SYLLABUS

Class – B. Com/ B. Com (Hons) I Year

Subject – Indian Economy

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UNIT I: ANCIENT INDIAN ECONOMY

Introduction –

The study of ancient Indian economic ideas provides a deeper insight into India's culture, tradition, and inherent national characteristics. The major sources of information about the economic ideas of Indian writers are Vedas, Arthasastra, the Ramayana and Mahabharata, Manusmriti, Sukraniti, and several other ancient Indian texts.

The peculiar features of Indian economic ideas are:

1. **Descriptive:** The economic ideas are descriptive and not analytical. Indian thinkers paid more attention to practical problems and hence are realistic in nature.
2. **Mixed with politics**: Economic ideas were mixed with politics and were influenced by political factors.
3. **Less Emphasis to Material wealth:** Indian thinkers mixed ethics and economics together and did not give much importance to material wealth and welfare. They gave importance to moral aspects of life also.

Indian economic thought is classified into – **Ancient Economic Thought And Modern Economic Thought.**

Ancient Indian Economy

Spanning from the Indus valley civilization (3300-1300 BCE) to the Mughal empire (1526-1756).

The sources of information available for the study of ancient Indian economic thought are Vedas, the Upanishads, the Epics - Ramayana and Mahabharata, Smritis and Niti Shastras particularly those of Manu and Shukra. Among these, the two most well-known ancient Indian writings are **Arthasastra and Manusmriti**. Kautilya was the important thinker, whose 'Arthasastra' has been considered the most reliable work on ancient Indian economic thought. It should be mentioned that ancient Indian thinkers had no clear conception of economics and their ideas were mixed with politics, ethics and economics.

The most common word used at that time as **Varta meaning the national economy.** The national economy consists of **agriculture, animal husbandry and trade**. Later on, money lending and artisanship were also brought under Varta. The King was expected to have a good grasp of Varta or Economics.

The term Arthasastra was wider in scope than Vartha and it was a combination of economics, political science and jurisprudence. Asthasatra is that science which describes the actions and administration of Kings in accordance with the dictates of revelation and of law as well as the means of appropriate livelihood. Arth or material prosperity was necessary for the smooth functioning of social structure, organization and institutions.

Salient Features of Ancient Indian Economy –

- **Agriculture** was regarded as the basic source of new wealth. Agriculture was the highest occupation in society.
- **Labour** was unproductive as it failed to achieve its end. Women should help men in productive activities in agriculture and trade.
- **Trade Gold or bullion** was regarded as a means of producing wealth; and trade was the source of industrialized capital. There were free trade in those days in India. Tolls, duties and customs were realized for revenue purposes. The state had framed trade regulations which show that commerce in ancient India had reached an advanced stage.
- There were no fear of large **population** as population could not grow beyond a reasonable limit because of constant wars between small states, and loss of life due to the lack of medical facilities.
- **Welfare State:** The state was to promote the welfare of people by regulating the life of people. It had to give subsidies for the development of trade, agriculture, irrigation, mines, cattle welfare, etc. Various regulations relating to financial transactions, weights and measures, essential industries, currency and exchange, public works, prevention of adulteration, usury, etc point towards the ideal of a welfare state.
- **Private Property:** Individual and family can own land and the right in land was transferable and saleable. The state dominated all forms of property and levied cesses and fines when needed.
- **Interest:** Interest in those days was part of profit. Kautilya proposed the public regulation of interest.
- **Production and Consumption:** The starting point of the ideals of consumption in ancient India was the acceptance of the doctrine of the four ends of life. They are **Dharma, Artha, Kama and Moksha**. In those days four agents of production – **land, labour, capital and organization** appear to have been recognised.
- **Functions of the State**: In the field of production, the government followed the principle of full freedom and enterprise to individuals within limits. Private individuals could also undertake the manufacture and sale of commodities monopolized by the state.
- **Public Finance:** Taxation was regarded as one of the most important source of State revenue. Ancient Indian thinkers supported tax for beneficial purposes and not to be wasted by the government. The two principles that were followed in connection with the realization of taxes were: (i) It should be levied once a year and should not prove burdensome and (ii)Taxes should be levied according to the ability to pay. Kautilya's discussion of taxation has several underlying principles - the taxing power of the state should be limited, tax should not be felt to be heavy or excessive, tax hikes should be introduced gradually, tax should be levied in the proper place, time and form, and tax level should be equitable and reasonable. Ideally, the government should collect taxes like a **honeybee that sucks just the right amount of honey from the flower so that both can survive**. Kautilya's scheme of taxation involved the elements of sacrifice by the taxpayer,

direct benefit to the taxpayers, redistribution of income (the state took care of the poor), and tax incentives for desired investments. Kautilya suggested forced loans for meeting deficit budgets. Town Planning and Social Security

- **Town planning** which included there-orientation of main roads and street, and the sub-division of city areas was found in a much-developed form, particularly during the days of Mauryan Kings. The metropolitan city was established after a detailed and careful planning; and due emphasis was laid on the maintenance of sanitation and prevention of fire. Regarding social security, Kautilya emphasized that it was the prime duty of the state to protect the weak and the aged, to provide jobs to the unemployed, and to set up poor houses and charitable institutions.

Concepts of Natural Resources in Ancient India

In ancient India, natural resources were seen as economic assets under state supervision. Land, forests, water, and mines formed the foundation of agriculture, trade, and state revenue. The Arthashastra provides the clearest economic framework—classifying, taxing, and regulating resources with a strong emphasis on sustainability and wealth generation. Thus, the economic thought of ancient India reflects an early form of resource economics where natural wealth = state power + social prosperity.

1. **Resource Classification –**
   Land– agricultural base, source of state revenue.
   Forests– provider of timber, honey, ivory, medicinal plants, elephants (used in warfare and trade).
   Water Resources– irrigation, fisheries, navigation, and taxation through water use.
   Mines– metals, precious stones, salt; critical for coinage, weapons, and trade.
   Animals – livestock for dairy, agriculture, transportation, and military.
   This reflects an early economic categorization of natural resources as factors of production.

2. **Ownership and State Control**
   State as Trustee of Resources: Natural resources were largely state-owned; private ownership existed but was regulated. The ruler was seen as protector of resources for ensuring economic prosperity.

3. **Revenue and Taxation**
   The main tax, usually 1/6th of produce, variable with fertility, irrigation, and crop type.
   Land revenue was the backbone of the state economy.
   Forest Revenue: Taxation on timber, honey, ivory, and animal capture. Certain forests were reserved for the king's use (e.g., elephant forests).

Mining and Metallurgy Revenue: Taxes on extraction of gold, silver, copper, iron, salt. Mining was often a state monopoly, ensuring strategic and financial control.

Water Tax: Charges for irrigation canals, reservoirs, and wells constructed by the state. Thus, natural resources formed the fiscal base of kingdoms.

4. **Trade and Economic Value**

Domestic Trade: Surpluses of grains, forest produce, salt, and metals were traded in local markets. Villages specialized in resource-based production (e.g., iron in Vidisha, textiles in Varanasi).

International Trade: India's natural resources (spices, cotton, indigo, gems, elephants, teak, salt) were highly demanded in Roman, Greek, and Southeast Asian markets.

Ports like Bharuch, Tamralipti, and Kaveripattinam thrived due to resource-based exports.

This shows resources were not just for subsistence, but for wealth generation and global trade integration.

5. **Sustainability and Regulation**

Regulated Exploitation: Arthashastra prescribed sustainable use — over-extraction was penalized. Unauthorized cutting of trees, poaching, or misuse of irrigation systems attracted fines.

Community Management: Pastures, tanks, and forests were sometimes under collective village responsibility. Customary laws ensured equitable distribution and prevented monopolization.

6. **Economic Philosophy**

Dharma + Artha Balance: Dharmaśāstras stressed that wealth (Artha) must be generated without violating ecological duties (Dharma).

The idea was utilization, not exploitation.

Arthashastra considered resources as Wealth of the State or state capital—their mismanagement weakened economic and military power.

This early form of resource economics linked prosperity, stability, and power.

Indian Knowledge System regarding –

1. **AGRICUTURE**

Agriculture is the most important constituent of the economy. Three principal vocations are recognised as providing men with the means of livelihood namely, agriculture, cattle rearing and trade. In those days the state and the community were responsible for the development of agriculture for which waste land were to be cultivated. The lands which were neglected by absentee landlords were to be taken away and given to those who could cultivate them with

greater advantage. With respect to taxes on agriculture, avoid extremes of either complete absence of taxes or exorbitant taxation.

- Agriculture was the main occupation with crafts, manufacturing and trade following it.
- Over 70–80% of population was engaged in agriculture.
- Economically: agriculture provided food security, state revenue (land tax), raw materials for industries (cotton, indigo, oilseeds), and surplus for trade**.**
- Indians cultivated wheat, barley, peas, date palms and cotton, more than 4500 years ago.
- Agriculture supplied the raw materials for textiles and crafts.
- There was high level of agricultural productivity and production; No scarcity or famine
- Agriculture generated **marketable surplus** → fed urban populations, supported craft industries, and enabled **long-distance trade**.
- Export of **cotton, spices, sugarcane, indigo, rice** contributed to India's favorable balance of trade.
- **Knowledge of Agricultural Techniques**

1. **Crop Science:** Knowledge of **seasonal crops (kharif, rabi)** and Rotation of crops to maintain fertility.
2. **Irrigation:** Construction of tank, canals, wells, dams. State officials supervised irrigation.
3. **Soil Management:** Classification of soils (black, red, alluvial). Use of organic manure (cow dung, compost).
4. **Horticulture & Forestry:** Cultivation of fruits, medicinal plants, and timber trees.
5. **Animal Husbandry Integration:** Livestock (oxen, cows, buffaloes) integrated into farm economy as draft power, dairy, and manure suppliers.

2. INDUSTRY

Ancient India did not have "industry" in the modern mechanized sense, but it had a **well-developed proto-industrial economy** based on **crafts, manufacturing, metallurgy, textiles, and organized guilds**. In those days four agents of production – land, labour, capital and organization appear to have been recognised. Land was regarded as the source of all wealth. In the field of production, the government followed the principle of full freedom and enterprise to individuals within limits. It is important to note that private individuals could also undertake the manufacture and sale of commodities monopolized by the state.

Country	%age Share in World Manufacturing Output
Europe	23.2
United States	0.1
Japan	3.8
China	32.8

India	24.5

- **Nature of Industries:** Ancient Indian industries were mainly **craft-based and resource-based**. Key sectors included:

1. **Textile Industry** – cotton (Indus Valley cotton textiles, muslin from Bengal), silk (exported to Rome and China), wool (from Gandhara). There were advanced looms for textile weaving and dyeing techniques**.**
2. **Metallurgy** – iron, copper, bronze, silver, and gold. Famous for **high-quality steel (Wootz steel)** exported to West Asia, Middle East and Europe.
3. **Mining Industry** – salt, gems, precious stones (Golconda diamonds).
4. **Handicrafts and Artisanal Production** – pottery, sculpture, jewelry, ivory carving, stonework. Harappan cities had bead-making, metallurgy, and standardized weights (proto-industrial features).
5. **Shipbuilding** – ports like Lothal, Bharuch, and Tamralipti engaged in building large vessels for trade. Large sea-going vessels described in Jatakas and Greek accounts. India was in the forefront in the field of shipbuilding.
6. **Construction Industry** – large-scale projects (stupas, temples, forts, irrigation works) employing masons, carpenters, metalworkers.

- **Organization of Industry: Guild System** function as associations of craftsmen and traders. Each guild had its own rules, acted as a **trade union + bank + cooperative**, and even issued **guild seals**. Examples: guilds of weavers, goldsmiths, potters, and oil pressers. Guilds regulated quality, fixed prices, protected members, and undertook collective contracts.
- Industries of strategic importance (metallurgy, salt, weapons, elephants) were often **state monopolies**.
- **Urbanization:** Industrial production led to thriving cities like **Pataliputra, Ujjain, Taxila, Varanasi, Madurai, Kanchipuram**—centers of trade and crafts.

Decline and Continuity

The industrial sector remained vibrant till **early medieval India**, but invasions (Turkish, later colonial) disrupted guilds and destroyed traditional industries. Colonial rule further **deindustrialized India**, turning it from exporter of finished goods to supplier of raw materials.

Ancient Indian economic thought (especially *Arthashastra*) treated industries as **strategic assets for wealth and power**, with a balance of **state control + private guild autonomy**.

TRADE

Trade was one of the strongest pillars of the ancient Indian economy, complementing agriculture and industry. Trade transformed India from a primarily agrarian society into one

of the wealthiest civilizations of the ancient world, with a consistent trade surplus. Trade centres were organized hubs of exchange, specialization, and state revenue. The combination of **knowledge of monsoons, trade routes, and market networks** made India a global trade leader for over a millennium. During Mauryan and Gupta Period, trade was at the peak of prosperity. During Medieval Period, India remained a hub of Indian Ocean trade until later disruptions by colonial powers.

