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Economics Preview

ECONOMICS

PRELIMS & MAINS

For Civil Services Exams

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Chapter 1 Basic Concepts

Goods and Services

Goods refer to tangible products which possess physical characteristics, i.e. shape, appearance, size, weight, etc. Some goods can be used only once by a consumer, while some can be used repeatedly.

Goods can be traded in the market. There is a time gap in the production, distribution, and consumption of goods. When the buyer purchases goods and pays the price, the ownership is passed from the seller to the buyer.

Goods are manufactured in batches. In a single batch, all the goods possess identical physical characteristics. Examples include books, pens, bottles, bags, etc.

Services lack physical identity and are thus intangible in nature. Services are produced and consumed at the same time. Services are considered sold at the time of their consumption. Examples include retail trade, banking, insurance, transport, communication, courier delivery, etc.

Classification of goods

Goods can be further classified on multiple criteria on the basis of their use. Let us understand these criteria.

1. Capital and Consumer Goods

Capital Goods are products which helps in increasing the production capacity. In other words, capital Goods are these goods which are used to produce other goods or services. For example, a machine used by a toy manufacturer to aid production process is a capital good. Capital goods are used by producer.

Consumer goods (or consumption goods) are products which are ready for consumption. In contrast to capital goods, these goods do not increase production capacity. Example of consumer goods include milk, eggs, fruits, vegetables, etc. These goods are used by final consumers such as households.

Depending upon the time period of their use, consumer goods can be classified into the following categories:

a. Durable Consumer Goods:

Durable consumer goods are those goods which can be used for several years before being discarded. These goods are relatively of high value.

Examples of these goods include Computer, Laptop, Television, Car, Scooter, etc.

b. Semi-durable Consumer Goods:

Semi-durable consumer goods are those goods which can be used approximately for a year or slightly more. Usually, these goods have higher value than non-durable goods but lower value than durable goods.

Examples of these goods include clothes, utensils, etc.

c. Non-durable or Single-use Consumer Goods:
Non-durable goods are those goods which are used (or consumed) in a single act of consumption. For instance, a packet of milk is consumed only once. The same packet cannot be used again and again. These goods are of low value.
Examples of these goods include bread, fruits, vegetables, petrol, etc.

2. Intermediate and Final Goods:
Intermediate goods are those goods which are used in the production of final goods. In other words, these goods are used as raw materials for production of final goods.

Let us take example of thread to understand intermediate goods. Thread is used to make cloth which is worn by us. Similarly, wood purchased by a carpenter to make furniture is an intermediate good.

Same good may be intermediate or final
A same good may be intermediate in one situation and final in the other situation. Let us take an example. Sugar consumed by your family member is a final good. On the other hand, when the same sugar is used by a biscuit manufacturer to make biscuits, then it is an intermediate good.

Whether a good is intermediate or final, it depends on the use of good. Let us further elaborate the above example of sugar. Your family member is a final consumer. When a product is consumed by a final consumer, then it is a final product. Thus, sugar consumed by your family member is a final good.

On the other hand, Biscuit manufacturer is not a final consumer, but he is a producer. He uses sugar for further production of biscuits and not for self-consumption. Thus, sugar in this case is an intermediate good.

Let us take another example. When consumed by you, Milk is a final good. When used by sweets manufacturer, milk is an intermediate good.

Capital stock
Capital stock refers to sum total of means of production. In other words, it is a stock of those assets which are used for production. The production capacity of an economy depends upon its capital stock. If there is an increase in the capital stock, then the production capacity of an economy increases.

Investment
In generic sense, investment refers to sacrifice of current consumption to enhance future production capacity. Investment includes purchase of assets by business firms, government, private individuals and institutions. It even includes expenditure on education, health and other welfare services because such expenditures enhance future production capacity.

In a stricter sense, investment refers to increase in capital stock during a year. If investment is defined in this manner, then it is also called capital formation. In other words, investment (or capital formation) refers to increase in the stock of capital during a particular year.

Mathematically,
$I = \Delta K$
'I' stands for investment.
'K' stands for Capital Stock.
'Δ' stands for change.
'ΔK' stands for change in capital stock during a year.

Components of investment
Investment has two components:
1. Fixed Investment
2. Inventory Investment

Fixed investment: Fixed investment refers to increase in the stock of capital goods in a year. In other words, expenditure on purchase of capital goods in a year is called fixed investment. Capital goods are those goods which are used for further production. Generally, capital goods have long-term use. Thus, they can also be called fixed assets. Fixed assets are those assets which are purchased for long-term use and which cannot be converted quickly into cash. Fixed assets include land, buildings and equipment. Fixed assets enhance the productive capacity of the economy.

Mathematically, Fixed investment (Increase in the stock of fixed assets in a year) = Stock of fixed assets at the end of a year − Stock of fixed assets at the beginning of a year

Inventory investment: Inventory investment refers to increase in inventory stock in a year. Inventory includes finished goods (goods which are ready for sale), semi-finished goods (goods which are in the process of production) and raw materials.

Mathematically, Inventory investment (Increase in the inventory stock in a year) = Stock of inventory at the end of a year − Stock of inventory at the beginning of a year

Gross investment and Net investment
Gross investment refers to the expenditure by producers on the purchase of new assets as well as expenditure on the replacement of existing assets during a year.

Purchase of new assets by producers leads to addition in capital stock. However, replacement of existing assets only helps in maintaining the existing stock of capital.

Net investment refers to the expenditure by producers on the purchase of new assets only. It does not include expenditure by producers on the replacement of existing assets.

Depreciation
When fixed assets are used in the process of production, their value reduces on account of (i) normal wear and tear (ii) accidental damages beyond normal wear and tear, and (iii) change in

technology. This fall in value is called depreciation. In other words, depreciation is that part of value of fixed assets (fixed capital) which is consumed in the process of production. Depreciation is also called consumption of fixed capital.

Gross domestic product

Gross domestic product (GDP) is made up of three words: Gross, domestic and product.

Gross refers to aggregate (total amount) value without making any deductions. On the other hand, when we calculate 'net' value of anything, we make deductions such as depreciation.

Domestic refers to anything which occurs or exists inside a particular territory.

Product refers to goods and services.

Gross domestic product (GDP) is the estimated value of all the final goods and services produced within a country's territory in a specific time period. Though GDP is usually calculated on an annual basis, it can be calculated with reference to any time frame.

Concept of Economic Territory

We have learnt that Gross domestic product (GDP) is the estimated monetary value of all the finished goods and services produced within a country's territory in a specific time period.

What constitutes economic territory for the purpose of GDP?

For the purpose of calculating GDP and other economic indicators such as GNP, NDP, NNP, etc, the concept of economic territory is used rather than political or geographic territory. The Economic territory of any country such as India includes the following:

1. Land boundaries of a country

2. Exclusive Economic Zone of the country: Exclusive Economic Zone (EEZ) refers to the area up to 200 nautical miles (1 nautical mile = 1.853 Km) from the baseline (point where land and sea meet). In this area, a country has sole rights over all the economic resources. However, where boundaries of the nations are close, then the size of EEZ reduces.

