multiple times.
- **Correct Calculation:** We sum only the Value Added at each stage (100+100+200+400 = 800).

Stage	Output	Input	VA
Cotton	100	0	100
Yarn	200	100	100
Cloth	400	200	200
Shirt	800	400	400
		TOTAL VA =	800

- **Double Counting:** Double counting occurs when the value of intermediate goods is counted more than once. To avoid this, we must only count the value of final goods or sum the value added at each step.

- **Gross Value Added (GVA)**: The sum of value added by all sectors in the economy.

$$GVA = GVA_1 + GVA_2 + GVA_3 + GVA_n$$

In 2015, the Central Statistics Office (CSO)—now the National Statistical Office (NSO)—adopted the Gross Value Added (GVA) methodology for calculating India's GDP

2. Income Method

- This method focuses on the distribution side. It sums up all incomes generated by the factors of production (Land, Labor, Capital, Entrepreneur) within the domestic territory.
- **Formula:** National Income = Compensation of Employees + Operating Surplus + Mixed Income

Components:

- **Compensation to Employees:** This refers to the total wages or salaries paid to workers for their product or services.
- **Operating Surplus:** This refers to the profit earned by businesses (profit, rent, and interest) after deducting employee compensation (wages).
- **Mixed Income:** This is the income earned by self-employed individuals and unincorporated businesses. It arises when elements of factor income (labor and capital) cannot be distinctly separated.
- **E.g.**, A doctor running their own clinic

3. Expenditure Method

- This is a way to calculate a country's GDP by adding up all spending on goods and services in the economy. It's the most common method for calculating GDP.
- **Formula:** $GDP = C + G + I + (X - M)$

Components:

- **C (Consumption Expenditure):** Spending by households on goods and services.
- **I (Investment Expenditure):** Spending by businesses on capital goods (machinery, infrastructure).
- **G (Government Spending):** Public expenditure on goods and services (e.g., defense, roads, salaries).
- **X - M (Net Exports):**
  - **X (Exports):** Spending by foreigners on domestic goods.
  - **M (Imports):** Spending by residents on foreign goods (subtracted because it leaves the economy).

FINAL GOOD vs INTERMEDIATE GOOD

Feature	Final Goods	Intermediate Goods
Economic Process	These goods will now not undergo any economic process.	These are semi-finished products that will undergo various economic processes and transformations to be converted to final products.
Usage	Goods used by the consumer for personal consumption or investment.	Goods used as inputs for producing other goods and services and will get customized in the process.
Nature of Demand	Direct consumption or capital investment.	Further processing or resale.
Example	When you buy tea from a shop for personal consumption, it is a final good.	When a tea shop or hotel buys tea to prepare and sell tea to customers, it becomes an intermediate good.

Types of Final Goods

1. Consumer goods

- Finished products used by individuals for personal consumption rather than for producing other goods.
- **Consumer Non-Durables:** Goods consumed immediately or quickly (e.g., food, drinks, milk).
- **Consumer Durables:** Goods that last for a long time and are not "eaten" or destroyed immediately (e.g., TV, Fridge, AC, Cars).

2. Capital goods

- These are physical goods used by businesses to produce other goods and services, but they are not consumed in the process.
- E.g. Machine to produce T-shirts.

Inventory

- It refers to the items a business keeps in stock for sale or production purposes. It can include raw materials, work-in-progress items, and finished goods, depending on the type of business.
- If the sale of goods increases, the inventory decumulates, and if the sale of goods decreases, the inventory accumulates. It can be either planned or unplanned.

TYPES OF VARIABLE: STOCK vs FLOW

Stock: It is a quantity measured at a point in time
Ex: Wealth, loan, inventory, capital, money supply

Flow: It is a quantity measured over a period of time
Ex: Income, expenditure, change in inventory, depreciation

AGGREGATES OF NATIONAL INCOME

Gross Domestic Product (GDP)

- **GDP at Market Price (GDP_{MP}):** The total value of all final goods and services produced within the territory of a country during a financial year.
  - **Key Exclusion:** Second-hand goods are never counted to avoid double counting.

GDP was developed by Russian-American economist Simon Kuznets in 1934.

Gross National Product (GNP)

- **GNP at Market Price (GNP_{MP}):** The total value of goods and services produced by the nationals (citizens) of a country, whether living inside or outside the country.

Work done by women at home is outside the percentage of GDP.

GNP vs. GDP:

GNP = GDP + Net Factor Income From Abroad (NFIA)

GNP = GDP - Factor Income to Abroad + Factor Income From Abroad

Net Domestic Product (NDP)

- **NDP at Market Price (NDP_{MP}):** It is the measure of a country's economic output after adjusting for the depreciation (or consumption) of fixed capital.
- The monetary value of an asset decreases over time due to various factors and is called depreciation. It is seen in capital goods.

NDP = GDP - Depreciation

Net National Product (NNP)

- It is the monetary value of final goods and services produced by a country's citizens during a given period, after deducting depreciation from GNP.