- **Nature of Trade**
  1. **Internal Trade (Village → Town → City):**
     a) Villages supplied raw materials (grain, cotton, cattle, forest produce).
     b) Towns specialized in crafts (weaving, metalwork, pottery).
     c) Cities served as **wholesale and export hubs** (e.g., Pataliputra, Ujjain, Taxila, Varanasi, Madurai).
  2. **Long-Distance Trade:**
     a) Flourished along **land routes (Uttarapatha, Dakshinapatha, Silk Road)** and **maritime routes (Indian Ocean trade)**.
     b) Connected India with **Rome, Central Asia, Southeast Asia, and China**.
- **Major Trade Commodities**
  1. **Exports:** India's textiles (cotton, silk, muslin), spices (pepper, cardamom), metals, gems, ivory, pearls, steel (Wootz), elephants and handicrafts were in high demand in **Roman Empire, Central Asia, Southeast Asia, and China**.
  2. **Imports:** Horses (from Central Asia), gold and silver (from Rome), wines, luxury goods, silk (from China).
  3. **Balance of Trade:** Strongly **favorable to India.** Roman gold was drained into India in exchange for luxury goods.
- **Organization of Trade**
  a) **Guilds**
  b) **Caravan Trade:** Large caravans carried goods across land routes (Silk Road, Central Asian routes). Protected by the state against bandits.
  c) **Maritime Trade:** Ports like **Bharuch (Broach), Sopara, Tamralipti, Kaveripattinam, Arikamedu** thrived.
- Indian merchants had colonies in **Southeast Asia (Java, Sumatra, Cambodia)**.
- **Role of the State (Economic Regulation):** superintendent of trade regulated internal and external commerce. Ensured standard weights and measures, price control, and prevention of adulteration. State imposed **customs duties, road taxes, ferry charges, and octroi**.
- **Monetary System**
  a) **Coins as Medium of Trade:** Punch-marked coins (Mauryan period), Gold coins and Roman coins.
  b) **Barter System:** Co-existed in rural and village markets.
- **Economic Importance of Trade**

a) **Urbanization:** Trade led to the rise of wealthy cities and market towns.
b) **Wealth Accumulation:** Gold inflows from Rome and other regions enriched Indian kingdoms.
c) **Cultural Exchange:** Trade spread not just goods but also ideas (Buddhism spread via trade routes).
d) **Economic Diversification:** Trade created demand for handicrafts, textiles, and luxury goods, stimulating industrial growth.

- **Technological and Institutional Support**
  a) **Infrastructure:** Roads (built by Mauryas, Guptas), Riverine transport (Ganga, Godavari) and Ships capable of ocean voyages.
  b) **Market System:** Local markets (*haats*), periodic fairs (*jatras*), and urban bazaars (*mandis*).
  c) **Banking & Credit:** Guilds and wealthy merchants acted as bankers. Early use of promissory notes (*hundis*).

Transportation in Ancient India

Modes of Transportation

1. **Land Routes:**
   - North Road: Connected Taxila → Mathura → Pataliputra → Tamralipti.
   - South Road: Connected Central India → Deccan → Kanchipuram → Southern ports.
   - Used **bullock carts, horse carriages, elephants, pack animals (camels in NW India)**.
2. **River Routes:**
   - Rivers like **Ganga, Yamuna, Godavari, Narmada** were key for bulk transport.
   - Boats and rafts reduced transport costs.
3. **Sea Routes:**
   - Indian Ocean trade connected India with **Persia, Arabia, East Africa, Rome, Southeast Asia, and China**.

Economic Role of Transportation

1. **Reduced Costs of Exchange:** Lower transaction and time costs, making long-distance trade profitable.
2. **Market Expansion:** Allowed surplus regions to connect with deficit regions, ensuring **comparative advantage**.
3. **Stimulated Urbanization:** Cities grew around trade routes and ports (e.g., Bharuch, Ujjain, Madurai).
4. **Revenue from Transit:** State levied **road tolls, ferry taxes, customs duties**, making transport routes sources of revenue.
5. **International Competitiveness:** Efficient transport (especially maritime) allowed India to dominate **luxury trade** for centuries.

UNIT II: Introduction to Indian Economy

Characteristics of the Indian Economy

From ranking 11th in 2009 to fourth by end-2025 in GDP terms, India's growth has not just been numerical, but structural, driven by domestic demand, a young and tech-adaptive workforce, and the government's policy prudence. India stands as the **fourth largest economy** in terms of nominal GDP and ranks ahead of the developed nations like Japan, Italy, France and Canada. It is predicted that India will surpass Germany by 2030. Not only this, India's GDP growth in FY25 is estimated to be 6.2% and in FY26 at 6.3%.

1. Agriculture-based Economy (but changing)

- Agriculture has been the backbone of the Indian economy since ancient times.
- About 58% of our nation's population is involved in agriculture. Too many people depend on agriculture, though its share in GDP is small (17%).
- Green Revolution a period, particularly during the 1960s and 70s, when agricultural production in many developing countries, including India, dramatically increased due to the adoption of modern farming techniques and technologies
- India is the 2nd largest producer of rice and wheat in the world.

2. Large Population

- India is the most populous country in the world (2023) with ~1.43 billion people.
- Young population: Median age ~28 years (compared to ~38 years in China, ~40+ in Europe).
- Advantage: Big labour force & market (demographic dividend).
- Challenge: Need more jobs, education, and healthcare.

3. Service Sector Dominance

- India's economy is now service-led rather than agriculture-led.
- Services contribute the largest share: ~54% of GDP (2023-24).
- India is famous as the IT hub of the world (outsourcing, software exports).

4. Low Per Capita Income

- India's GDP (Nominal, 2023): ~$3.7 trillion (5th largest in the world).
- But Per Capita Income (average income per person): only ~$2,730 (IMF, 2023). In comparison: USA: ~$80,000 and China: ~$12,700
- This shows India is a developing economy: big size but low average income.

5. High Share of Informal/Unorganized Sector

- Around 80–85% of workers are in the informal sector (no fixed wages, no job security, no social security).
- Examples: small farmers, street vendors, small shopkeepers, casual labourers.
- This keeps productivity low and reduces tax collection.

6. Uneven Growth (Regional and Social Inequality)

- Regional disparity: States like Maharashtra, Gujarat, Karnataka, Tamil Nadu are having advanced industries & services. While States like Bihar, UP, MP, Odisha are still dependent on farming, lower incomes.
- Wealth inequality: Top 10% of Indians own ~77% of national wealth (Oxfam report).
- Shows that growth is not evenly distributed across regions and people.

7. Mixed Economy

- India has both private sector (Reliance, Infosys, TCS) and public sector (Indian Railways, ONGC, SBI).
- Government controls basic sectors (defense, railways, banking), while private sector drives industries and services. This combination makes India a mixed economy.

8. High Dependence on Imports (especially energy)

- India imports ~85% of crude oil and ~50% of gas demand.
- Trade deficit (imports > exports): around $240 billion (2023-24).
- Even though India exports IT services, textiles, and gems, its oil import bill is huge.

9. Rapid but Uneven Economic Growth

- GDP Growth Rate (2023-24): ~6.5% (one of the fastest in the world).
- Challenges: Unemployment ~7% average and Inflation (especially food prices).
- India is growing fast, but job creation and price stability are problems.

10. Global Integration

- India is deeply integrated into the world economy.
- Major exporter of IT, textiles, pharma, and services.
- Major importer of oil, gold, electronics.
- Member of WTO, G20, BRICS, SCO.
- India is not an isolated economy — it is a major player in global trade and politics.

11. Industries:

The Indian industrial sector is the second pillar of the economy after services (First pillar is Agriculture). It contributes ~27% of GDP and 22% of jobs, with MSMEs playing a major role. Despite strong growth in steel, automobiles, and pharma, manufacturing's share in GDP has stagnated at ~17%, and challenges like infrastructure gaps, import dependence, and informality remain. India is the 2nd largest steel producer and a global hub for automobiles & pharmaceuticals.

Sector	% Contri in GDP	% Employment	% Growth rate	Remarks
Agriculture	17	45.8	4.4	Largest employer
Industry	27	22	6.5	Stagnant growth
Service	54	30	8.3	Largest GDP Contributor

Year/Period	Milestone	Description
1991	Economic Liberalization	India opened up to foreign investment, privatized public enterprises, and deregulated its markets.
2000s	Rise of IT and Services	The service sector, especially IT and telecom, became the engine of GDP growth and exports.
2014–2019	Infrastructure & Policy Push	Programs like Make in India, Digital India, GST reforms and expansion of highways gained momentum.
2020–2025	Digital Economy & Startups	India became a startup hub with strong government backing and digital transformation in fintech, education, and health.

GDP	$3.73 trillion
Growth Rate	6.8%
Agriculture Share	18%
Services Share	54%
Population	1.43 billion
Literacy	77.7%
Unemployment Rate	6.4%
Urbanization	36.2%

Natural Resource Endowments- Land, Water, Livestock, forest and Minerals

These are the resources that are found in the environment and are developed without the intervention of humans. Common examples of natural resources include air, sunlight, water, soil, stone, plants, animals, and fossil fuels. The natural resources are naturally occurring materials that are useful to man or could be useful under conceivable technological, economic or social circumstances or supplies drawn from the earth supplies such as food, building and clothing materials, fertilizers, metals, water, and geothermal power. For a long time, natural resources were the domain of the natural sciences.

Based on the availability are two types of natural resources:

1. **Renewable:** Renewable resources are the ones that are consistently available regardless of their use. They can be fairly recovered or replaced after utilization. Examples include vegetation, water, and air. Animals can also be categorized as renewable resources because they can be reared and bred to reproduce offspring to substitute the older animals. As much as these resources are renewable, it may take tens to hundreds of years to replace them. The renewable raw materials that come from living things namely animals and trees are termed as **organic renewable resources** while those that come from non-living things such as sun, water and wind are termed as **inorganic renewable resources**.

2. **Non-Renewable**: Non-renewable resources are the ones that cannot simply be substituted or recovered once they have been utilized or destroyed. Examples of such natural resources include fossil fuels and minerals. Minerals are categorized as non-renewable because, even though they take shape naturally through the rock cycle, their formation periods take thousands of years. Some animals mostly the endangered species are similarly regarded as non-renewable because they are at the verge of extinction. It brings about the many reasons the endangered species have to be protected by all means. The non-renewable materials that come from living things such as fossil fuels are known as organic non−renewable resources while those that come from non-living things such as rocks and soil are referred to as inorganic non-renewable resources.

TYPES OF NATURAL RESOURCES

1. **LAND RESOURCES**

(a) **Land as a resource**: Landforms such as hills, valleys, plains, river basins and wetlands Include different resource generating areas that the people living in them depend on. Many Traditional farming societies had ways of preserving areas from which they used resources. Eg. In the 'sacred groves' of the Western Ghats, requests to the spirit of the Grove for Permission to cut a tree, or extract a resource, were accompanied by simple rituals. The Outcome of a chance fall on one side or the other of a stone balanced on a rock gave or withheld permission. The request could not be repeated for a specified period. If land is utilized carefully it can be considered a renewable resource. The roots of trees and grasses bind the soil. If forests are depleted, or grasslands over grazed, the land becomes Unproductive and wasteland is formed. Intensive irrigation leads to water logging and salination, on which crops cannot grow. Land is also converted into a non-renewable resource when highly toxic industrial and nuclear wastes are dumped on it. Land on earth is as finite as any of our other natural resources. While mankind has learnt to adapt his lifestyle to various ecosystems world over, he cannot live comfortably for instance on polar ice caps, on under the sea, or in space in the foreseeable future. Man needs land for building homes, cultivating food, maintaining pastures for domestic animals, developing industries to provide goods, and supporting the industry by creating towns and cities. Equally importantly, man needs to protect wilderness area in forests, grasslands, wetlands, mountains, coasts, etc. to protect our vitally valuable biodiversity.

Thus a rational use of land needs careful planning. One can develop most of these Different types of land uses almost anywhere, but Protected Areas (National Park's and Wildlife Sanctuaries) can only be situated where some of the natural ecosystems are still Undisturbed. These Protected Areas are important aspects of Good land use planning.

(b) **Land use change**: The most damaging change in land use is demonstrated by the rapidity with which forests have vanished during recent times, both in India and in the rest of the

world. Forests provide us with a variety of services. These include processes such as maintaining oxygen levels in the atmosphere, removal of carbon dioxide, control overwater regimes, and slowing down erosion and also produce products such as food, fuel, timber, fodder, medicinal plants, etc. In the long term, the loss of these is far greater than the short term gains produced by converting forested lands to other uses

(c) **Land degradation**: It is a process of deterioration of soil or loss of fertility. Due to increasing

population, the demands for arable land for producing food, fibre and fuel wood is also increasing. Hence there is more and more pressure on the limited land resources which are getting degraded due to over-exploitation. Nearly 56% of total geographical area of the country is suffering due to land resource degradation. Out of 17-million-hectare canal irrigated area, 3.4 million hectares is suffering from water logging and salinity.

Effects of land degradation:

1. Soil texture and soil structure are destructed.
2. Loss of soil fertility.
3. Loss of valuable nutrients.
4. increase in water logging, salinity, alkalinity and acidity problem.
5. Loss of economic social and biodiversity.

Causes of land degradation:

1. Population: More land is needed for producing food, fibre and fuel wood. So land is degraded due to over exploitation.
2. Urbanisation: Urbanisation reduces the agricultural land. Urbanisation leads to deforestation, which in turn affects millions of plants and animals.
3. Fertilizers and pesticides: It affects fertility of the soil and causes land pollution.
4. Damage of top soil: Increase in food production generally leads to damage of top soil through nutrient depletion.
5. Water logging, soil erosion, salination and contamination of the soil with industrial wastes and cause land degradation.
6. Soil erosion: The process of loss or removal of superficial layer of soil due to the action of wind,w ater and human factors. In other words, it can be defined as the movement of soil components, especially surface-litter and top soil from one place to another. It has been estimated that more than 5000 million tonnes topsoil is being eroded annually and 30% of total eroded mass is getting loosed to the sea.