3. Airspace of the country: Airspace is the portion of the atmosphere which is above the territory of a country, including its territorial waters. It is under the control of the country. By international law, the country's sovereign airspace corresponds with the territorial waters i.e. 12 nautical miles from a nation's baseline. However, a country may, by international agreement, assume responsibility for controlling parts of international airspace, such as those over the oceans.

It is to be noted that territorial waters of a nation extend upto 12 nautical miles. On the other hand, Exclusive Economic Zone of a nation extends upto 200 nautical miles.

4. Territorial enclaves such as embassies, consulates, military bases, scientific bases etc which are located outside the territory of a country. Similarly, embassies, consulates, military bases,

scientific bases of others countries within the boundaries of India are not considered part of Indian territory for the purpose of calculating GDP of India.

For instance, Indian embassy in US is part of economic territory of India while US embassy in India is part of economic territory of United States.

5. Ships, aircrafts and other means of transportation operated by the Indian residents between two or more countries. For instance, Shipping services delivered to foreigners by ships operated by Indian residents constitute part of Indian GDP.

6. Fishing vessels, oil and natural gas rigs etc operated by the Indian residents outside India.

What Does GDP Indicate?

GDP is commonly used as an indicator of the economic health of a country, as well as a measure of country's standard of living.

The higher the production of goods and services in an economy, the higher the consumption level of people. A higher consumption level indicates a higher standard of living of the people.

Criticism of GDP

1. Under estimation of GDP: GDP is often under-reported on account of many reasons. GDP does not take into account the transactions that are illegal and not reported to the government in order to evade taxes.

2. Ignores Non-monetary exchanges: Even in present times, barter system constitutes an important means for exchange. For example- in many areas of India, farm labour is paid in form of food crops. Such transactions are not recorded and thus, also cause under-estimation of GDP.

3. Distribution of Income: GDP is the aggregate value of goods and services produced in an economy. It does not indicate the distribution of goods and services among various sections of population. It may happen that overall GDP of a country is high, but many sections of population suffer from severe poverty.

4. Insufficient indicator of well-being: Some criticize the tendency of GDP to be interpreted as an indicator of well-being. For example, in spite of high GDP, people may not enjoy well-being on account of high pollution in their vicinity.

India's Position

In India, GDP estimates are calculated by Central Statistics Office (CSO). In 2019, India was the fifth largest economy in terms of nominal GDP and third largest in terms of GDP on purchasing power parity (PPP) basis.

In nominal GDP terms, India was at 7th place in 2016. By 2019, it has surpassed United Kingdom and France to become 5th largest economy of the world. In 2018 United Kingdom was at 5th position. Now, France has also surpassed United Kingdom.

Rank	Country	Nominal GDP (Trillions of $)			Growth (%)
		2019	% Share	Difference with the next economy	
1	United States	21.48	24.4	-	2.54
2	China	14.17	16.1	7.31	6.18
3	Japan	5.22	5.93	8.95	0.94
4	Germany	4.12	4.67	1.1	1.86
5	India	2.96	3.36	1.16	7.44
6	France	2.84	3.23	.12	1.62
7	United Kingdom	2.81	3.19	.03	1.49

Source: IMF Data

In PPP terms, China's economy is the largest, the US economy is the second largest and the Indian economy is the third largest in the world. In PPP terms, China's economy surpassed US economy in the year 2014.

What Is Purchasing Power Parity?

Purchasing power parity (PPP) is defined as the number of units of a country's currency required to buy the same amount of goods and services in the domestic market as one dollar would buy in the US.

PPP is an attempt to work out how much currency will be needed to buy the same quantity of goods and services in different countries. It reflects the underlying exchange rate between the two different countries for buying goods and services, and a more accurate reflection of actual living standards in countries.

Often exchange rates do not actually reflect different living costs because some goods are not easily traded. For example, if you live in the United States, it is irrelevant if there is cheaper accommodation elsewhere in the world. What is relevant to you is the price of goods and services at which they are available to you locally.

For example, let us suppose that the market exchange rate between Dollar and Rupee is 66. One Dollar in the US buys 1 litre of milk. One dollar in terms of rupee, i.e., ₹ 66 can buy 3 litres of milk in India.

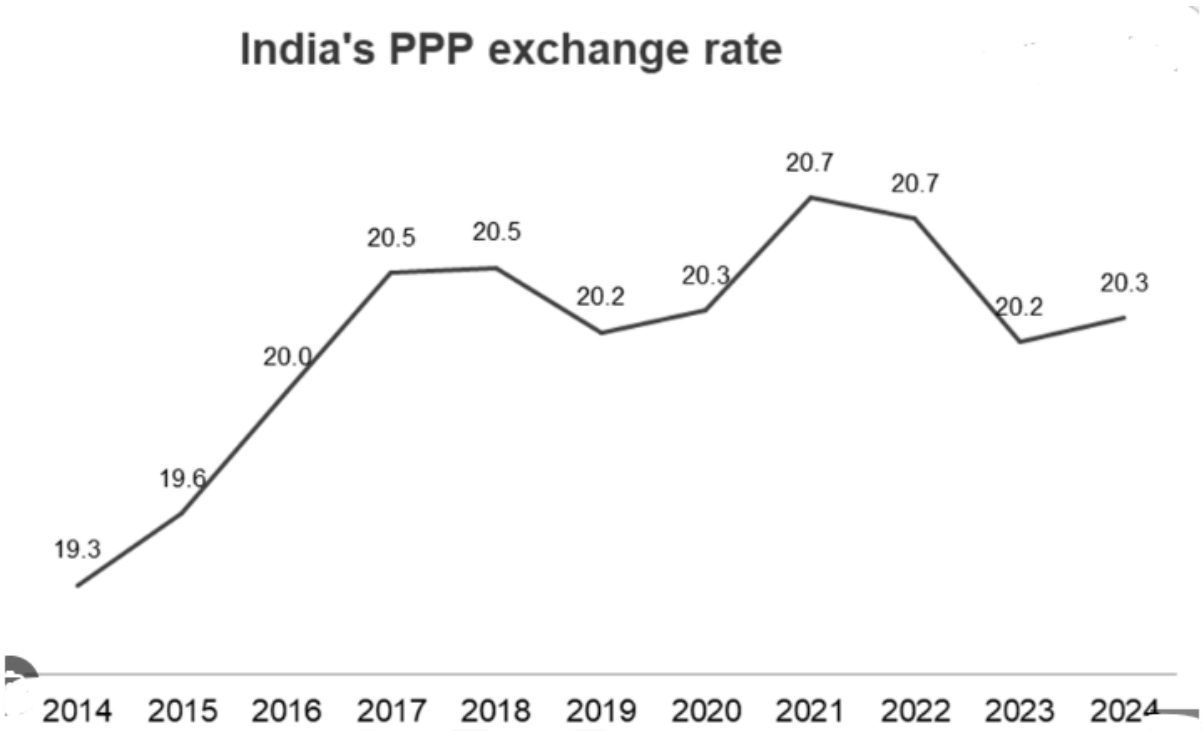
Suppose that India's GDP is ₹ 660. If we consider the market exchange rate, then this amount is equal to $10. If milk is the only commodity produced in the world, one will think that India is producing 10 litres of milk considering India's exchange rate ₹ 66 and GDP value of ₹ 660.