NNP = GNP - Depreciation

MARKET PRICE vs. FACTOR COST

Market Price (MP)	Factor Cost (FC)
The final value of the product being sold, which includes Net Indirect taxes.	The cost of the factors of production (total value of inputs) where Net Indirect tax is not included.

$$FC = MP - Indirect\ tax + Subsidy$$
$$FC = MP - (Indirect\ tax - Subsidy)$$
$$FC = MP - Net\ Indirect\ Tax$$

$$Basic\ Price = FC + Net\ production\ tax$$

$$*Net\ production\ tax = (Production\ tax - Subsidy)$$

- FC represent Factor Cost
- MP represent Market Price

National Income

- **Definition:** Net National Product at Factor Cost (NNP_{FC}).
  - **Net:** It accounts for the wear and tear of machinery (Depreciation).
  - **National:** It captures the income of the country's people, not just its territory.
  - **Factor Cost:** It reflects the actual earnings of the factors of production (Wages, Rent, Interest, Profit) rather than market prices distorted by taxes.

REAL GDP vs NOMINAL GDP

Feature	Real GDP	Nominal GDP
Reference	A base year is taken as a reference.	It is generally more than Real GDP due to inflation.
Price Basis	Calculated on constant prices.	Calculated on current prices.
Inflation Adjustment	It is inflation adjusted.	Inflation is not adjusted here.

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

- GDP Deflator is also called "Implicit Price Deflation" and "Price Index".
- GDP of India is calculated by: National Statistical Office (NSO) under Ministry of Statistics and Programme Implementation (MoSPI)
- The base year is considered as: 2011-2012.
- The current base year is 2011-2012, but the government has set up a committee to revise the base Year to 2022-2023.

PER CAPITA INCOME

- It is the average amount of money earned by each person in a specific area over a period of time.

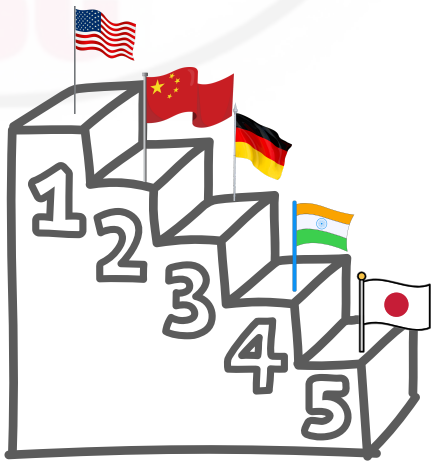
$$\text{Per Capita Income} = \frac{\text{National Income}}{\text{Population}}$$



PURCHASING POWER PARITY

- Purchasing power is the amount of goods and services that can be bought with a specific amount of money. It can also be referred to as "**a common basket of goods**".
- As of **2026, India's GDP** ranked **4th in the world** and **India's economy ranks 3rd** in the world in terms of Purchasing Power Parity **after the USA and China.**

- Ranking of GDP (around the world)
  1. USA
  2. China
  3. Germany
  4. India
  5. Japan



PERSONAL INCOME

- Total income of an individual earned from all sources before taxes.

PI = National Income (NI) + Income received but not earned - Income earned but not received

OR

PI= NI + Government transfers + Net interest paid by government - Corporate tax -Payment for social security

PI = NI + Transfer Payment - Undistributed corporate profit.
*Transfer payment example: Government subsidies/Scholarship/Person

PERSONAL DISPOSABLE INCOME

- It is the amount of money a person has after paying taxes and other mandatory withholding.

Disposable Income = Personal Income - Tax

Green GDP = GDP - Environmental Damage

Potential GDP - Real GDP = Recessionary Gap

POTENTIAL GDP

- It is the total output an economy would produce if its resources were fully utilized.

V.K.R.V. Rao used a scientific approach to calculate National Income. He also gave a two-sector economy classification.



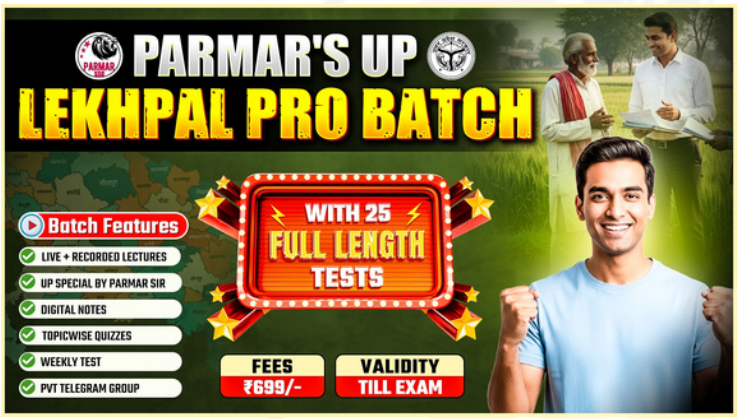


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