Land Resources

Total area	328.7 million hectares
Net sown area	141 million hectares (43%).
Forests	24.6% of total land area (ISFR 2023)
Fallow & barren land	13%
Waste land	5.6%.

Land under non-agricultural use	10%

Soil Types:

1. Alluvial (Indo-Gangetic plains)
2. Black (Deccan plateau – cotton)
3. Red (Southern India)
4. Laterite (Western Ghats)
5. Arid (Rajasthan desert)
6. Mountain (Himalayas)

6. FOREST RESOURCES

Forest is an important renewable resources. Forest vary in composition and diversity and can contribute substantially to the economic development of any country. Plants along with trees cover large areas, produce variety of products and provide food for living organisms, and also important to save the environment.

It is estimated that about 30% of world area is covered by forest whereas 26% by pastures. Among all continents, Africa has largest forested area (33%) followed by Latin America (25%), whereas in North America forest cover is only 11%. Asia and former USSR has 14% area under forest. European countries have only 3% area under forest cover. India's Forest Cover accounts for 20.6% of the total geographical area of the country as of 2005.

7. Significance of forests

Forest can provide prosperity of human being and to the nations. Important uses of forest can be classified as under:

8. Commercial values

Forests are main source of many commercial products such as wood, timber, pulpwood etc. About 1.5 billion people depend upon fuel wood as an energy source.

Timber obtained from the forest can used to make plywood, board, doors and windows, furniture, and agriculture implements and sports goods. Timber is also a raw material for preparation of paper, rayon and film.

- Forest can provide food, fibre, edible oils and drugs.
- Forest lands are also used for agriculture and grazing.
- Forest is an important source of development of dams, recreation and mining.

(ii) Life and economy of tribal

Forest provide food, medicine and other products needed for tribal people and play a vital role in the life and economy of tribes living in the forest.

(iii) Ecological uses

Forests are habitat to all wild animals, plants and support millions of species. They help in reducing global warming caused by greenhouse gases and produces oxygen upon

photosynthesis. Forest can act as pollution purifier by absorbing toxic gases. Forest not only helps in soil conservation but also helps to regulate the hydrological cycle.

(iv) Aesthetic values

All over the world people appreciate the beauty and tranquillity of the forest because forests have a greatest aesthetic value. Forest provides opportunity for recreation and ecosystem research.

Over exploitation of forests

Forests contribute substantially to the national economy. With increasing population increased demand of fuel wood, expansion of area under urban development and industries has led to over exploitation of forest. At present international level we are losing forest at the rate of 1.7 crore hectares annually. Over exploitation also occurs due to overgrazing and conversion of forest to pastures for domestic use.

Deforestation

Forest are burned or cut for clearing of land for agriculture, harvesting for wood and timber, development and expansion of cities. These economic gains are short term where as long term effects of deforestation are irreversible

9. Deforestation rate is relatively low in temperate countries than in tropics if present rate of

deforestation continues we may losses 90% tropical forest in coming six decades

10. For ecological balance 33% area should be under forest cover but our nation has only 20.6% forest cover.

Causes of deforestation

Forest area in some developed area has expanded. However in developing countries area under forest is

showing declining trend particularly in tropical region. Main causes of deforestation are

11. **Shifting cultivation or jhum cultivation**

This practise is prevalent in tribal areas where forest lands are cleared to grow subsistence crops. It is estimated that principle cause of deforestation in tropics in Africa, Asia and tropical America is estimated to be 70, 50, and 35% respectively. Shifting cultivation which is a practice of slash and burn agriculture are process to clear more than 5 lakh hectares of land annually. In India, shifting cultivation is prevalent in northeast and to limited extent in M.P, Bihar and Andhra Pradesh and is contributing significantly to deforestation.

12. **Commercial logging**

It is important deforestation agent. It may not be the primary cause but definitely it acts as secondary cause, because new logging lots permits shifting cultivation and fuel wood gatherers

access to new logged areas.

13. **Need for fuel wood**

Increased population has lead to increasing demand for fuel wood which is also acting as an

important deforestation agent, particularly in dry forest.

14. **Expansion for agribusiness**

With the addition of cash crops such as oil palm, rubber, fruits and ornamental plants, there is
stress to expand the area for agribusiness products which results in deforestation.

15. **Development projects and growing need for food**

The growing demand for electricity, irrigation, construction, mining, etc. has lead to destruction
of forest. Increased population needs more food which has compelled for increasing area under
agriculture crops compelling for deforestation.

16. **Raw materials for industrial use**

Forest provides raw material for industry and it has exerted tremendous pressure on forest. Increasing demand for plywood for backing has exerted pressure on cutting of other species such as fir to be used as backing material for apple in J&K and tea in northeast states.

Major effects of deforestation:

Deforestation adversely and directly affects and damages the environment and living beings

Major causes of deforestation are

- Soil erosion and loss of soil fertility
- Decrease of rain fall due to affect of hydrological cycle
- Expansion of deserts
- Climate change and depletion of water table
- Loss of biodiversity, flora and fauna
- Environmental changes and disturbance in forest ecosystems

17. Jhum cultivation

Jhum Agriculture or shifting agriculture has destroyed large number of hectares of forest tracts
in North−Eastern states and Orissa. Jhum agriculture is subsidence agriculture in which tract of
forest land is cleared by cutting trees and it is used for cultivation. After few years, when
productivity of the land decreases, cultivators abandon the land and clear next tract. As a result
of this practise, combined with increasing population there is rapid deforestation as more and
more cultivators clear forest to cultivate land. Also, with increase in population, cultivators are
forced to return to previous tracts of land in relatively shorter durations, not allowing the land to
regain its productivity.

18. Chipko movement

The Chipko movement or Chipko Andolan is a social−ecological movement that practised the Gandhian methods of satyagraha and non−violent resistance, through the act of hugging trees to protect them from being felled. The modern Chipko movement started in the early 1970s in the Garhwal Himalayas of Uttarakhand, with growing awareness towards rapid deforestation. The landmark event in this struggle took place on March 26, 1974, when a group of peasant women in Reni village, Hemwalghati, in Chamoli district, Uttarakhand, India, acted to prevent the cutting of trees and reclaim their traditional forest rights that were threatened by the contractor system of the state Forest Department. Their actions inspired hundreds of such actions at the grassroots level throughout the region. By the 1980s the movement had spread throughout India and led to formulation of people−sensitive forest policies, which put a stop to the open felling of trees in regions as far reaching as Vindhyas and the Western Ghats.

19. Western Himalayan region.

Over the last decade, there has been widespread destruction and degradation of forest resources in Himalayas, especially western Himalayas. This has resulted in various problems such as erosion of top soil, irregular rainfall, changing weather patterns and floods. Construction of roads on hilly slopes, have not only undermined their stability, but also damaged protective vegetation and forest cover. Tribes in these areas are increasingly facing shortage of firewood and timber, due large−scale tree cutting. Increased traffic volumes on these roads leads to increased pollution in the area.

20. Timber extraction

There has been unlimited exploitation of timber for commercial use. Due to increased industrial demand, timber extraction has significant effect on forest and tribal people.

Logging

- Poor logging results in degraded forest and may lead to soil erosion especially on slopes.
- New logging roads permit shifting cultivators and fuel wood gatherers to gain access to the logging area.
- Loss of long−term forest productivity
- Species of plants and animals may be eliminated
- Exploitation of tribal people by contractor.

21. Mining

Major effects of mining operations on forest and tribal people are:

- Mining from shallow deposits is done by surface mining while that from deep deposits is done

by sub−surface mining. It leads to degradation of lands and loss of top soil. It is estimated that
about eighty−thousand−hectare land is under stress of mining activities in India

• Mining leads to drying up perennial sources of water sources like spring and streams in mountainous area.

• Mining and other associated activities remove vegetation along with underlying soil mantle,
which results in destruction of topography and landscape in the area. Large scale deforestation
has been reported in Mussorie and Dehradun valley due to indiscriminating mining.

• The forested area has declined at an average rate of 33% and the increase in nonforest area due to mining activities has resulted in relatively unstable zones leading to landslides.

• Indiscriminate mining in forests of Goa since 1961 has destroyed more than 50000 hectare of
forest land. Coal mining in Jharia, Raniganj and Singrauli areas has caused extensive deforestation in Jharkhand.

• Mining of magnetite and soapstone have destroyed 14 ha of forest in hilly slopes of Khirakot, Kosi valley and Almora.

• Mining of radioactive minerals in Kerala, Tamilnadu and Karnataka are posing similar threats of deforestation.

• The rich forests of Western Ghats are also facing the same threat due to mining projects for
excavation of copper, chromites, bauxite and magnetite.

22. Effects of dams on forests and tribal people Pandit Jawaharlal Nehru referred dam and valley projects as “Temples of modern India”. These big dams and rivers valley projects have multi−purpose uses. However, these dams are also responsible for the destruction of forests. They are responsible for degradation of catchment areas, loss of flora and fauna, increase of water borne diseases, disturbance in forest ecosystems, rehabilitation and resettlement of tribal peoples.

• India has more than 1550 large dams, the maximum being in the state of Maharashtra (more than 600), followed by Gujarat (more than 250) and Madhya Pradesh (130).

• The highest one is Tehri dam, on river Bhagirathi in Uttaranchal and the largest in terms of capacity is Bhakra dam on river Satluj in Himachal Pradesh. Big dams have been in sharp focus of various environmental groups all over the world, which is mainly because of several ecological problems including deforestation and socioeconomic problems related to tribal or native people associated with them.

• The Silent valley hydroelectric project was one of the first such projects situated in the tropical rain forest area of Western Ghats which attracted much concern of the people.

• The crusade against the ecological damage and deforestation caused due to Tehri dam was led by Shri. Sunder Lal Bahaguna, the leader of Chipko Movement.

• The cause of Sardar Sarovar Dam related issues have been taken up by the environmental Activitist Medha Patkar, joined by Arundhati Ray and Baba Amte. For building big dams, large scale devastation of forests takes place which breaks the natural ecological balance of the region.

• Floods, droughts and landslides become more prevalent in such areas. Forests are the repositories of invaluable gifts of nature in the form of biodiversity and by destroying them (particularly, the tropical rain forests), we are going to lose these species even before knowing them. These species could be having marvellous economic or medicinal value and deforestation results in loss of this storehouse of species which have evolved over millions of years in a single stroke.

23. Forest conservation and management

Forest is one of the most valuable resources and thus needs to be conserved. To conserve forest,

following steps should be taken.

1. Conservation of forest is a national problem; thus, it should be tackled with perfect coordination between concerned government departments.
2. People should be made aware of importance of forest and involved in forest conservation activities.
3. The cutting of trees in the forests for timber should be stopped.
4. A forestation programmes should be launched
5. Grasslands should be regenerated.
6. Forest conservation Act should be strictly implemented to check deforestation.
7. Awards should be instituted for the deserving

Water Resources

Water is an indispensable resource for life on earth. Approximately 70.8 % surface of earth is covered with water in the form of oceans. Out of this, about 97% is not fit for human consumption, about 2% is locked as a glacier and only less than 1% available as fresh water that can be used for human consumption and other uses.

Rainfall: 1,170 mm per year (average).

Rivers: 14 major, 44 medium, 55 minor.

Total renewable water resource: 1,123 billion cubic meters/year.

Utilized water: ~700 BCM (Billion Cubic Metres).

Irrigation:

Source	Share (%)
Wells/Tubewells	58

Canals	24
Tanks	4
Other	14

Major Projects:

Bhakra Nangal (Punjab–Himachal)

Hirakud (Odisha)

Sardar Sarovar (Gujarat)

Nagarjuna Sagar (Telangana)

Issues: Water scarcity, floods, pollution, inter-state disputes.

Water is a very important source and essential for life because it has very unique characteristic such as

1. Water exists as liquid over a wide range of temperature 0-1000C with highest specific heat and latent heat of vaporization.

2. Water is excellent solvent and act as carrier of nutrient and helps to distribute them to the cells in the body, regulates the body temperature and support structure and can dissolve various pollutant and can act as carrier of large number of micro organisms

3. It is responsible for hydrological cycle which acts as resource of water to the earth. It is estimated that about 1.4 inch thick layer of water evaporates and majority of water returns to earth through hydrological cycle.

Water is renewable, but its overuse and pollution make it unfit for use. Sewage, industrial use, chemicals, etc. pollute water with nitrates, metals, and pesticides.

Use of Water Resources

Water resources are used for agricultural, industrial, domestic, recreational, and environmental

activities. Majority of the uses require fresh water. However, about 97 percent of water found on the earth is salt water and only three percent is fresh water. A little over two-thirds of the available fresh water is frozen in glaciers and polar ice caps. The remaining freshwater is found mainly as groundwater and a negligible portion of it is present on the ground or in the air.

Following is a brief account of how water is used in different sectors.

(i) Agricultural Use: Agriculture accounts for 69 percent of all water consumption basically in agricultural economies like India. Agriculture, therefore, is the largest consumer of the earth's freshwater.

By 2050, the global water demand of agriculture is estimated to increase by a further 19% due to irrigational needs. Expanding irrigation needs are likely to put undue pressure on water storage. It is still inconclusive whether further expansion of irrigation, as well as additional water withdrawals from rivers and groundwater, will be possible in future.

ii) Industrial Use: Water is the life blood of the industry. It is used as a raw material coolant, a solvent, a transport agent, and as a source of energy. Manufacturing industries account for a considerable share in the total industrial water consumption. Besides, paper and allied products, chemicals and primary metals are major industrial users of water.