However, India produces 30 litres of milk. To overcome this defect, we use the purchasing power parity exchange rate. Under PPP, we measure the GDP of India by comparing the money required to purchase commodities in both the countries. One dollar in the US can purchase one litre of milk, whereas ₹ 21 can purchase one litre of milk in India.

$1 = ₹ 21

Thus, in our example, PPP exchange rate is ₹ 21/$. Using this exchange rate, India's GDP of ₹ 660 is equal to $30. Thus, India's GDP in terms of PPP is $30. On the other hand, India's GDP in terms of market exchange rate is $10.

The World Bank (WB) calculates the PPP exchange rate.
PPP Exchange Rate = Rupees required to purchase goods and services in India which $1 can purchase in the US



Difference Between Nominal GDP and Real GDP
When the GDP is estimated at current prices, it exhibits Nominal GDP, whereas Real GDP is when the estimation is made at constant prices.

Definition of nominal GDP
It is the monetary value of the economic output produced during the current year at current year prices. The point to be noted is that the prices of the current year are taken into consideration without adjusting for inflation.

Current production of goods and services × Current prices = Nominal GDP

Definition of real GDP
GDP measurement is done at fixed prices, i.e. at the prices which were prevalent at some point of time in the past, known as base year price or reference price. It reflects the economic output at constant prices. Real GDP is considered as a true indicator of country's economic growth because it exclusively considers the rise in production of goods and services as the reason for increase in GDP.

Current Production of goods and services × Base Year Prices = Real GDP
Economists while calculating growth in GDP consider figures of real GDP.

Conversion of nominal GDP into real GDP

We have learnt that Real GDP is calculated at base year prices and Nominal GDP is calculated at current year prices.

Nominal GDP (GDP at current prices) can be converted to real GDP (GDP at constant prices) by comparing prices of both the current year and the base year. Comparison of prices is done by taking price level of both current year as well as base year. Price level is further reflected by price index.

If GDP at current prices (Nominal GDP) is divided by price index of current year and multiplied by price index of base year (which is always equal to 100), we get GDP at base year prices (Real GDP).

Mathematically,

Real GDP = $\frac{Nominal\ GDP}{Price\ index\ of\ Current\ Year} \times Price\ index\ of\ base\ year$

As price index of base year is 100, we get:

Real GDP = $\frac{Nominal\ GDP}{Price\ index\ of\ Current\ Year} \times 100$

GDP Growth

What is "economic growth rate"?

An economic growth rate is a measure of economic growth from one period to another in terms of percentage. In practice, it is a measure of the rate of change in a nation's GDP from one year to another.

The economic growth rate provides insight into the general direction and magnitude of growth for the overall economy. It demonstrates the change in a nation's or economy's income over a specified period of time. Most commonly, this is examined on a quarterly basis, but economic growth rates can be observed across larger spans of time, such as year over year (YOY) or decade over decade.

Economic growth refers to positive change in economic output, but changes in economic output can be either positive or negative. If an economy experiences two consecutive quarters with falling growth rates, it can be said that the associated economy is falling into a recession. If the economy begins to shrink, the percentage rate can be expressed in negative to demonstrate the income lost over the time period being examined.

Real economic growth rate

The real economic growth rate measures the economic growth in relation to GDP, from one period to another, adjusted for inflation, in other words, expressed in real as opposed to nominal terms.

The real economic growth rate is expressed as a percentage that shows the rate of change of a country's GDP from one period to another, typically from one year to the next.

The real economic growth rate, also referred to as the growth rate of real GDP, is a more useful measure than the nominal GDP growth rate due to the fact that it takes into account the growth only due to increase in output (and ignores the contribution of price rise to increase in value of output).

Calculating the real GDP growth rate
Once real GDP is calculated, the real GDP growth rate is calculated as follows:

$$\text{Real GDP growth rate} = \frac{(\text{Recent year's real GDP} - \text{Previous year's real GDP})}{\textit{Previous year's real GDP}} \times 100$$

Base Year
The base year, updated periodically by the government, is a designated year used as a comparison point for economic data such as the GDP. Presently, 2011–12 is used as the base year for calculating GDP in India.

GDP is calculated by taking into account the quantity of the present year and prices of the base year. Thus, when we talk about GDP growth, we talk about real GDP growth rate.

MARKET PRICE AND FACTOR COST
What Is Factor Cost?
A number of inputs are required in the production process. These inputs are commonly known as factors of production and include things such as land, labour, capital, and entrepreneurship. Producers of goods and services incur a cost for using these factors of production. Factor cost refers to the cost of factors of production that is incurred by a firm when producing goods and services. Examples of such production costs include the cost of renting machines, salaries and wages, cost of obtaining capital, and the profit margins that are added by the entrepreneur (profits are the cost of entrepreneur).

The factor cost does not include the taxes that are paid to the government since taxes are not directly involved in the production process and, therefore, are not a part of the direct production cost. However, subsidies received are included in the factor cost as subsidies are given on inputs used in production.

What Is Market Price?
Once goods and services are produced, they are sold at a market price. The market price is the price that consumers will pay for the product when they purchase it from the sellers. Taxes charged by the government will be added onto the factor price while subsidies provided will be reduced from the factor price to arrive at the market price.

Taxes are added because taxes are the costs that increase the price, and subsidies are reduced because subsidies compensate the factor cost or reduce the factor cost. For instance, money is required to run a business. Thus, money is a factor of production. The cost of money is interest. Interest here is a factor cost. If government gives subsidy on interest, then actual cost of money (interest cost) will reduce.

Relationship between GDP at Market Price and GDP at Factor Cost
GDP (MP) – Indirect Taxes + Subsidies = GDP (FC)

Note: In common parlance, when we use the term GDP, we refer to GDP at market prices.

Factor incomes and transfer incomes

Incomes can be classified into two types: (i) factor incomes, and (ii) transfer incomes.
We have learnt that factor costs are payments made for factors of production. Factor costs or payments are borne by business units. The factors of production (land, labour, capital and entrepreneurship) are provided by the household sector. Thus, household sector receives factor payments.

Therefore, from the point of view of firms, these are called factor payments and from the point of view of household sector, these are called factor incomes.

Factor income is received when services are provided. Thus, factor income is also called 'earned income'. For instance, interest is received on capital only after capital is given for use.

On the other hand, transfer income does not require delivery of services. It is also called 'un-earned' income. Examples of transfer income include money given for help of family members, money given for charity, etc.

GROSS VALUE ADDED OR GDP (FC)

Gross value added (GVA) is the measure of the value of goods and services produced in an area, industry, or sector of economy.

It is to be noted that both GVA and GDP are measure of output. However, there is difference in the approach used by both the indicators to measure output.
GDP measures output on the basis of base year prices of goods and services. On the other hand, GVA measures output on the basis of factor costs incurred to produce goods and services.

Relationship with GDP

GVA is linked to GDP, as both are measures of output. The relationship is defined as follows:
GVA + Taxes on products − Subsidies on products = GDP

Why GVA Is Calculated?

1. GVA and GDP give a picture of economic activity from producers' (supply side) and consumers' (demand side) perspective, respectively, because GVA is the net receipt of the producers and GDP is the expenditure incurred by the consumers.

2. Both these measures need not match and there could be a sharp divergence due to net indirect taxes (NIT = indirect taxes − subsidies), which are counted in GDP calculations (GDP is the sum of GVA and NIT).

3. GVA provides a better measure of economic activity because GDP can record a sharp increase just on account of increased tax collections due to better compliance/coverage and not necessarily due to increase in output.

4. GVA is a better reflection of the productivity of the producers as it excludes the indirect taxes, which could distort the production value.

5. A sector-wise breakdown provided by the GVA measure can better help policymakers to decide which sectors need incentives/stimulus or vice versa.

Use of GVA As Primary Measure of Economic Activity?
In the revision of the National Accounts Statistics in 2015 by the CSO, it was decided that GVA should be adopted as primary measure of economic activity. In 2018, Reserve Bank switched back to the gross domestic product (GDP)-based measure to offer its growth estimates, citing global best practices.

What Is the Global Trend?
Globally, the performance of most economies is gauged in terms of gross domestic product (GDP). This is also the approach followed by multilateral institutions, international analysts and investors, and primarily they all stick to GDP because it facilitates easy cross-country comparisons.

GROSS NATIONAL PRODUCT
Gross national product (GNP) refers to estimated value of all the final goods and services produced by normal residents (such as Indian residents) of a country in a specific time period.

How Is GNP Calculated?
GNP = GDP − Production by foreign residents in India + Production by Indian residents outside India
or
GNP = GDP − Factor income paid to foreign residents in India + Factor income paid to Indian residents abroad i.e., GNP = GDP − Net factor income from abroad

Comparison with GDP
GDP is the monetary value of all the finished goods and services produced in a territory such as India, whereas GNP is the monetary value of all the finished goods and services produced by normal residents such as Indian residents.

In India, the value of GDP is higher than that of GNP because India has received more investment from abroad compared to the investment made by Indian residents in abroad.

Who are normal residents?
A normal resident is said to be a person (or organisation) who ordinarily resides in a country and whose significant part of economic interest lies in that country. Thus, two conditions have to fulfilled before a person or institution can be regarded as normal resident:

1. **Ordinarily resident of a country:** A person residing in a country for a period of one year (or more), is ordinarily resident of that country.

2. **Economic interest lies in the country:** A person is said to have economic interest in a particular country when significant part of his economic transactions (relating to investment, consumption or production) take place in that country.

It is important to note the following points to understand the concept of normal residents.
1. Both individuals and organisations such as companies, firms, etc can be normal residents.

2. A normal resident is not always the citizen of the same country. A person may be normal resident of one country and citizen of other country. For example, if an American citizen is living in India for one year or more and his centre of economic interest lies in India, then he is an ordinarily resident of India.

3. The following persons are not counted as normal residents of our country as their stay is less than 1 year in India and their chief economic interest does not lie in India:
(a) Foreigners who visit our country for recreation, medical treatment, conferences, etc.
(b) Crew members of foreign shipping vessels
(c) Foreigners who have come to India for installing plant & machinery

4. Diplomats and members of armed forces of foreign countries are treated as normal residents of the countries to which they belong, and not of the countries in which they are posted.

NET DOMESTIC PRODUCT (AT MARKET PRICE)
Whenever there is production of goods and services, there is consumption or reduction in value of assets used to produce goods and services; this consumption or reduction in value of assets is called depreciation.

How Do We Calculate NDP?
Whenever we calculate the net value from gross value, we subtract depreciation out of gross value.
Net Domestic Product (NDP) = GDP – Depreciation

NATIONAL INCOME OR NET NATIONAL PRODUCT AT FACTOR COST
Net national product at factor cost (NNP_{fc}) or national income is the income earned by Normal residents in a given time period.

In other words, it is the collective income of normal residents in a given time period. It is calculated as follows:
$NNP_{fc} = GNP_{mp}$ – Depreciation – Indirect taxes + Subsidies
or
$NNP_{fc} = GDP_{mp}$ – Net factor income abroad – Depreciation – Indirect taxes + Subsidies

PER CAPITA INCOME
Per capita income or average income measures the average income earned per person in a given area (city, region, country, etc.) in a specified year. It is calculated by dividing the area's total income by its total population.

In other words, per capita income refers to national income divided by the population of a country.

Per capita income = $\frac{\text{National income}}{Population}$

Real per capita income is obtained after adjusting nominal per capita income for inflation.

Real per capita income = $\frac{\text{Nominal per capita income}}{Price\ index\ of\ Current\ Year} \times Price\ index\ of\ base\ year$

Which is a better measure of economic growth: GDP or Per Capita Income?

Economic growth is measured on the basis of expansion of GDP. However, there are instances when the rate of population growth is higher than the rate of increase in GDP. In such instances, GDP increases while per capita income decreases. Therefore, per capita income is considered a better indicator of economic growth.

Methods of calculating National Income

Production of goods & services, generation of income, and use of income (to purchase goods & services and make investment) are three phases of economic activity. Each phase represents level of economic activity or national income.

In the first phase, the factors of production are arranged from the household sector. These factors are used by producers to produce goods and services in the economy. Value of final goods and services produced indicates level of economic activity. This total value of final goods and services is called domestic output.

In the second phase, the factors of production are made payments because they have contributed in production of goods and services. These payments are incomes of various factors of production. These incomes are collectively called domestic income. Level of domestic income also indicates level of economic activity.

In the third phase, the factors of production make consumption and investment expenditure out of their income. Thus, income is converted into expenditure. The level of expenditure also indicates level of economic activity.

In the above discussion, we have considered three phases of economic activity. These three phases take place in continuous manner and even simultaneously with each other.

National income can be calculated from any of the above three perspectives: Output, Income and Expenditure.

Let us study the three methods of calculating national income.

1. Product method or Value-added method or Output method

This method calculates national income on the basis of value addition by each producing enterprise in the economy during a specific time period such as year.

What is value addition?

Value addition is the difference between the value of output and the value of its intermediate consumption. Intermediate consumption refers to the goods and services consumed to produce output.

Let us take an example to understand value addition. Let us suppose that a farmer produces wheat worth ₹ 500 by using free inputs. He sells this wheat to a flour mill. We can say that farmer has added value equal to ₹ 500.

The mill sells flour for ₹ 800 to a bread baker. The mill has added value equal to ₹ 300 (₹ 800 – ₹ 500).

The baker bakes bread and sells his output to shopkeeper for ₹ 1200. The baker has added value equal to ₹ 400 (₹ 1200 – ₹ 800).