Worldwide, the industry accounts for 19 percent of total consumption. In industrialized countries, however, industries use more than half of the water available for human use.

(iii) Domestic Use: It includes drinking, cleaning, personal hygiene, garden care, cooking, washing of clothes, dishes, vehicles, etc. Since the end of World War II there has been a trend of people moving out of the countryside to the ever-expanding cities.

Implications on our water resources.

Government and communities have had to start building large water-supply systems to deliver water to new populations and industries. Of all water consumption in the world, domestic use accounts for about 12 percent.

(iv) Use for Hydropower Generation: Electricity produced from water is hydropower. Hydropower is the leading renewable source of electricity in the world. It accounts for about 16 percent of total electricity generation globally. There are many opportunities for hydropower development throughout the world. Today, the leading hydropower generating countries are China, the US, Brazil, Canada, India, and Russia.

(v) Use for Navigation and Recreation: Navigable water ways are defined as water courses that have been or may be used for transport of interstate or foreign commerce.

Agricultural and commercial goods are moved on water on a large scale in a number of regions in the world. Water is also used for recreational purposes such as boating, swimming, and sporting activities.

These uses affect the quality of water and pollute it. Highest priority should be given to public health and drinking water quality while permitting such activities in reservoirs, lakes, and rivers.

Over-Exploitation of Water

Water scarcity has become a burning global issue. The UN has held several conventions on water in recent decades. Continuous over utilization of surface and ground water has led to virtual water scarcity in the world today.

The depleting sources for high growth in human population over the centuries and increased man induced water pollution across the world have created unforeseen water scarcity around the globe. As a result, there has been continuous overutilization of the existing water sources due to mammoth growth in world population.

(i) Surface water

Surface water mainly comes directly from rain or snow covers. The various surface sources are natural lakes and ponds, rivers and streams, artificial reservoirs. Availability of surface water decides the economy of the country. On one side surface water availability affects the productivity, but on the other side water sources may cause floods and drought. Due to

unequal distribution, water may lead to national (interstate) or international disputes. Sharing of surface water due to these disputes is affecting productivity of different agro eco-zone and creating problems for government.

(ii) Ground water

Groundwater is the major source of water in many parts of the world. However, there has been continuous depletion of this source due to its over exploitation by rising human population and the rapid rise in industrialization and urbanization in modern times. About 9.86% of the total fresh water resources are in the form of groundwater and it is about 35-50 times that of surface water supplies.

Effects of extensive and reckless groundwater usage:

1. Subsidence
2. Lowering of water table
3. Water logging

Consequences of Overutilization

Water scarcity now becomes an important topic in international diplomacy. From village to the United Nations, water scarcity is a widely-discussed topic in decision making.

Nearly three billion people in the world suffer from water scarcity. International, intrastate and regional rivalries on water are not new to world. The ongoing Jordan River conflict, Nile River conflict, and Aral Sea conflict are cases in point. The intra-state issues such as Cauvery Water dispute in South India, 2000 Cochabamba protests in Bolivia is still a simmering cauldron causing periodic tension at the national and regional levels. According to World Health Organization (WHO) sources, a combination of rising global population, economic growth and climate change means that by 2050 five billion (52%) of the world's projected 9.7 billion people will live in areas where fresh water supply is under pressure.

Researchers expect about 1 billion more people to be living in areas where water demand exceeds surface-water supply.

(i) Climate Change

Scientists, environmentalists, and biologists worldwide are now alarmed that climate change can have an impact on the drainage pattern and hydrological cycle on the earth thereby severely affecting the surface and ground water availability.

Climate change is believed to rise the global temperature at an increasing pace. Temperature increase affects the hydrological cycle by directly increasing evaporation of available surface water and vegetation transpiration.

As a result, precipitation amount, timing and intensity rates are largely affected. It impacts the flux and storage of water in surface and subsurface reservoirs.

(ii) Floods & Draughts

Floods and droughts are two well-known natural hazards in the world. The former is due to excess in water flow and the latter is due to scarcity of water.

The amount of rainfall received by an area varies from one place to another depending on the location of the place. In some places, it rains almost throughout the year whereas in other places it might rain for only few days. India records most of its rainfall in the monsoon season.

Heavy rains lead to rise in the water level of rivers, seas, and oceans. Water gets accumulated in the coastal areas, which results in floods. Floods bring in extensive damage to crops, domestic animals, property and human life. During floods, many animals get carried away by the force of water and eventually die.

On the other hand, droughts set in when a particular region goes without rain for a long period of time. In the meantime, the soil will continuously lose groundwater by the process of evaporation and transpiration. Since this water is not brought back to earth in the form of rains, the soil becomes very dry.

The level of water in the ponds and rivers goes down and in some cases water bodies get dried up completely. Ground water becomes scarce and this leads to droughts. In drought conditions, it is very difficult to get food and fodder for the survival. Life gets difficult and many animals perish in such conditions.

Frequent floods and droughts are mostly due to climate change and global warming. Various environmental organizations world over are of the view that climate change is a long-term change in weather patterns, either in average weather conditions or in the distribution of extreme weather events.

Major Water Conflicts

Some of the major water conflicts that have become thorn in relations between states and countries are

(1) Water conflict in the middle east

Countries involved are Sudan, Egypt and Turkey. It also affects countries which are water starved viz. Saudi Arabia, Kuwait, Syria, Israel and Jordan.

(2) The Indus water treaty

This Indus water treaty dispute between India and Pakistan is lingering since long.

(3) The Cauvery water dispute

It involves two major states of India viz. Tamilnadu and Karnataka.

(4) The Satluj-Yamuna link canal dispute

The dispute is between two Northern states viz. Punjab and Haryana and UP, Rajasthan as well as Delhi has also interest in it.

In traditional water management, innovative arrangements ensure equitable distribution of water, which are democratically implemented. These disputes can be solved amicably through 'Gram Panchayats", if transparency is maintained. But disputes between countries or states sometimes attain war like situation and are difficult to solve.

Dams - Benefits and Problems

Water is a precious resource and its scarcity is increasing at global level. There is a pressure to utilise surface water resources efficiently for different purposes. Dam, structure built across a stream, a river, or an estuary to retain water. Dams are built to provide water for human consumption, for irrigating arid and semiarid lands, or for use in industrial processes.

Major benefits of dams

The major benefits of dams are:

1. Hydroelectricity generation
2. Year-round water supply to ensure higher productivity
3. Equal water distribution by transferring water from area of excess to area of deficit
4. Helps flood control and protects soil
5. Assure irrigation during dry periods
6. River valley projects provide inland water navigation, employment opportunities and can be used to develop fish hatcheries and nurseries
7. River valley projects have tremendous potential for economic upliftment and will help to raise the standard of living and can help to improve the quality of life

Disadvantages/problems

Although dams have proved very useful over the centuries but recent past big dams has created lot of human as well as environmental issues

1. Submergence of large areas may lead to loss of fertile soil and displacement of tribal people
2. Salt left behind due to evaporation increase the salinity of river water and makes it unusable when reaches down stream
3. Siltation and sedimentation of reservoirs not only makes dams use less but also is responsible for loss of valuable nutrients
4. Loss of non-forest land leads to loss of flora and fauna
5. Changes in fisheries and the spawning grounds
6. Stagnation and water logging near reservoir leads to breeding of vectors and spread of vectorborne diseases
7. Growth of aquatic weeds may lead to microclimatic changes.

Livestock Resources

Total livestock: 535.8 million (2022).

Cattle: 192 million, Buffaloes: 109 million.

Milk production: 230 million tonnes (2023–24) → India ranks 1st globally.

Egg production: 138 billion (2023–24).

Contribution to GDP: 4.8%.

Main products: Milk, meat, wool, hides, eggs.

Schemes: Rashtriya Gokul Mission, National Livestock Mission.

Mineral Resources

India is rich in minerals with over 87 types identified.

Mineral	Reserve (Billion tonnes)	Major States
Coal	361	Jharkhand, Chhattisgarh, Odisha
Iron Ore	13	Odisha, Jharkhand, Karnataka
Bauxite	3.9	Odisha, Gujarat
Manganese	0.5	Madhya Pradesh, Maharashtra
Mica		Jharkhand, Bihar
Petroleum	594 MMT	Assam, Gujarat, Mumbai High

Mining Contribution: 2.3% of GDP.

Challenges: Depletion, pollution, displacement, illegal mining.

Infrastructure

Infrastructure supports production, distribution, and economic development. It includes energy, transport, and communication networks.

Power/Energy Infrastructure

Total Installed Capacity (2024): 451 GW

Thermal: 56%

Hydro: 11%

Renewable (solar, wind, biomass): 33%

Key Facts:

India ranks 3rd globally in renewable energy capacity.

Goal: 500 GW of renewable capacity by 2030.

Power generation (2023–24): 1,780 billion kWh.

Major projects: Tehri (Uttarakhand), Koyna (Maharashtra), Sardar Sarovar (Gujarat).

Issues: Power loss, coal dependency, uneven distribution.

Transport Infrastructure

Roadways

Total road length: 6.73 million km (2024). National Highways: 1.47 lakh km (carry 40% of traffic).

Schemes: Bharatmala, PM Gram Sadak Yojana.

Railways

Route length: 68,000 km.

100% electrification target by 2025.

Carries 8.4 billion passengers/year and 1.4 billion tonnes of freight .

Projects: Vande Bharat trains, Dedicated Freight Corridors.

Waterways

111 National Waterways.

Ganga-Brahmaputra network key to cargo movement.

Airways

150+ airports (2024).

Domestic passengers: 153 million/year.

Flag carrier: Air India, Indigo (largest private).

E. Ports

12 major and 200+ minor ports.

Handle 90% of external trade volume

Communication Infrastructure

Telecom subscribers: 1.17 billion.

Internet users: 881 million (2nd largest globally).

Mobile penetration: 82%.

Digital India: Focus on rural connectivity, e-services, UPI, BharatNet.

5G launched (2022) — covering 700+ districts by 2024.

Role: Boosts e-commerce, banking, education, and telemedicine.

The communication sector in India is a vital, rapidly growing component of the national economy, acting as a crucial enabler of digital transformation, economic growth, and social development. Driven by liberalization policies and the digital revolution, India has become the world's second-largest telecommunications market by subscribers.

Key Components and Structure

The sector primarily encompasses telecommunications, internet services, and broadcasting (radio and television), with the telecom segment being the most significant.

Telecommunications: The backbone of the sector, characterized by a massive shift from landlines to wireless services. The market is dominated by a few major private players (Jio, Airtel, Vodafone Idea) and public sector entities (BSNL/MTNL).

Internet and Broadband: India has the world's second-largest internet user base. Affordable data plans and increasing smartphone penetration have fueled explosive growth in data consumption, with an average of 32 GB per smartphone per month in 2024.

Media and Broadcasting: Includes a diversified system of radio, television (including satellite and cable), and digital platforms, all contributing to information dissemination and the media economy.

Economic Impact and Trends

The communication sector contributes significantly to India's GDP and overall economic development through several channels:

GDP Contribution & Employment: The sector is estimated to contribute a significant portion to the national GDP and supports millions of direct and indirect jobs.

Enabling Productivity: It acts as a foundational infrastructure that enhances the efficiency and productivity of other sectors, including financial services (e-banking), transport, education (e-learning), and healthcare (e-health).

Investment & Innovation: The sector is a major recipient of Foreign Direct Investment (FDI) and is a hub for innovation, particularly in areas like 5G, IoT, and AI applications.

Digital Inclusion: By providing affordable connectivity, the telecom revolution has helped narrow the urban-rural divide and facilitated the growth of the digital economy, including the surge in digital payments (UPI).

Government Initiatives

The government has introduced several key policies to boost the sector:

National Digital Communications Policy, 2018: A roadmap aiming for "Broadband for All," job creation, and enhancing the sector's GDP contribution.

Telecommunications Act, 2023: A modern legislative framework that replaces archaic laws, focuses on spectrum optimal utilization, ease of doing business, and user protection.

PM-WANI (Prime Minister Wi-Fi Access Network Interface) Scheme: Aims to expand public Wi-Fi networks to improve internet proliferation, especially in rural areas.

Production-Linked Incentive (PLI) Scheme: Promotes domestic manufacturing of telecom and networking products, positioning India as a global manufacturing hub.

In essence, the communication sector is not just a utility but a critical catalyst for India's transition into a digitally empowered society and a major global economy.

Demographic Features of Indian Economy

Demography is a key factor determining India’s growth potential.

[8:57 am, 11/11/2025] Poonam Rathore: India's economy is shaped by significant demographic features, primarily a large, youthful and growing population currently in a phase of demographic dividend.

Key Demographic Features (Latest Data)

Feature	Data (2025 estimates)	Source(s)
Population	~1.46 billion (world's most populous country)	
Population Growth Rate	~0.89% annually	
Median Age	~28.8 years	
Working-Age Pop. (15-64 years)	~67-68% of total population	
Total Fertility Rate (TFR)	~1.94 children per woman (below replacement level of 2.1)	
Urban Population	~37.1%	
Life Expectancy	~72.5 years (total)	
Literacy Rate	~77.7% (total)	
Dependency Ratio	~46% (as of 2025)	

Economic Implications and Challenges

Demographic Dividend: With a large working-age population relative to dependents, India has a significant opportunity for accelerated economic growth, a period expected to last until around 2055 and peak in 2041.

Workforce and Employment: The young population provides a vast labour force; however, challenges exist in ensuring sufficient job creation, improving low female labour force participation (raising it from 35.6% to 50% by 2047 is a policy goal), and addressing skill mismatches. Only about 4.4% of young adults (15-29) had formal skill training as of 2023.

Urbanization: Over a third of the population lives in urban areas, putting pressure on infrastructure and public services in cities.

Aging Population (Future): While currently young, the population is aging. The proportion of the elderly (65+) is growing, which will eventually increase the overall dependency ratio and strain social security, pensions, and healthcare systems in the coming decades.

Poverty and Inequality: Despite robust economic growth (projected GDP growth of 6.5% for FY25), challenges like low per capita income and wealth disparity between urban and rural areas persist.

Harnessing this demographic potential requires sustained investment in human capital (education, health, and skill development) and policies that promote productive employment and innovation.

[8:58 am, 11/11/2025] Poonam Rathore: India's economy is characterized by a large, young, and growing working-age population, which presents a significant demographic dividend. Key demographic features include a high dependency ratio (though declining), a low median age (around 28.7 years), increasing urbanization, and a high labor force participation rate. The female labor force participation rate is increasing, as are educational levels, while the Total Fertility Rate (TFR) has fallen below replacement level in many states.

Key demographic features

Age structure: India has one of the youngest populations in the world, with a median age of approximately 28.7 years. This creates a large working-age population (15-64 years) that is larger than the dependent population.

Demographic dividend: India's demographic dividend window—the period of potential economic growth due to a large working-age population—is expected to last for several decades (from 2005-06 to 2055-56), which is longer than any other country.

Urbanization: India's urban population is growing rapidly. In 2022, around 35% of the population lived in urban areas, a trend that is creating new economic opportunities.

Female labor force participation: The participation of women in the workforce is increasing, though it remains low compared to other countries. This trend has the potential to boost economic growth if it continues.

Education and productivity: Literacy rates and educational levels are rising, which can lead to increased workforce productivity. However, despite having some of the longest working hours, India has one of the lowest labor productivity levels globally.

Fertility and population growth: The Total Fertility Rate (TFR) has fallen to 2.0, which is below the replacement rate of 2.1. This is a significant demographic transition, leading to a slowdown in population growth, which is expected to be below 1% over the next decade.

Sex ratio: As of 2024, there are approximately 106.5 males for every 100 females in India.

State-level variation: The pace of demographic transition varies significantly among states, leading to different age structures and economic development trajectories. Southern states are more advanced in the transition and have a higher proportion of older people compared to northern states.

Population Size and Growth

Year	Population (in billions)	Growth (%)
1951	0.36	
1981	0.68	2.2
2001	1.02	1.9
2021	1.39	1.0
2024	1.43	0.9

Observation:

India’s population growth has slowed, but the absolute number continues to rise.

Age Composition

0.14 years: 26%

15–59 years: 67% (working age)

60+ years: 7%

Median age: 28.4 years → India is a young nation with a demographic dividend.

Density & Distribution

Density: 473 persons/sq. km (2024) .

Uneven: Bihar (1,100+) vs Arunachal (17).

Urbanization: 36.2% , increasing with migration and development.

Literacy & Education

Literacy rate: 77.7% (NSO 2024) .

Male literacy: 84.4%; Female: 71.5%.

Major programs: NEP 2020, Samagra Shiksha, Beti Bachao Beti Padhao.

Sex Ratio

1,020 females per 1,000 males (NFHS-5, 2023).

Highest in Kerala (1,084), lowest in Haryana (922).

Employment

Labour force: 510 million.

Unemployment rate: 6.4%.

Informal sector: employs over 80% of workforce.

Programs: MGNREGA, PM Kaushal Vikas Yojana, Startup India.

B.Com/B.Com (Hons) - 1st Year **Subject- Indian Economy**

UNIT III

1. Nature of Indian Agriculture

The nature of Indian agriculture reflects its close relationship with the country's economy, geography, and people's livelihood. It is one of the oldest economic activities in India, and despite modernization, it still remains the backbone of the Indian economy.

(a) Primary Occupation

Agriculture is the **main source of livelihood** for a large section of the Indian population. About half of India's working population is directly or indirectly engaged in agricultural and allied activities such as crop cultivation, animal husbandry, fishing, and forestry.

(b) Rural-Based Activity

A majority of India's population still lives in rural areas where agriculture forms the foundation of life and economy. Most rural households depend on farming either as cultivators or as agricultural labourers.

(c) Subsistence Nature

Indian agriculture is largely **subsistence-oriented**, meaning most farmers grow crops mainly for their own family consumption rather than for sale in markets. However, commercialization is gradually increasing with the growth of transport, markets, and industries.

(d) Dependence on Monsoon

A large part of Indian agriculture depends on **rainfall and monsoon conditions**. Uneven or uncertain monsoons often lead to droughts or floods, which affect crop productivity. Although irrigation facilities are improving, dependence on rain still continues in many areas.

(e) Seasonal Activity

Agricultural activities in India are seasonal and divided into **three main crop seasons**:

- **Kharif (June–October):** Crops sown with the onset of monsoon (e.g., rice, maize, cotton).
- **Rabi (October–March):** Crops sown after monsoon (e.g., wheat, barley, mustard).
- **Zaid (March–June):** Short summer crops (e.g., watermelon, cucumber, vegetables).

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2. Importance of Indian Agriculture

Agriculture is not only a source of food but also the foundation of India's economy. It plays a vital role in several sectors:

(a) Source of Livelihood

Agriculture provides employment to around **45–50% of the total workforce** in India. It remains the major source of income in rural areas.

(b) Contribution to National Income

Agriculture contributes about **15–18% of India's GDP** (Gross Domestic Product). Though its share is declining due to industrial and service sector growth, it remains crucial for economic stability.

(c) Supply of Food and Raw Materials

Agriculture supplies **food grains, fruits, vegetables, milk, meat, and fish** to the population. It also provides **raw materials** for industries such as:

- Cotton → Textile Industry
- Sugarcane → Sugar Industry
- Jute → Jute Industry
- Tea, Coffee, Tobacco → Processing Industries

(d) Contribution to Foreign Trade

Agricultural products form a major part of India's exports. Items like **tea, coffee, rice, spices, cotton, and marine products** earn valuable foreign exchange for the country.

(e) Support to Other Sectors

Many industries like fertilizer, farm equipment, and transport are dependent on agriculture. It also supports the **banking sector** through agricultural credit and loans.

(f) Food Security

Agriculture ensures that India's vast population has enough food to eat. Government schemes like the **Public Distribution System (PDS)** depend on the availability of grains produced by farmers.

(g) Socio-Economic Importance

Agriculture supports **rural development**, reduces **poverty**, and provides a base for **cultural and social stability** in villages. It influences the overall development of the country.

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3. Characteristics of Indian Agriculture

(a) Small and Fragmented Landholdings

Due to population pressure and inheritance laws, most Indian farmers own **small and scattered pieces of land**, making it difficult to use modern machinery efficiently.

(b) Low Productivity

The yield per hectare of crops in India is relatively low compared to developed countries due to poor soil management, outdated techniques, and inadequate irrigation.

(c) Dependence on Nature

Although irrigation systems are improving, many areas still depend heavily on **monsoon rains**, which are uncertain and uneven.

(d) Traditional Farming Methods

In many rural areas, farmers still use **traditional tools like ploughs, bullocks, and manual labour** instead of modern technology, leading to lower efficiency.

(e) Labour-Intensive Farming

Indian agriculture uses **more human labour** and less machinery, mainly due to cheap labour availability and small land sizes.

(f) Mixed Farming

Farmers often combine **crop cultivation with animal rearing**, poultry, or fisheries. This helps them reduce risk and increase income.

(g) Diverse Cropping Pattern

Due to India's varied climate, soil, and rainfall, there is a **diversity of crops** — from rice and tea in the east, wheat in the north, cotton in the west, to spices and coconut in the south.

(h) Regional Variations

Agricultural practices and productivity differ greatly from one region to another because of climatic, soil, and irrigation differences.

(i) Increasing Commercialization

With better transport and market facilities, Indian agriculture is slowly shifting from **subsistence farming to commercial farming**, where crops are grown for sale and export.

1. Introduction

Agriculture in India has undergone **tremendous changes since Independence**. In the early years (1947–1960), agriculture was mostly traditional, rain-dependent, and low-yielding. With the introduction of **modern technology, irrigation, fertilizers, and the Green Revolution**, agricultural production and productivity increased significantly. However, regional and crop-wise differences still remain.

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2. Meaning of Production and Productivity

- **Agricultural Production:**
  It refers to the **total output or quantity of crops produced** in a given period. Example: Total rice or wheat produced in India in a year (in tonnes).
- **Agricultural Productivity:**
  It refers to the **output per unit of input**, usually measured as **yield per hectare**. Example: Quantity of wheat produced per hectare of land.

In simple words:

Production = Total quantity Productivity = Quantity per hectare

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3. Trends in Agricultural Production in India

(a) Post-Independence Period (1947–1960)

- Agriculture was **stagnant and traditional**.
- Main problems: low irrigation, poor seeds, and dependence on monsoon.
- Food shortages and imports were common.
- Major crops: rice, wheat, pulses, and coarse grains.
- The country faced frequent famines and had to import food grains (especially from the USA under the PL-480 scheme).

(b) Green Revolution Period (1965–1980)

- A major turning point in Indian agriculture.
- Introduction of **High-Yielding Variety (HYV) seeds**, chemical fertilizers, pesticides, and improved irrigation.
- Focused mainly on **wheat and rice**.
- **Punjab, Haryana, and Western Uttar Pradesh** became major wheat producers.
- Resulted in **self-sufficiency in food grain production**.
- Agricultural production grew rapidly during this period.

(c) Period of Technological Expansion (1980–2000)

- Green Revolution technologies spread to more regions and crops.
- Growth seen in commercial crops like **sugarcane, cotton, oilseeds, and horticulture**.
- Mechanization (tractors, harvesters) and rural electrification expanded.
- The government introduced **Operation Flood** for milk and **Technology Missions** for oilseeds and pulses.

(d) Modern Period (2000–Present)

- Agriculture is becoming more **diversified and market-oriented**.
- Farmers started cultivating **fruits, vegetables, floriculture, and fisheries**.
- The **National Horticulture Mission** and **Rashtriya Krishi Vikas Yojana (RKVY)** promoted growth.
- Emphasis on **organic farming**, **precision farming**, and **sustainable agriculture**.
- Despite modernization, challenges like **climate change, declining soil fertility, and rural distress** remain.

4. Trends in Agricultural Productivity

(a) Increase in Crop Yields

- Productivity has improved over the years due to scientific advancements.
- For example:
  - **Wheat yield** increased from about **850 kg/ha (1950–51)** to over **3,400 kg/ha (2020–21)**.
  - **Rice yield** increased from **700 kg/ha** to about **2,800 kg/ha**.
  - **Pulses and oilseeds** productivity also improved but at a slower rate.

(b) Regional Variations

- Productivity is **high in irrigated and Green Revolution regions** like Punjab, Haryana, and western U.P.
- **Low in eastern and central India**, where rain-fed farming dominates.

- Southern states like Tamil Nadu and Andhra Pradesh have seen good growth due to irrigation and technology.

(c) Crop-Wise Trends

Crop	Trend	Remarks
Wheat	Steady increase	Major beneficiary of Green Revolution
Rice	Significant growth	HYV seeds and irrigation support
Pulses	Fluctuating growth	Still low productivity due to poor soil and irrigation
Oilseeds	Increased production	Due to Technology Mission on Oilseeds
Sugarcane	High growth	Improved irrigation and hybrids
Cotton	Increased after Bt Cotton introduction	Technological progress since 2002
Horticulture	Very high growth	India now 2nd largest producer of fruits & vegetables

5. Factors Responsible for Growth in Production and Productivity

1. **Use of HYV Seeds:** Improved quality seeds with higher yield potential.
2. **Expansion of Irrigation:** Dams, canals, and tube wells increased water availability.
3. **Use of Fertilizers and Pesticides:** Improved soil fertility and reduced crop loss.
4. **Mechanization:** Use of tractors, harvesters, and threshers increased efficiency.
5. **Government Policies:** Subsidies, Minimum Support Price (MSP), and credit facilities encouraged farmers.
6. **Research and Extension:** Agricultural universities and Krishi Vigyan Kendras spread new techniques.
7. **Improved Infrastructure:** Better roads, storage, and marketing networks.
8. **Diversification:** Shift towards horticulture, dairy, fisheries, and allied sectors.

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6. Challenges in Agricultural Productivity

1. **Unequal Regional Growth:** High in some states, low in others.
2. **Small Landholdings:** Most farms are small and fragmented.
3. **Depleting Soil and Water Resources:** Overuse of fertilizers and groundwater.
4. **Climate Change:** Uncertain rainfall and rising temperatures.
5. **Low Investment:** Limited private and public investment in agriculture.
6. **Inadequate Storage and Marketing:** Post-harvest losses remain high.
7. **Price Instability:** Fluctuating prices affect farmers' income.

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7. Government Initiatives to Boost Production and Productivity

1. **Green Revolution (1965–80)** – HYV seeds and irrigation expansion.