The shopkeeper sells all the bread units to final consumers for ₹ 1800. The shopkeeper has added value equal to ₹ 600 (₹ 1800 – ₹ 1200).

The total value added in our example is ₹500 + ₹ 300 + ₹ 400 + ₹ 600 = ₹ 1800.
Gross value added by all the producing enterprises within the economy territory of a country during a specific time period such as year is called Gross Domestic Product at Market Prices (GDP_{MP}).

GDP_{MP} on the basis of final output
In our example, the sum of value addition at various stages is equal to the value of output sold to final consumers. Thus, we can also say that the value of final goods and services by all the producing enterprises within the economy territory of a country during a specific time period such as year is called Gross Domestic Product at Market Prices (GDP_{MP}).
Thus, GDP_{MP} can be calculated either by value added method or final output method.

Calculation of National Income from GDP_{MP}
Once we have calculated GDP_{MP}, we can calculate NNP_{FC} from the following formula:
GDP_{MP} – Depreciation = NDP_{MP}
NDP_{MP} – Net indirect taxes = NDP_{FC} (Domestic Income)
NDP_{FC} + Net factor income abroad = NNP_{FC} (National Income)

Points to be taken into consideration when product method is used
1 When GDP_{MP} is calculated on the basis of final output, then the value of intermediate goods is not included because value of intermediate goods is already included in value of final goods. If value of intermediate goods is also included, then it leads to double counting.

Double Counting
Double counting occurs when apart from value of final goods, the value of intermediate goods is also included in the estimation of gross domestic product. For estimation of gross domestic product, only value of final goods should be included.

Let us take an example. We have learnt that intermediate goods are those goods which are used in the production of final goods. A biscuit manufacturer uses milk of ₹ 2,000 to produce

biscuits worth ₹ 10,000. Now, the value of final goods (biscuits worth ₹ 10,000) already includes the value of intermediate goods (milk of ₹ 2,000).
Thus, in estimation of gross domestic product, the value of final goods (i.e. value of biscuits) is taken. Milk, here is an intermediate product and thus, its value is not included in calculation of gross domestic product.

If we also include the value of intermediate goods (apart from value of final goods), it leads to double counting. In our example, we would wrongly calculate gross domestic product as ₹ 12,000 (₹ 10,000 + ₹ 2,000).

2. Value of the second-hand goods is also not included because second hand goods were already accounted in the year in which they were produced.

3. If producer uses self-produced goods for own consumption, then the estimated value of those goods is included in GDP. These goods are similar to other goods sold in the market. These were not sold just because they were consumed by the owner himself.

4. The contribution to GDP on account of welfare activities performed by the government is equal to the expenses incurred by the government to perform these activities. It is because these activities are undertaken for collective consumption, and are not for sale in the market. For instance, the cost of maintaining law and order is a welfare activity undertaken by government. Its value is added to the GDP on the basis of cost incurred by the government.

2. Income Method or Distributed Share Method or Factor Payments Method
This method calculates national income on the basis of factor payments (salaries, wages, rent, interest and profit) to the factors of production (employees, labourers, land, capital and entrepreneurship) during a specific time period such as year.

We have learnt that factors of production are provided by households. We have also learnt that National Income is estimated total factor income earned by normal residents of a country during a specific time period such as year.

It is to be noted that factor incomes paid within the economic territory of country (both by residents and non-residents) is called domestic income. Net factor income abroad is added to domestic income to calculate national income.

Mathematically, Domestic income (NDP_{FC}) + Net factor income abroad = National Income (NNP_{FC})

Points to be taken into consideration when income method is used
1. Transfer payments such as pocket expenses, gift of money, unemployment allowances, etc are not included in factor payments. These payments have no effect on total national income.

2. Tax payments are not made on account of supply of factor of production. Thus, these payments are also outside national income.

3. Payments made in kind are included at their estimated value in national income. For instance, school facility provided by an employer to children of employee is added at estimated value to the factor income of the employee.

3. Expenditure Method or Consumption and Investment Method or Income Disposal Method

All domestically produced goods and services are purchased either by consumers for consumption of final goods (expenditure on consumer goods) or by producers for investment (expenditure on capital goods). We know that GDP_{MP} is equal to the value of final goods and services produced in an economy. Thus, we can conclude that sum of final consumption expenditure and investment expenditure is equal to GDP_{MP}.

To arrive at national income under expenditure method, first of all sum of final consumption expenditure and investment expenditure within the domestic economy is calculated. This sum is equal to GDP_{MP}. Thereafter, GDP_{MP} is adjusted to arrive at NNP_{FC} or national income.

Since this method calculates national income by totaling final consumption and investment expenditure, this method is also called Consumption and Investment Method or Income Disposal Method.

Calculation of GDP_{MP} through expenditure method

$GDP_{MP} = C + G + I + X – M$

GDP_{MP} stands for Gross Domestic Product at Market Prices

'C' stands for Private Final Consumption Expenditure

'G' stands for Government Final Consumption Expenditure

'I' stands for Investment Expenditure

'X' stands for Exports and 'M' stands for Imports

'X – M' stands for Net exports

Final Consumption Expenditure

Final Consumption Expenditure is the expenditure on purchase of goods and services produced within the economic territory of a country for final use. It is called final expenditure because the expenditure is incurred for consumption by ultimate or end consumers and not by producers.

Final Consumption Expenditure is further classified into Private Final Consumption Expenditure (C) and Government Final Consumption Expenditure (G).

Private Final Consumption Expenditure (C) is the expenditure on consumer goods and services by individuals and households.

Government Final Consumption Expenditure (G) is the expenditure on consumer goods and services by government.

Consumption Expenditure

Consumption expenditure can be understood through the following perspective as well. Consumers in an economy can be classified into the following three categories:

Households: Households consume goods for the fulfillment of their needs and desires.

Government: Government buys consumer goods for serving people of the country and for distribution among armed forces.

Non-government private institutions: Non-government private institutions include Non-governmental organizations, religious institutions and other private institutions.

The total expenditure on consumer goods by households, government and non-government private institutions is called the total consumption expenditure (or aggregate consumption expenditure) in an economy.

Mathematically, Aggregate consumption expenditure = Consumption expenditure by Households + Consumption expenditure by Government + Consumption expenditure by Non-government private institutions

We can also say that Households, government and non-government private institutions are the final consumers in an economy. Expenditure incurred by final consumers collectively on the purchase of final goods is called aggregate consumption expenditure of an economy.

Investment Expenditure (I)

Investment Expenditure refers to the expenditure on the purchase of goods by producers in an economy in a specific period such as year. Producers in the economy include private business units and government enterprises.

Investment Expenditure can be further classified into two parts:

1. **Fixed Investment:** Fixed investment refers to the investment in assets which have long term use. These assets which have long term use are also called fixed assets. The examples of these assets include plant, machinery, land, building, etc. Investment expenditure on fixed assets leads to capital formation or gross domestic-capital formation in the economy.

2. **Inventory Investment:** It refers to the increase in stock during the year. It is equal to difference between closing stock and opening stock. Sock includes raw materials, work in progress and finished goods.