2. **Operation Flood (1970s)** – Growth of milk production (White Revolution).
3. **National Food Security Mission (2007)** – Increase in food grain production.
4. **Rashtriya Krishi Vikas Yojana (RKVY)** – Encouragement for state-level agricultural development.
5. **Paramparagat Krishi Vikas Yojana (2015)** – Promotion of organic farming.
6. **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)** – "Per Drop More Crop" for irrigation efficiency.
7. **e-NAM (National Agriculture Market)** – Online marketing and fair price system for farmers.

1. Introduction

Before independence, India's industrial sector was **underdeveloped** and mainly limited to a few industries like cotton, jute, sugar, and mining. The economy was largely **agrarian**, and industries were dominated by British capital.

After 1947, India adopted **planned industrialization** as the key strategy for economic growth and modernization. Industrial development was seen as essential for:

- Reducing dependence on agriculture
- Achieving self-reliance
- Generating employment
- Promoting exports and balanced regional growth

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2. Industrial Development After Independence

(a) First Phase (1947–1965): Foundation of Industrialization

- This period laid the **base for modern industries** through **Five-Year Plans**.
- The government focused on **heavy industries, infrastructure, and public sector enterprises**.
- The **Second Five-Year Plan (1956–61)**, based on the **Mahalanobis Model**, gave highest priority to heavy industries like steel, engineering, machine tools, and power.
- Major developments:
  - Establishment of **steel plants** at Bhilai, Rourkela, and Durgapur.
  - Expansion of **coal, cement, and engineering industries**.
  - Creation of **public sector enterprises (PSUs)** in core sectors.
  - Formation of **Industrial Finance Corporation (IFCI)**, **LIC**, and **IDBI** for industrial finance.

Result: India developed a strong industrial base but remained largely state-controlled.

(b) Second Phase (1965–1980): Stagnation and Regulation

- Industrial growth slowed down due to wars (1962, 1965, 1971), droughts, and political instability.

- The government introduced several controls — licensing, regulation, and permits — leading to what was called the **"License-Permit-Quota Raj."**
- Private sector growth was restricted, and **industrial inefficiency** increased.
- Some progress was made in **small-scale industries (SSIs)** and **public sector expansion**.

  Result: Low industrial productivity, slow growth (about 3–4% per annum).

(c) Third Phase (1980–1991): Liberalization Begins

- India began **partial economic liberalization** during the 1980s.
- Focus shifted toward **industrial modernization, export promotion**, and **reducing government control**.
- Some industries were **delicensed**, and **technology imports** were encouraged.
- Private sector participation increased.

  Result: Growth rate of industrial production improved to around **6–7%**, preparing the ground for full-scale liberalization in the 1990s.

(d) Fourth Phase (1991–Present): Liberalization, Privatization, and Globalization (LPG Era)

- The **New Industrial Policy of 1991** marked a **turning point** in India's industrial development.
- India shifted from a **state-controlled to a market-oriented economy**.
- Key reforms:
  - Abolition of industrial licensing (except a few industries).
  - Reduction in the role of the public sector.
  - Encouragement of **foreign investment (FDI)** and technology.
  - Privatization and disinvestment of PSUs.
  - Integration with the **global economy**.

Result: Rapid industrial growth in sectors like **IT, automobiles, telecom, pharmaceuticals, and services**. India became one of the fastest-growing economies in the world.

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3. Industrial Policies of India

India's industrial development was guided by a series of **Industrial Policies** formulated by the government at different times.

(A) Industrial Policy Resolution of 1948

- First official statement on industrial development after Independence.
- Mixed economy model: both **public and private sectors** were recognized.
- Industries were classified into:

1. **Exclusive state sector** (e.g., defense, atomic energy)
2. **Controlled private sector** (with licenses)
3. **Open sector** (for private enterprises)

- Emphasis on **industrial regulation, labor welfare**, and **foreign capital under control**.
  Significance: Laid the foundation for planned industrial growth and public-private partnership.

(B) Industrial Policy Resolution of 1956 (The Industrial Constitution of India)

- Most important industrial policy after independence.
- Based on the **socialist pattern of society**.
- Industries were divided into **three schedules**:
  1. **Schedule A:** Completely owned by the state (e.g., defense, atomic energy, railways)
  2. **Schedule B:** Joint sector (both state and private)
  3. **Schedule C:** Private sector under government regulation
- Focus on **heavy industries, import substitution**, and **balanced regional development**.
  Significance: Strengthened the **public sector** and guided industrial growth till the 1980s.

(C) Industrial Policy Statement of 1977

- Focused on promoting **small-scale and cottage industries**.
- Aimed at **employment generation** and **reduction of regional imbalance**.
- Encouraged **technological modernization** of small units.
  Significance: Recognized the importance of small industries for inclusive growth.

(D) Industrial Policy Statement of 1980

- Initiated **liberalization measures** to revive industrial growth.
- Encouraged **modern technology**, **export-oriented production**, and **foreign collaboration**.
- Gave importance to **consumer goods industries** along with heavy industries.
  Significance: Marked the beginning of the **liberalization era**.

(E) New Industrial Policy of 1991

- Announced as part of the **economic reforms** after the balance of payment crisis.
- Main features:
  1. **Abolition of Industrial Licensing:** Except for a few hazardous industries.
  2. **Reduction in Public Sector Role:** Only a few strategic industries reserved for government.

3. **Foreign Investment (FDI):** Up to 100% allowed in many sectors.
4. **Foreign Technology Agreements:** Liberalized to promote modernization.
5. **MRTP Act Reforms:** Restrictions on large business houses removed.
6. **Disinvestment in PSUs:** To improve efficiency and reduce fiscal burden.
7. **Globalization:** Encouraged exports and integration with the world economy.

Significance: Shifted India towards a **market-driven economy**, encouraging competition, efficiency, and foreign investment.

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4. Achievements of Industrial Development

1. **Diversified Industrial Base:** India now produces a wide range of goods — from food to steel to electronics.
2. **Self-Reliance:** Reduced dependence on imports of manufactured goods.
3. **Employment Generation:** Millions of jobs created in manufacturing and services.
4. **Export Growth:** Industrial products like engineering goods, textiles, and IT services contribute majorly to exports.
5. **Technological Progress:** Rise in automation, R&D, and digital industries.
6. **Infrastructure Development:** Expansion of roads, ports, power, and telecom sectors.

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5. Problems in Industrial Development

1. **Regional Imbalance:** Industries concentrated in a few states (Maharashtra, Gujarat, Tamil Nadu, etc.).
2. **Poor Infrastructure:** Power shortage, transport bottlenecks, and high logistics costs.
3. **Low Productivity:** Outdated technology and lack of skilled labor in some sectors.
4. **Environmental Pollution:** Industrialization led to ecological issues.
5. **Slow Growth of Capital Goods Industry:** Dependence on imports still exists.
6. **Unemployment:** Automation and low growth in labor-intensive industries.
7. **Inefficient Public Sector Units (PSUs):** Many still suffer losses and poor management.

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6. Recent Initiatives for Industrial Development

1. **Make in India (2014):** Promote manufacturing and attract foreign investment.
2. **Start-up India (2016):** Support innovation and entrepreneurship.
3. **Production-Linked Incentive (PLI) Scheme:** Encourage large-scale manufacturing in key sectors.
4. **Digital India:** Promote digital infrastructure and online business.
5. **Skill India:** Train youth for industrial and service sector jobs.
6. **Atmanirbhar Bharat (Self-Reliant India):** Boost domestic production and reduce import dependence.
7. **1. Introduction**

8. The **Micro, Small, and Medium Enterprises (MSMEs)** form the **backbone of the Indian economy**.
   They play a vital role in promoting **employment, regional balance, exports, and entrepreneurship**.
9. After independence, India encouraged small-scale industries (SSIs) to reduce poverty and dependence on agriculture. Over time, SSIs evolved into MSMEs with modern definitions and expanded roles.

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2. Meaning of MSME

MSMEs are **productive enterprises** involved in **manufacturing, processing, or providing services** on a small or medium scale.

They use **limited capital and technology** but have a **high labor absorption capacity** and play a crucial role in inclusive growth.

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3. Legal Definition of MSME (as per MSMED Act, 2006 and Revised 2020)

Earlier Definition (Before 2020)

Under the **MSME Development (MSMED) Act, 2006**, MSMEs were classified separately for **Manufacturing** and **Service** sectors based on **investment in plant & machinery or equipment**.

Category	Manufacturing Sector (Investment)	Service Sector (Investment)
Micro	Up to ₹25 lakh	Up to ₹10 lakh
Small	₹25 lakh – ₹5 crore	₹10 lakh – ₹2 crore
Medium	₹5 crore – ₹10 crore	₹2 crore – ₹5 crore

However, this system became outdated as it did not consider business turnover and discouraged enterprises from expanding.

Revised Definition (Effective from July 1, 2020)

The **Government of India revised the MSME definition** to promote growth, attract investment, and reduce complexity.

Now, **there is no separate definition** for manufacturing and service sectors — both are treated **equally**.

Category	Investment in Plant & Machinery/Equipment	Annual Turnover
Micro Enterprise	Up to ₹1 crore	Up to ₹5 crore
Small Enterprise	Up to ₹10 crore	Up to ₹50 crore
Medium Enterprise	Up to ₹50 crore	Up to ₹250 crore

Note: Both **investment and turnover** conditions must be satisfied.
These limits are periodically revised to reflect inflation and industry growth.
MSMEs are registered through the **Udyam Registration Portal** (https://udyamregistration.gov.in/).

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4. Characteristics of MSMEs

(a) Low Investment and Simple Technology

MSMEs are characterized by **low capital investment** and use of **simple, often local technology**. This makes them easy to start and manage.

(b) High Employment Generation

MSMEs are **labor-intensive**, providing employment to millions, especially in **rural and semi-urban areas**.
They contribute around **110 million jobs**, making them the **second-largest employer after agriculture**.

(c) Flexibility and Adaptability

Due to their small size, MSMEs can **quickly adapt** to changing market conditions, consumer preferences, and new technologies.

(d) Contribution to GDP and Exports

MSMEs contribute about **30% to India's GDP**.
They account for nearly **45–50% of India's total exports**, especially in textiles, leather, handicrafts, and engineering goods.

(e) Regional Balance and Rural Development

MSMEs are spread across small towns and villages, promoting **balanced regional development** and reducing **migration to cities**.

(f) Promote Entrepreneurship

They encourage **self-employment** and nurture **entrepreneurial talent**, especially among youth and women.

(g) Use of Local Resources

MSMEs use **locally available raw materials**, skills, and labor, reducing import dependence and promoting sustainability.

(h) Diverse Activities

They are involved in a wide range of sectors such as:

Manufacturing (textiles, food processing, handicrafts, machinery)
Services (IT, repair, education, logistics)
Agro-based industries

(i) Low Barriers to Entry

Setting up MSMEs requires less capital, land, and complex regulation compared to large industries, making them attractive for first-generation entrepreneurs.

(j) Support to Large Industries

MSMEs often act as **ancillary or feeder units** to large industries by supplying components, tools, and materials — creating a **strong industrial link**.

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5. Role and Importance of MSMEs in Indian Economy

Employment Creation:

Major source of non-farm employment.

Balanced Regional Development:

Reduces economic disparity between urban and rural areas.

Export Promotion:

Contributes significantly to foreign exchange earnings.

Industrialization of Rural Areas:

Encourages small industrial clusters in villages.

Innovation and Competitiveness:

Promotes local innovations and entrepreneurship.

Inclusive Growth:

Encourages women and weaker sections to participate in the economy.

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6. Problems Faced by MSMEs

Lack of Finance: Difficulty in getting loans and working capital.
Poor Infrastructure: Inadequate power, transport, and storage facilities.
Technological Backwardness: Limited access to modern technology.
Marketing Problems: Low brand awareness and poor market access.
Competition: From large domestic and foreign companies.
Delayed Payments: Buyers often delay payments, affecting cash flow.
Skilled Labour Shortage: Lack of training and modern skill sets.
Regulatory Burden: Complex procedures and compliance issues.

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7. Government Support and Schemes for MSMEs

(a) Financial Support

MUDRA Yojana (2015): Loans up to ₹10 lakh for small entrepreneurs.

Credit Guarantee Fund Scheme (CGTMSE): Collateral-free loans for MSMEs.
Emergency Credit Line Guarantee Scheme (ECLGS): Support during COVID-19.
(b) Skill and Technology Development
Technology Upgradation Fund Scheme (TUFS)
Skill India Mission
Cluster Development Programme (CDP)
(c) Marketing and Promotion
Government e-Marketplace (GeM): Platform for MSME product procurement.
MSME Export Promotion Schemes
Zero Defect Zero Effect (ZED) certification for quality improvement.
(d) Digital and Registration Initiatives
Udyam Registration: Online registration and recognition.
CHAMPIONS Portal: Real-time support and grievance redressal.
TReDS Platform: To ensure timely payments through bill discounting.

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8. Recent Developments (Post–2020)
Revised MSME Definition (2020): Introduced turnover criteria and uniform classification.
Atmanirbhar Bharat Package: Financial support to MSMEs during the pandemic.
Self-Reliant India Mission: Focus on import substitution and domestic manufacturing.
Digital MSME Initiative: Encouraging digital tools, e-commerce, and online marketing.
One District One Product (ODOP): Promotion of local specialities for export.

UNIT – 4

1. Introduction

Foreign trade refers to the exchange of goods and services between one country and other nations.

It includes **exports** (goods/services sold abroad) and **imports** (goods/services purchased from abroad).