Difference between Investment and Investment Expenditure

Investment is a generic term which is used for the sacrifice of current consumption to enhance future production capacity. Investment is the fundamental means of achieving economic growth. Examples of investment include purchase of assets by business firms, government, private individuals and institutions. It even includes expenditure on education, health and other welfare services because such expenditures enhance future production capacity.

Investment Expenditure is a more specific term. It refers to expenditure on goods and services produced in the economy by the business sector. In other words, it refers to the

expenditure on capital goods by private business units and government enterprises, produced within the economic territory of a country.

Net Exports

Net exports refer to the difference between exports (X) and imports (I) during a particular time period such as a year. Net exports can be denoted by X – I. It can also be denoted by NX.

Net exports are added to Final Consumption and Investment Expenditure to calculate GDP at market prices. Why? Exports are part of goods and services produced within the economic territory of a country. Thus, exports are part of goods and services produced in our economy. Therefore, value of exports is added to total expenditure (both consumption and investment expenditure) in order to calculate GDP_{MP}.

On the other hand, imports are part of goods and services produced within the economic territory of another country. Thus, imports are not part of goods and services produced in our economy. Therefore, value of imports is subtracted from total expenditure (both consumption and investment expenditure) in order to calculate GDP_{MP}.

As exports are added and imports are subtracted, we take net exports (exports – imports) for our computation.

Calculating National Income from GDP_{MP}

We have learnt that $GDP_{MP} = C + G + I + X – M$

GDP_{MP} is converted into NNP_{FC} (National Income) by the following calculations:

GDP_{MP} – Depreciation = NDP_{MP}
NDP_{MP} – Indirect Taxes + Subsidies = NDP_{FC} (Domestic Income)
NDP_{FC} + Net Factor Income Abroad = NNP_{FC} (National Income)

Points to be taken into consideration when expenditure method is used

1. Expenditure on all intermediate goods and services is excluded to avoid double counting. For example, expenditure on purchase of paper by printing press is not included because paper is an intermediate product for printing press.

2. Transfer payments such as scholarships, unemployment allowance, old-age pension, etc by government are excluded because expenditure on goods and services are incurred by recipient of transfer payments. Government merely transfers these payments to recipients.

3. Expenditure on second hand goods is also excluded because expenditure on them was included when they were purchased for the first time.

Summary of Output, Income and Expenditure Method

1. Output Method or Value Added Method

Value added by each producing enterprise in an economy = GDP_{MP}
GDP_{MP} – Depreciation = NDP_{MP}

NDP_{MP} – Indirect Taxes + Subsidies = NDP_{FC} (Domestic Income)
NDP_{FC} + Net Factor Income Abroad = NNP_{FC} (National Income)

2. Income Method
Payment to factors of Production **=** NDP_{FC} (Domestic Income)
NDP_{FC} + Net Factor Income Abroad = NNP_{FC} (National Income)

3. Expenditure Method
Final consumption expenditure + Investment expenditure + Net Exports = GDP_{MP}
GDP_{MP} – Depreciation = NDP_{MP}
NDP_{MP} – Indirect Taxes + Subsidies = NDP_{FC} (Domestic Income)
NDP_{FC} + Net Factor Income Abroad = NNP_{FC} (National Income)

Can Indian Economy Grow at 8-9% per annum?
The Indian economy is currently passing through a phase of relatively slow growth. However, over the 9-year period beginning 2005–06, the average annual growth rate was 7.7%. Against this background, the relevant question is whether India has the capability to grow at 8–9% in a sustained way.

Past Performance
India achieved a growth rate of 9.5% in 2005–06, followed by 9.6% and 9.3% in the subsequent 2 years. After declining a bit in the wake of international financial crisis, the growth rate went back to 8.9% in 2010–11. The domestic savings rate during this period averaged 34.9% of GDP. Similarly, the gross capital formation rate averaged 36.2%.

Reasons for Reduction in Growth Rate: Low Investment and High ICOR
An analysis of the data of the period since 2012–13 reveals two trends. First, there has been a decline in investment rate. Second, the decline in growth rate is greater than the decline in investment rate, indicating a rise in the incremental capital–output ratio (ICOR). In 2007–08, India's investment rate was 38% of GDP. It declined steadily to touch 34.8% in 2012–13. The declining trend continued in 2015–16.
With an ICOR of 4, only a return to higher level of savings and investments can take us back to 8–9% growth seen earlier. Thus, what is needed to achieve the "higher growth rate" is to raise the investment rate and improve the productivity (or use) of capital.

Incremental Capital–Output Ratio
ICOR refers to addition in capital required to raise output by ₹1. The higher the ICOR, the lower the productivity of capital. Thus, a high ICOR can be thought of as a measure of the inefficiency with which capital is used. In most countries, the ICOR is near 3. ICOR, thus, determines efficiency in use of capital. In India, ICOR is slightly high at 4. ICOR is low in service industry than in the manufacturing sector.

It is influenced by a number of factors such as technology, skill of the labour force, which in turn depends on the quality of the education system and ease of doing business, etc. Bureaucratic hurdles, which impede speedy execution of projects, need to be removed. Thus, improving the productivity of capital requires steps at several fronts.

What is "Savings Rate"?

A savings rate is the amount of money, expressed as a percentage or ratio, that a person deducts from his or her income to set aside as savings. The accumulated savings are invested in various forms.

For years, the savings rate in the United States has declined. In the 1970s and 1980s, personal savings rates were in the range of 5–7% but decreased to the range of 1–3% in the 21st century. In sharp contrast, the Chinese and Indian savings rate is about 30%.

The ratio of domestic saving to GDP reached from a peak of 38.3 percent in 2007 to 29.2 percent in 2013, before falling back to 29 percent in 2016.

The fall from 2007 to 2016 has been milder for investment than saving. In India, the investment slowdown started in 2012, subsequently intensified and was apparently still continuing as shown by 2016 figures.

What Affects the Savings Rate?

The national average savings rate is often determined by how a particular culture views debt (loan), values possessions, etc. Economies oriented towards consumption have lower savings rates; in the United States, consumption constitutes around 75% of the economy. Economies such as India, which is oriented more towards investment, have higher savings rates. Savings rate tends to fall as the average age of the population increases. Savings rates are also affected by rise in income levels.

Calculating Savings Rate

The savings rate is the ratio of personal savings to income and can be calculated for an economy as a whole or at the personal level.

Saving rate = $\frac{\text{Savings}}{\text{Income}} \times 100$

Investment Rate

The investment rate refers to the proportion of GDP invested into economy. High savings rate leads to high investment rate in the economy. Economic growth depends on investment rate and ICOR. In other words, Economic growth = Investment rate × (1/ ICOR).