Foreign trade is a vital part of the Indian economy because it helps:

- earn foreign exchange,
- promote industrial and agricultural growth, and
- integrate India with the global economy.

After Independence, India's foreign trade underwent a massive transformation — from exporting primary goods and importing finished goods (colonial pattern) to exporting manufactured and service products (modern diversified trade).

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2. Meaning and Types of Foreign Trade

(a) Meaning:

Foreign trade is the trade between **two or more countries**. It helps a nation obtain goods and services that it cannot produce efficiently or economically.

(b) Types of Foreign Trade:

1. **Import Trade:** Purchase of goods and services from foreign countries (e.g., importing crude oil, machinery).
2. **Export Trade:** Sale of goods and services to foreign countries (e.g., exporting software, textiles).
3. **Entrepot Trade:** Import of goods for re-export to other countries (e.g., Singapore, Dubai).

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3. Importance of Foreign Trade for India

Foreign trade plays a crucial role in India's **economic development** and **global integration**.

Its importance can be understood as follows:

(a) Earning of Foreign Exchange

Exports bring in **foreign currency**, which helps India pay for imports like crude oil, defense equipment, and technology.

(b) Economic Growth and Development

Foreign trade stimulates **industrial growth**, encourages new technologies, and promotes **modernization** of the economy.

(c) Employment Generation

Export-oriented industries like **textiles, gems, IT services, and handicrafts** provide large-scale employment opportunities.

(d) Optimal Resource Utilization

Through international trade, India can **specialize** in goods where it has a comparative advantage (e.g., IT services, pharmaceuticals) and import those it lacks (e.g., petroleum).

(e) Access to Modern Technology

Imports of **machinery, electronics, and research equipment** help India adopt modern technology and improve productivity.

(f) Expansion of Market

Foreign trade gives Indian industries access to **global markets**, encouraging economies of scale and competitiveness.

(g) Improvement in Balance of Payments

Higher exports improve the **Balance of Payments (BoP)** situation, reducing dependency on external debt.

(h) Cultural and International Relations

Trade improves **international cooperation, peace, and diplomatic relations** among nations.

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4. Composition of India's Foreign Trade

"Composition of trade" refers to the **type of goods and services exported and imported** by a country.
It shows the structural changes in the economy over time.

A. Composition of Exports

(i) Before Independence (Colonial Period):

- India mainly exported **primary goods** like raw cotton, jute, tea, and minerals.
- Industrial goods were imported from Britain.
- The trade pattern was designed to serve British interests.

(ii) Post-Independence Changes:

After 1947, India diversified its exports from **raw materials** to **manufactured and service-based products**.

Current Major Exports (Recent Trends):

Category	Examples	Share/Remarks
1. Engineering Goods	Machinery, iron & steel, automobiles	Largest export item
2. Petroleum Products	Refined petroleum, diesel, lubricants	High export earnings
3. Gems and Jewellery	Diamonds, gold jewellery	Major foreign exchange earner
4. Chemical Products	Drugs, pharmaceuticals, organic & inorganic chemicals	Globally competitive
5. Textiles and Garments	Cotton yarn, readymade garments, handlooms	Traditional export sector
6. Agricultural Products	Rice, spices, tea, coffee, marine products	Strong global demand
7. IT and Software Services	IT, BPO, consultancy, financial services	Major part of "invisible exports"
8. Others	Leather, handicrafts, electronic goods	Expanding categories

Trend: India's exports have shifted from **primary goods** to **manufactured and service-oriented products**, reflecting industrial progress.

B. Composition of Imports

(i) Early Period (Post-Independence):

- Imports consisted mainly of **machinery, transport equipment, food grains**, and **industrial raw materials**.

(ii) Recent Composition (Modern Pattern):

Category	Examples	Remarks
1. Petroleum (Crude Oil & Products)	Crude oil, gas, lubricants	Largest import item (over 25% of total imports)
2. Capital Goods	Machinery, electrical equipment, transport goods	Supports industrial growth
3. Gold & Precious	Gold, silver, gems	For jewellery and

Category	Examples	Remarks
Metals		investment
4. Electronic Goods	Mobile phones, semiconductors, computers	Rising share due to tech demand
5. Chemicals & Fertilizers	Industrial and agricultural chemicals	Key input for production
6. Iron, Steel, and Non-Ferrous Metals	Copper, aluminium	Industrial use
7. Food and Agricultural Products	Edible oil, pulses	Imports to meet domestic shortfall

Trend: India's imports are dominated by **crude oil, machinery, electronics, and gold** — showing industrial dependence and consumer demand.

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5. Direction of India's Foreign Trade

"Direction of trade" refers to **countries and regions** with which India trades.

(a) Before Independence

- Trade was mainly with the **United Kingdom** and other **Commonwealth countries**.

(b) After Independence

- India diversified trade relations with **developed and developing countries**.

(c) Present Pattern (2020s):

- **Major Export Destinations:** USA, UAE, Netherlands, Bangladesh, Singapore, China.
- **Major Import Sources:** China, UAE, USA, Saudi Arabia, Iraq, Indonesia, and Switzerland.

Trend: India has diversified its trade partnerships, reducing dependence on a single country.

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6. Recent Trends in India's Foreign Trade

1. **Growth in Total Trade Volume:**
   India's total trade (exports + imports) has increased manifold since 1991.
2. **Diversification of Exports:**
   More focus on high-value items like engineering goods, IT, and pharmaceuticals.
3. **Rise in Service Exports:**
   India has become a **global IT service hub**.
4. **Trade Deficit:**
   Imports are usually higher than exports due to oil and gold imports.
5. **Free Trade Agreements (FTAs):**
   India has signed trade agreements with ASEAN, Japan, UAE, and others.

6. **Focus on Atmanirbhar Bharat:**
   Efforts to promote self-reliance and reduce unnecessary imports.

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7. Problems of India's Foreign Trade

1. **High Trade Deficit:** Imports exceed exports.
2. **Dependence on Crude Oil Imports.**
3. **Fluctuating Global Prices:** Especially for oil and commodities.
4. **Low Export Competitiveness:** In certain sectors due to high production costs.
5. **Inadequate Infrastructure:** Ports, logistics, and transport inefficiencies.
6. **Global Recession and Trade Barriers:** Affect export demand.

8. Government Measures to Promote Foreign Trade

1. **Export Promotion Schemes:** Duty Drawback, MEIS, RoDTEP, etc.
2. **Special Economic Zones (SEZs):** For export-oriented industries.
3. **Foreign Trade Policy (2015–2020 and beyond):** Aimed at boosting exports.
4. **Trade Infrastructure for Export Scheme (TIES):** Improved logistics and ports.
5. **Bilateral and Regional Trade Agreements:** To expand market access.
6. **Make in India & Atmanirbhar Bharat:** Encourage domestic manufacturing for export.

Role of Foreign Direct Investment (FDI) and Multinational Corporations (MNCs) in India

1. Introduction

Foreign Direct Investment (FDI) refers to investment made by a company or individual from one country into business interests located in another country.
In simple words, it means **foreign companies investing in India** — by setting up factories, offices, or acquiring ownership in Indian companies.

Multinational Corporations (MNCs) are large companies that operate in **two or more countries**.

They bring capital, technology, management skills, and global market access to the host country (like India).

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2. Meaning and Definition

(a) Foreign Direct Investment (FDI):

FDI is an investment made by a foreign entity (company, individual, or government) in the business or production of another country, with the intention of **establishing long-term interest and control**.

Example:

- Toyota (Japan) establishing a car manufacturing unit in India.
- Walmart buying stakes in Flipkart.

(b) Multinational Corporations (MNCs):

MNCs are companies that own or control the production and marketing of goods and services in **multiple countries**.

Example:

Coca-Cola, Nestlé, Microsoft, Samsung, and Tata Group (Indian MNC).

3. Forms of FDI

1. **Greenfield Investment:**
   - Setting up new production facilities from scratch.
   - Example: Hyundai establishing a new car plant in Chennai.
2. **Brownfield Investment:**
   - Acquiring or merging with an existing company in the host country.
   - Example: Walmart's acquisition of Flipkart.
3. **Joint Venture:**
   - Partnership between foreign and local companies.
   - Example: Maruti Suzuki (India-Japan).
4. **Equity Capital, Reinvested Earnings, and Intra-company Loans**
   - Various forms through which FDI funds enter the country.

IN 4. Role and Importance of FDI in India's Economic Development

(1) Capital Formation

FDI helps fill the gap between **domestic savings and investment requirements**. It provides much-needed capital for India's industrial and infrastructure development.

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(2) Technological Advancement

Foreign investors bring **modern technology, equipment, and know-how** which improves productivity and product quality.

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(3) Employment Generation

FDI creates **direct jobs** (in factories, offices) and **indirect jobs** (in services, supply chains, construction).

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(4) Improvement in Infrastructure

Many foreign companies invest in **ports, power, telecommunications, and roads**, boosting national infrastructure.

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(5) Export Promotion

FDI promotes **export-oriented industries** — for example, automobile and electronics sectors produce for global markets.

(6) Managerial Skills and Expertise

FDI introduces **modern management techniques**, efficient business operations, and corporate governance practices.

(7) Balance of Payments Support

By increasing exports and reducing import dependence, FDI helps in **stabilizing India's Balance of Payments (BoP)**.

(8) Integration with the Global Economy

FDI links India to **international production networks and value chains**, enhancing its global trade relations.

(9) Development of Backward Areas

MNCs often set up industries in less-developed regions, promoting **regional development and reducing inequalities**.

(10) Competition and Efficiency

The entry of MNCs increases competition, pushing Indian firms to **innovate and improve efficiency**.

5. Trends of FDI in India (Post-Liberalization Period)

- **1991 Economic Reforms** opened India's economy for foreign investors.
- Sectors like **telecommunication, automobiles, IT, retail, and banking** saw massive foreign investments.
- India is now one of the **top global destinations for FDI**.
- **Major investing countries:** Singapore, USA, Mauritius, Netherlands, Japan.
- **Major FDI sectors:** Services, Computer Software, Manufacturing, Construction, Trading, and Financial Services.

6. Role and Impact of Multinational Corporations (MNCs) in India

(1) Capital Inflow

MNCs bring **huge foreign investment**, which supplements domestic capital and helps economic expansion.

(2) Technology Transfer

They bring **latest production techniques, patents, and R&D**. Example: Automobile and electronics sectors.

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(3) Employment Opportunities

MNCs create jobs in manufacturing, services, marketing, and distribution networks.

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(4) Skill Development

Indian employees trained in MNCs gain modern skills and global business exposure.

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(5) Boost to Exports

MNCs help India integrate into global markets, improving **export competitiveness**.

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(6) Industrial and Urban Development

They encourage industrial clusters, logistics, and urban growth around major cities.

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(7) Consumer Benefits

Increased competition leads to **better quality products, lower prices, and more choices** for consumers.

(8) Contribution to GDP

MNCs contribute significantly to **India's industrial output, employment, and GDP** growth.

7. Problems and Criticisms of FDI and MNCs

Despite their benefits, FDI and MNCs also have **certain negative effects**:

1. **Profit Repatriation:**
   Large profits are sent back to the parent country, reducing India's foreign exchange reserves.
2. **Cultural Influence:**
   Western lifestyles and consumerism spread through MNC advertising, affecting Indian traditions.
3. **Market Domination:**
   Small Indian firms often find it difficult to compete with large MNCs.
4. **Uneven Development:**
   MNCs prefer urban or developed regions, leading to **regional imbalances**.
5. **Environmental Issues:**
   Some MNCs may exploit natural resources and cause pollution.

6. **Dependency Risk:**
   Excessive reliance on foreign investment can make the economy vulnerable to global shocks.

7. Government Policies Toward FDI and MNCs

(a) Pre-1991 (Before Liberalization):

- Strict control and licensing.
- Limited foreign ownership allowed (usually below 40%).
- Focus on self-reliance and import substitution.

(b) Post-1991 (After Liberalization):

- FDI allowed in many sectors through the **automatic route**.
- Equity caps increased to 74% or 100% in several industries.
- Establishment of **FDI Promotion Agencies** like *Invest India*.
- Simplified procedures and approval systems.

(c) Recent Developments:

- 100% FDI allowed in most sectors like e-commerce, telecom, and defense (with conditions).
- Production-Linked Incentive (PLI) schemes to attract global investors.
- Emphasis on **"Make in India"** and **"Atmanirbhar Bharat"** to combine domestic strength with global capital.

8. Role of FDI and MNCs in Major Indian Sectors

Sector	Example of MNC/FDI	Impact
Automobiles	Hyundai, Suzuki, Honda	Tech upgrade, exports, jobs
Telecom	Vodafone, Airtel (foreign partners)	Expanded connectivity
IT & Software	IBM, Microsoft, Google	Skill development, global outsourcing
Retail & E-commerce	Walmart, Amazon	Supply chain modernization
Pharmaceuticals	Pfizer, Novartis	R&D and global quality standards
Finance & Banking	HSBC, Citibank	Financial innovation and globalization

NITI Aayog –

1. Introduction

NITI Aayog stands for **National Institution for Transforming India**. It is the **premier policy think tank** of the Government of India, established to replace the old **Planning Commission** in **2015**.

It aims to promote **cooperative federalism**, foster **innovation**, and ensure **strategic and long-term development planning** for India.

2. Establishment

- **Established on:** 1st January 2015
- **By:** Government of India (Cabinet Resolution)
- **Replaced:** Planning Commission (which was formed in 1950)
- **Headquarters:** New Delhi
- **Website:** https://www.niti.gov.in

3. Meaning and Full Form

- **Full Form:** *National Institution for Transforming India*
- **Meaning:**
  It is an institution created to guide and coordinate **national development strategies** with a focus on **cooperative federalism** (Centre and States working together) and **evidence-based policymaking**.

4. Objectives of NITI Aayog

1. **To design strategic and long-term policies** for India's development.
2. **To promote cooperative federalism** by involving State Governments in policy formation.
3. **To foster innovation, entrepreneurship, and technology-driven growth.**
4. **To ensure participation of all levels of government** in policy planning and implementation.
5. **To monitor and evaluate programs** and initiatives of the Central Government.
6. **To provide a platform for knowledge and best practices** from India and abroad.
7. **To focus on sustainable and inclusive growth**, ensuring that development reaches all sections of society.

5. Composition / Structure of NITI Aayog

Position	Person/Details
Chairperson	Prime Minister of India
Vice-Chairperson	Appointed by the Prime Minister

Position	Person/Details
Governing Council	Chief Ministers of all States + Lt. Governors of Union Territories
Regional Councils	Formed to address specific regional issues (for a limited period)
Full-time Members	Experts with specialized knowledge
Ex-officio Members	4 Union Ministers nominated by the PM
Special Invitees	Experts, specialists, and practitioners nominated by the PM
Chief Executive Officer (CEO)	Appointed by the Prime Minister for a fixed tenure

Current Key Members (as of recent years):

- **Chairperson:** Prime Minister of India
- **Vice-Chairperson:** (Appointed position – varies over time)
- **CEO:** Senior IAS Officer (e.g., B.V.R. Subrahmanyam as of 2023–24)

6. Features and Nature of NITI Aayog

1. **Advisory Role, Not Allocative:**
   Unlike the Planning Commission, NITI Aayog does **not allocate funds** to States. It gives **policy advice and coordination**.
2. **Think Tank:**
   Works as a **knowledge hub**, conducting research and preparing strategies for different sectors.
3. **Bottom-Up Approach:**
   Encourages inputs from **States, districts, and local bodies**, instead of imposing a top-down plan.
4. **Cooperative and Competitive Federalism:**
   Promotes both **cooperation among States** and **healthy competition** for better governance.
5. **Evidence-Based Policy:**
   Uses **data analytics, research, and consultation** for planning and decision-making.
6. **Focus on Innovation:**
   Supports **entrepreneurship and technology-led solutions** (like Atal Innovation Mission).

7. Functions of NITI Aayog

NITI Aayog performs several crucial functions divided into key areas:

A. Policy Formulation

- Drafting national development agendas, long-term strategies, and medium-term plans.
- Advising the government on economic and social policy matters.

B. Coordination

- Acting as a platform for **Centre–State collaboration**.
- Resolving inter-departmental and inter-state issues.

C. Monitoring and Evaluation

- Evaluating implementation of government schemes and identifying bottlenecks.
- Suggesting reforms based on ground-level performance data.

D. Knowledge and Innovation Hub

- Encouraging research, innovation, and best practices from around the world.
- Running programs like **Atal Innovation Mission** to promote startups and creativity.

E. Promoting Cooperative Federalism

- Engaging State governments in national development planning.
- Encouraging States to design their own development models.

F. Public-Private Partnership (PPP)

- Promoting collaboration between government and private sector for national projects.

8. Important Initiatives of NITI Aayog

Initiative / Programme	Description
Atal Innovation Mission (AIM)	Promotes innovation and entrepreneurship through Atal Tinkering Labs and incubation centres.
Aspirational Districts Programme	Focuses on rapid development of backward districts in India.
Digital India	Strengthening digital infrastructure and governance.
Make in India	Encourages manufacturing and industrial growth.
Women Entrepreneurship Platform (WEP)	Supports women entrepreneurs through networking and mentoring.
SDG India Index	Tracks India's progress towards UN Sustainable Development Goals.
Composite Water Management Index	Evaluates water resource management performance of States.
India @75 / Vision 2047	Long-term vision document for India's growth and development.
National Energy Policy & Health Strategy	Frameworks for sustainable energy and healthcare improvement.

9. Difference Between Planning Commission and NITI Aayog

Basis	Planning Commission	NITI Aayog
Establishment Year	1950	2015
Nature	Centralized planning body	Think tank and advisory body
Approach	Top-down	Bottom-up
Fund Allocation	Allocated funds to States	No fund allocation power
Chairperson	Prime Minister	Prime Minister
Members	Full-time + part-time	Full-time + ex-officio + invitees
Focus	Five-Year Plans	Long-term strategic planning
Federalism	Centralized	Cooperative and Competitive
Function	Formulated plans and budgets	Provides ideas, advice, and policy coordination

10. Role of NITI Aayog in India's Development

1. **Promotes Inclusive Growth**
   – Focus on backward districts, rural areas, women empowerment, and sustainability.
2. **Encourages State Participation**
   – States are partners in national policy-making, ensuring realistic goals.
3. **Strengthens Data-Driven Governance**
   – Uses analytics and technology to improve policy accuracy.
4. **Supports Reforms and Innovations**
   – Helps in implementing reforms like GST, Digital India, and Startup India.
5. **Acts as a Bridge**
   – Links government, industry, academia, and civil society for integrated planning.
6. **Focus on Sustainable Development Goals (SDGs)**
   – Tracks India's performance and coordinates actions across States.

11. Challenges Faced by NITI Aayog

1. **Lack of Financial Powers:**
   – Cannot allocate funds to States, which reduces its influence.
2. **Implementation Gaps:**
   – Policies designed are sometimes not implemented effectively at the State level.
3. **Coordination Issues:**
   – Differences in priorities among Centre and States can slow decision-making.

4. **Dependence on Central Government:**
   – Still relies on Central ministries for policy execution.
5. **Limited Authority:**
   – Recommendations are advisory, not binding.

12. Recent Developments and Future Role

- Preparing **India@100 Vision** for 2047 – roadmap for becoming a developed nation.
- Encouraging **AI, renewable energy, and sustainable agriculture**.
- Strengthening **Aspirational Blocks Programme** (extension of Aspirational Districts).
- Working towards **Digital Governance and Data Policy frameworks**.

NITI Aayog is gradually becoming India's **"Centre of Policy Innovation"** — guiding both Central and State governments.

Major Social Welfare Schemes of Government of India

a. Swachh Bharat Mission (2014):

Aim: Clean India by eliminating open defecation and improving solid waste management.

Launched by: PM Narendra Modi on Gandhi Jayanti, 2 Oct 2014.

Achievements: Millions of toilets built; awareness on hygiene.

b. Ayushman Bharat (2018):

Aim: Universal health coverage.

Components

Health and Wellness Centres (HWCs): Primary healthcare.

Pradhan Mantri Jan Arogya Yojana (PM-JAY): Health insurance of ₹5 lakh per family per year

Beneficiaries: Over 10 crore poor and vulnerable families

c. Ujjwala Yojana (2016):

Aim: Provide free LPG connections to poor households.

Implemented by: Ministry of Petroleum and Natural Gas.

Benefit: Reduces indoor air pollution and promotes women's health.

d. Atal Pension Yojana (2015):

Aim: Provide old-age income security to unorganized sector workers.

Age Group: 18–40 years

Pension: ₹1,000 to ₹5,000 per month after 60 years.

e. Pradhan Mantri Garib Kalyan Yojana:

Aim: Financial assistance to poor during crises (e.g., COVID-19).

Components: Free ration, direct cash transfer, and MNREGA wage increase.

1. Swachh Bharat Mission (SBM)

Launched on: 2nd October 2014

Launched by: Prime Minister Narendra Modi

Nodal Ministry: Ministry of Housing and Urban Affairs (Urban) & Ministry of Jal Shakti (Rural)

Objective:

To make India **clean and open defecation free (ODF)** by promoting **sanitation, solid waste management, and hygiene awareness.**

Key Features:

1. Construction of **individual household toilets** and **community toilets**.
2. **Elimination of open defecation** in rural and urban areas.
3. **Solid and liquid waste management.**
4. Behavioural change campaigns like "Swachhata Hi Seva."
5. **Public participation (Jan Andolan)** and involvement of celebrities, NGOs, and citizens.

Components:

- **SBM (Gramin):** For rural sanitation.
- **SBM (Urban):** For cities and towns.
- **Swachh Survekshan:** Annual cleanliness survey of cities.

Achievements:

- Over **10 crore toilets constructed** nationwide.
- **100% villages declared ODF.**
- Significant reduction in open defecation-related diseases.
- Improved cleanliness in cities; Indore ranked cleanest city multiple times.

Importance:

- Improved health, hygiene, and dignity (especially for women).
- Enhanced tourism and public awareness.
- Promoted cleanliness as a **mass movement.**

2. Pradhan Mantri Ujjwala Yojana (PMUY)

Launched on: 1st May 2016

Implemented by: Ministry of Petroleum and Natural Gas

Target Group: Below Poverty Line (BPL) households, especially women

Objective:

To provide **clean cooking fuel (LPG)** to rural and poor households, replacing unsafe cooking methods like wood, coal, or cow dung.

Key Features:

1. **Free LPG connections** to women from BPL families.
2. Financial support of **₹1,600 per connection** (for security deposit, regulator, and hose).
3. Refill subsidies transferred directly into beneficiary's bank account.
4. Identification of beneficiaries through **Socio-Economic Caste Census (SECC)** data.
5. Focus on **women empowerment and health improvement.**

Achievements:

- Over **9 crore LPG connections** distributed.
- Smoke-free kitchens improved women's health and reduced indoor air pollution.
- Boosted LPG coverage from 55% (2014) to over 97%.

Importance:

- Reduced deforestation and carbon emissions.
- Empowered rural women and promoted gender equality.
- Enhanced the standard of living and cleanliness in homes.

3. Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana (PM-JAY)

Launched on: 23rd September 2018

Implemented by: Ministry of Health and Family Welfare

Also known as: Modicare

Objective:

To provide **universal health coverage** to poor and vulnerable families and reduce financial burden due to healthcare expenses.

Key Features:

1. Provides **health insurance coverage up to ₹5 lakh per family per year** for secondary and tertiary care hospitalization.
2. Covers **over 10.74 crore poor and vulnerable families** (~50 crore beneficiaries).
3. **Cashless and paperless treatment** in empanelled public and private hospitals.
4. Includes **pre- and post-hospitalization** expenses.
5. No restriction on **family size, age, or gender.**
6. Managed through **Ayushman Bharat Health Accounts (ABHA)** and **Health ID cards.**

Components of Ayushman Bharat:

1. **Health and Wellness Centres (HWCs):**
    - Aim to establish 1.5 lakh HWCs to provide **primary healthcare services** (screening, diagnostics, medicines).
2. **Pradhan Mantri Jan Arogya Yojana (PM-JAY):**
    - Provides financial protection for hospitalization.

Achievements:

- Over **6 crore hospital admissions** covered.

- Reduction in out-of-pocket medical expenses.
- Benefitted millions of poor families with **cashless healthcare.**

Importance:

- Major step toward **Universal Health Coverage (UHC)**.
- Improved health security for low-income households.
- Reduced poverty caused by medical expenses.

4. Atal Pension Yojana (APY)

Launched on: 9th May 2015

Implemented by: Pension Fund Regulatory and Development Authority (PFRDA)

Target Group: Workers in unorganized sector (like farmers, laborers, drivers, etc.)

Objective:

To provide a **guaranteed pension** to unorganized sector workers after the age of 60.

Key Features:

1. Open to **citizens aged 18–40 years.**
2. Subscribers contribute monthly (based on age and pension choice).
3. After 60 years, they receive a **fixed pension** between ₹1,000 to ₹5,000 per month.
4. The **Government co-contributes** 50% of the subscriber's contribution or ₹1,000 per year (for eligible subscribers).
5. In case of death, **spouse receives pension**; after both die, corpus amount is returned to the nominee.

Achievements:

- Over **6 crore subscribers** enrolled (as of recent years).
- Promoted savings and retirement security among informal workers.

Importance:

- Encourages financial inclusion and social security.
- Reduces old-age dependency on family.
- Promotes culture of long-term savings in low-income groups.

5. Pradhan Mantri Garib Kalyan Yojana (PMGKY)

Introduced: 2016 (as an income declaration scheme);

Revamped during COVID-19 pandemic (2020) as welfare package for the poor.

Implemented by: Ministry of Finance & various welfare ministries.

Objective:

To provide **financial and food security** to the **poor, vulnerable, and disadvantaged sections** of society during crises (especially during COVID-19 lockdown).

Key Features (COVID Relief Version):

1. **Free food grains** (5 kg wheat/rice + 1 kg pulses per person per month) under PM Garib Kalyan Anna Yojana.

2. **Direct cash transfers** to women Jan Dhan account holders (₹500/month for 3 months).
3. **Free LPG refills** for Ujjwala beneficiaries for 3 months.
4. **₹1,000 assistance** to senior citizens, widows, and differently-abled persons.
5. **Insurance cover of ₹50 lakh** for healthcare workers fighting COVID-19.
6. **EPF support** for employees of small establishments.
7. Extension of **PM-KISAN** payments to farmers.

Achievements:

- Provided free ration to **80 crore people** during the pandemic.
- Supported crores of women, farmers, and laborers.
- Helped stabilize the economy during lockdowns.

Importance:

- Acted as a **lifeline during COVID-19 crisis.**
- Protected poor families from hunger and financial distress.
- Strengthened India's **social welfare network.**