Let us presume that investment rate is 32% and ICOR is 4. Economic growth = 32% × (1/4) = 8%

Practice Questions

1. An increase in national income because of an increase in prices only is called an
(a) Increase in real national income
(b) Increase in national income at constant prices
(c) Increase in nominal national income
(d) Increase in national income at base year prices

2. The national income of a country for a given period is equal to the
(a) Consumption and investment expenditure incurred by the government
(b) Consumption and investment expenditure incurred by Indians abroad

(c) Consumption and investment expenditure incurred by private sector
(d) Consumption and investment expenditure incurred by all the above

3. In an open economy, the national income (Y) of the economy is (C, I, G, X, M stand for consumption, investment, government expenditure, total exports, and total imports, respectively.)
(a) $Y = C + I + G + X$
(b) $Y = C + I + G - X + M$
(c) $Y = C + I + G + (X - M)$
(d) $Y = C + I - G + X - M$

4. The growth rate in per capita income at current prices is higher than that of per capita income at constant prices, because the former takes into account the rate of
(a) Growth of population
(b) Increase in price level
(c) Growth of money supply
(d) Increase in the wage rate

5. The value of all final goods and services produced by the normal residents of a country and their property, whether operating within the domestic territory of the country or outside, in a year is termed
(a) Gross national income
(b) Net national income
(c) Gross domestic product
(d) Net domestic product

6. National income in context of India is the collective income of all the Indians.
Which of the following is equivalent to national income?
(a) Gross domestic product at market prices
(b) Net domestic product at factor prices
(c) Net national product at market prices
(d) Net national product at factor cost

7. Gross domestic product is more than the net domestic product. Gross domestic product (GDP) is called "gross" because its computation does not exclude
(a) Consumption of capital in production process
(b) Subsidies on consumption of goods
(c) Earnings of foreign exchange in domestic country
(d) Informal economy

8. Which one of the following is responsible for bringing out the report on national and per capita income in India?
(a) Ministry of Planning
(b) Ministry of Human Resource Development
(c) Ministry of Home Affairs
(d) Ministry of Statistics and Programme Implementation

9. The main reason for the low growth rate in India in spite of high rates of savings and capital formation is
(a) Low rate of investment
(b) Low level of foreign investment
(c) Low capital/output ratio
(d) High capital/output ratio

10. In India, National Income Statistics are computed by which of the following?
(a) Planning Commission
(b) Ministry of Finance
(c) Central Statistical Office
(d) RBI

11. If the net national product at market price is higher than the net national product at factor cost, then which of the following is the correct description of relationship between indirect taxes and government subsidies:
(a) Government subsidies > Indirect taxes
(b) Government subsidies < Indirect taxes
(c) Government subsidies = Indirect taxes
(d) Government subsides ≥ Indirect taxes

12. Which one of the following is the difference between value at market prices and value at factor cost for a national income aggregate?
(a) Value of consumption of fixed capital
(b) Value of indirect taxes net of subsidies
(c) Value of net factor income earned abroad
(d) Value of subsidies net of indirect taxes

13. In national income accounting, which one of the following is the difference between gross aggregates and net aggregates?
(a) The value of net indirect taxes
(b) The value of consumption of fixed capital
(c) The value of intermediate consumption
(d) The value of final consumption expenditure

14. The average rate of domestic savings (gross) for the Indian economy is currently estimated to be in the range of
(a) 15 to 20%
(b) 20 to 25%
(c) 25 to 30%
(d) 30 to 35%

15. Consider the following statements:
1. The GDP of India (in nominal terms) has crossed $2 trillion.
2. The per capita income (in nominal terms) in India is more than ₹100,000.
3. India has the third largest GDP in the world in PPP terms.
4. The ICOR in India is lower than that in the United States.

Which of the above statements are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 2, 3, and 4 only
(d) 1, 2, and 3

16. Which among the following is added to the gross domestic product to arrive at national income of a nation?
1. Depreciation
2. Subsidies
3. Indirect taxes
4. Net factor income abroad
Select the correct answer using the codes given below:
(a) 2 only
(b) 1 and 2
(c) 1 and 3
(d) 3 and 4

17. Consider the following statements:
1. The net domestic product can be greater than the gross domestic product for the same year.
2. The gross national product of an economy is always less than its gross domestic product for the same year.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

18. Consider the following statements:
1. The income method of GDP calculation considers income received by factors of production only.
2. The GDP calculated through income method is less than the GDP calculated through the expenditure method for the same year.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

19. With reference to national income accounting, consider the following statements:
1. The value of GVA is lower than GDP because the taxes levied are higher than the subsidies granted.
2. GVA gives measure from the consumer's point of view and GDP gives measure from producer's point of view.
Which of the statements given above is/are correct?
(a) 1 only

(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

20. Consider the following statements:
1. The nominal gross domestic product (GDP) reflects the changes in both prices and quantities of the goods and services produced in an economy.
2. Real GDP reflects only the changes in the quantities of the goods and services produced in an economy.
3. GDP deflator reflects the changes in prices of the goods and services produced in an economy.
Which of the statements given above is/are correct?
(a) 1 and 2 only
(b) 1 and 3 only
(c) 2 and 3 only
(d) 1, 2, and 3

Note: In economics, the GDP deflator is a measure of the level of prices in an economy. It is calculated by dividing nominal GDP by real GDP and then multiplying by 100. Nominal GDP is the market value of goods and services produced in an economy, unadjusted for inflation.

21. GDP is defined as the output of economic activities carried out within the economic boundaries of a country. Which of the following constitutes the economic territory of a country with respect to GDP calculation?
1. Fishing vessels, oil and natural gas rigs operated by the residents of a country in the international waters.
2. Embassies, consulates, and military establishment of the country located abroad.
3. Ships and aircraft owned by residents of the country operating between two different countries.
4. Industrial establishment owned by residents located abroad.
Select the correct answer using the codes given below:
(a) 2 and 3 only
(b) 1 and 3 only
(c) 1, 2, and 3
(d) 1, 2, 3, and 4

22. Which of the following affect the accuracy of national income estimation in India?
1. Output of non-monetized sector
2. Non-availability of data about income of small producers or household enterprises
3. Unreported legal income
4. Inflation
Select the correct answer using the codes given below:
(a) 1, 2, 3, and 4
(b) 1, 2, and 3 only
(c) 2 and 3 only
(d) 1 and 4 only

23. Which of the following statements is/are correct?
A rise in per capita income does not automatically imply an increase in economic welfare because
1. Distribution of income is not known
2. Rate of economic growth is not known
3. Per capita income suffers from the limitation of averages
Select the correct answer using the codes given below:
(a) 1 only
(b) 2 only
(c) 1 and 3 only
(d) 1, 2, and 3

Perfecting Past Prelims

1. With reference to Indian economy, consider the following statements: **(2010)**
1. The gross domestic product (GDP) has increased by four times in the last 10 years.
2. The percentage share of public sector in GDP has declined in the last 10 years.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

2. In the context of Indian economy, consider the following statements: **(2011)**
1. The growth rate of GDP has steadily increased in the last 5 years.
2. The growth rate in per capita income has steadily increased in the last 5 years.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

3. Economic growth in country X will necessarily have to occur if **(2013)**
(a) There is technical progress in the world economy
(b) There is population growth in X
(c) There is capital formation in X
(d) The volume of trade grows in the world economy

4. The national income of a country for a given period is equal to the **(2013)**
(a) Total value of goods and services produced by the nationals
(b) Sum of total consumption and investment expenditure
(c) Sum of personal income of all individuals
(d) Money value of final goods and services produced

5. With reference to Indian economy, consider the following statements: **(2015)**
1. The rate of growth of real gross domestic product has steadily increased in the last decade.
2. The gross domestic product at market prices (in rupees) has steadily increased in the last decade.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

6. Despite being a high saving economy, capital formation may not result in significant increase in output due to **(2018)**
(a) Weak administrative machinery
(b) Illiteracy
(c) High population density
(d) High capital-output ratio

7. Consider the following statements: **(2019)**
1. Purchasing Power Parity (PPP) exchange rates are calculated by comparing the prices of the same basket of goods and services in different countries.
2. In terms of PPP dollars, India is the sixth largest economy in the world.
Which of the statements given above is / are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Answer Key

Practice Questions

1. (c)	2. (d)	3. (c)	4. (b)	5. (a)
6. (d)	7. (a)	8. (d)	9. (d)	10. (c)
11. (b)	12. (b)	13. (b)	14. (d)	15. (d)
16. (a)	17. (d)	18. (a)	19. (a)	20. (d)
21. (c)	22. (a)	23. (c)		

Perfecting Past Prelims

1. (b)	2. (d)	3. (c)	4. (b)	5. (b)
6. (d)	7. (a)			

Solutions

Practice Questions

1. (c) Nominal national income can increase on account of either increase in prices or increase in production or both. Thus, increase in national income due to increase in prices only is an example of increase in the nominal national income.

2. (d) Income is sum total of investment and consumption. The income belongs to private sector in India, Indians abroad and the government.

3. (c) In economics, aggregate expenditure (AE) is a measure of national income.

The aggregate expenditure is thus the sum total of all the expenditures undertaken in the economy by the factors during a given time period. It refers to the expenditure incurred on consumer goods, investment and the expenditure made by the government in the economy. In an open economy scenario, the aggregate expenditure also includes the difference between the exports and the imports.

4. (b) Growth rate at constant prices is calculated on the basis of prices of goods at base year, so it can only increase when output of goods and services in particular year increases.

Growth rate at current price is calculated on the basis of prices of goods and services in the same year in which they are produced. Even if there is no increase in physical output, the growth rate may increase due to rise in price levels.

5. (a) The value of all final goods and services produced by the normal residents of a country and their property, whether operating within the domestic territory of the country or outside in a year is termed as Gross National Income.

7. (a) Gross Domestic Product (GDP) is more than Net Domestic product (NDP) because GDP does not take into account the depreciation of assets.

NDP = GDP − Depreciation

8. (d) The reports on per-capita income and National Income are brought out by Central Statistical Office (CSO) under the Ministry of Statistics and Program Implementation.

9. (d) High ICOR is responsible for low growth rate in India despite a high rate of saving and capital formation. The higher the ICOR, the lower the output generated from use of capital.

10. (c) The Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation, releases National Income Statistics.

11. (b) If Net National Product at Market price is higher than Net National Product at Factor cost, it means that government subsidies are less than indirect taxes.
Market Price – Indirect Taxes + Subsidies = Factor Cost

12. (b) Indirect Taxes – Subsidies = NNPmp – NNPfc

15. (d) Statement 1 is correct: Nominal GDP of India is a $2.26 trillion.

Statement 2 is correct. India's per capita income grew by 9.7 percent to ₹1,03,219 in 2016-2017 from ₹94,130.

Statement 3 is correct. India has third largest GDP in purchasing power parity terms ($8.72 trillion as of 2016) after China and USA.

Statement 4 is incorrect. ICOR of USA is around 3 while India's ICOR is near 4.

16. (a) Gross domestic product + Subsidies – Indirect taxes – Net factor income abroad = National income of a nation.

17. (d) Statement 1 is incorrect. NDP = GDP − Depreciation.

Statement 2 is incorrect. GNP = GDP − Factor income paid to foreigners in India + Factor income paid to Indians abroad.

GNP depends on two factors. If the factor income paid to foreigners in India is greater than factor income paid to Indians abroad, then the GNP is less than GDP and vice versa. Thus, GNP is not always less than GDP.

18. (a) Statement 2 is incorrect. The value of GDP is same irrespective of the method used to calculate GDP.

20. (d) Statement 1 is correct. Nominal GDP is calculated on the basis of current prices of particular year in which goods and services are produced.
Statement 2 is correct. Real gross domestic product is calculated on the basis of prices of the base year. It can increase when the quantity of goods and services produced in a particular year increases.

21. (c) The term economic territory includes
• The geographic territory administered by a government within which persons, goods, services, and capital move freely;
• Any free zones, including bonded warehouses and factories under
customs control;
• The national air-space, territorial waters, and the continental shelf lying in international waters, over which the country enjoys exclusive rights;
• Territorial enclaves in the rest of the world under international treaties (embassies, consulates, military bases, scientific bases, etc.);
• Deposits of oil, natural gas, and other reserves in international waters owned by residents of a country.

The economic territory does not include extraterritorial enclaves (i.e., the parts of the country's own geographic territory used by governments of other countries. For instance, foreign embassies and consulates within India are not part of India's economic territory).

22. (a) The accuracy of national income estimation is affected by all the mentioned factors because it is difficult to determine the exact value of these factors.

23. (c) Statement 2 is incorrect. A rise in per capita income signals growth in the economy. Statement 2 does not justify why rise in per capita income does not automatically imply an increase in economic welfare.

Statements 1 and 3 are correct. Per capita income shows only the average income. A nation may have a significant GDP, but the distribution of income may be confined to a few rich people and the remaining population may be living under poverty.

Perfecting Past Prelims

1. (b) Statement 1 is incorrect. The growth rate of GDP in 1990–2000 was 4.4% and that in 2000–2010 was 6.4%. For GDP to quadruple, country has to grow by 10% for almost more than 15 years.

Statement 2 is correct. The growth rate of private sector far exceeds that of public sector (government-owned enterprises). Thus, the percentage share of public sector in GDP has declined in the last 10 years.

2. (d) Statement 1 is incorrect. The question was asked in 2011. The statement was clearly incorrect because the growth rate had come down due to the financial crisis in 2008.

Statement 2 is incorrect. If the GDP growth rate is not steadily increasing, per capita income growth rate would also not be steadily increasing.

3. (c) Economic growth depends upon two factors: capital formation and ICOR.

4. (b) Net national product at factor cost (NNPfc) or national income is the collective income earned by nationals of a country in a given time period.
This income can be further bifurcated into consumption and investment expenditure.

5. (b) Statement 1 is incorrect. The rate of growth of real gross domestic product (economic growth rate) has not increased steadily in the last decade.

Statement 2 is correct. GDP has been increasing year after year.

6.(d) If there is high capital-output ratio, then the output would not increase by large amount despite high investment in the economy.

7.(a) Statement 2 is incorrect: India is the third largest economy in the world in terms of PPP.