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ANALYSIS**



LAKSHYA ACADEMY®

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# 1 - Kerala's push for infrastructure:

## GS III

### Infrastructure related issues:

- **Context:**

- The New Dry Dock (NDD) at Cochin Shipyard Limited (CSL), the International Ship Repair Facility (ISRF) of CSL, and the LPG Import Terminal of Indian Oil Corporation Limited (IOCL) were recently opened by the Prime Minister (PM) at Kochi, Kerala.
- The Prime Minister's goal to modernise India's ports, shipping, and waterways industries and increase their capacity and self-sufficiency is aligned with these significant infrastructure projects.

- **Which three distinct projects did Kerala inaugurate?**

- **Fresh Dry Dock:**

- At 310 metres in length, the NDD is constructed in accordance with international standards.
- This engineering marvel, a source of national pride, can handle aircraft carriers twice as large as the INS Vikrant or other larger ships.
- The NDD, one of the biggest marine facilities in the area, is a landmark project that showcases India's engineering and project management skills.
- In order to guarantee effectiveness, security, and environmental sustainability, it has integrated the newest technological advancements.

- **International Ship Repair Company:**

- The first completely designed pure ship repair ecosystem in India, the ISRF will increase the ship repair industry's capacity by 25%.
- Constructed with a ₹970 crore investment, it will additionally enable quick turnaround for India's Coast Guard and Naval vessels in case of emergencies as well as planned maintenance.
- Through the ISRF, CSL will be able to become a global hub for ship repair while also modernising and expanding its current capabilities.

- **IOCL's LPG Import Terminal:**

- A 3.5 km Cross Country Pipeline connected the state-of-the-art Multi-User Liquid Terminal Jetty to the LPG Import Terminal for IOCL, which was also inaugurated in Kochi.
- A turnover of 1.2 million metric tonnes annually (MMTPA) is the terminal's goal. It would guarantee the distribution of LPG via pipeline and road transfers, which will immediately help the bottling facilities in Tamil Nadu and Kerala.
- Millions of homes and companies in the area will benefit from a consistent supply of LPG, which will also greatly improve India's energy infrastructure.
- This project will bolster India's efforts to guarantee that electricity is available and reasonably priced for everyone.

- **What Importance Do These Projects Have?**

- **Maritime Development's Strategic Vision:**

- The Prime Minister underscores the worldwide standard established by the initiatives in line with the 'Sabka Saath, Sabka Vikaas' philosophy.
- With a focus on innovation and quality, Kochi aims to become a global hub for green ships and a significant maritime cluster by 2047, as outlined in the Maritime Amrit Kaal Vision 2047.

- **Investments and Jobs in the Maritime Industry:**

- With the help of these measures, the maritime industry is expected to get a substantial investment of Rs 45,000 Crores and employ over 50,000 people.
- The main goals are to become Atmanirbhar, increase India's tonnage, and reduce reliance on foreign ships.

- **Cochin Shipyard Limited's (CSL) function:**

- Acknowledged worldwide for supplying Norway with self-sufficient electric barges, CSL is essential to India's comeback as a significant maritime force.
- The shipyard is positioned to play a significant role in India's marine economy thanks to its robust product line, which includes Next-Generation Green Technology ships.

- **Environmental Impact and National Pride:**

- India's engineering skill is on display with the projects in Kochi, which are a source of national pride. It is anticipated that they will emphasise environmental responsibility by lowering CO2 emissions and producing significant logistic savings.

- **Conformity to The Worldwide Vision:**

- Providing insight into the agreements reached about the Middle East-Europe Economic Corridor (MEEEC) during India's G20 Presidency, the Prime Minister emphasised that the MEEEC will reinforce the establishment of Viksit Bharat by bolstering the country's coastal economy.
- **Plans for Maritime Infrastructure in the Future:**
- **Based on these projects, the Ministry of Ports, Shipping & Waterways sets future plans that comprise:**
  - establishing a shipbuilding and repair centre of excellence.
  - Establishing ship repair hubs in key places.
  - easing of trade restrictions to support the ship repair industry.
  - There are currently talks about building a ship repair facility at Vadinar.
- **What Steps Can Be Done to Make the Infrastructure Sector Stronger?**
- **Maintaining Uniformity in the Policy and Regulatory Structure:**
- Improved regulations and uniformity in the tendering procedure are necessary. It is imperative to give top emphasis to addressing the disparities in policy coherence and consistency among various government departments.
- A comprehensive approach between the government and the RBI is required to address the problem of stressed assets.
- For non-performing assets and PSU reform, a sector-specific policy must be developed.
- **Fair User Fees:**
- It is essential to sustainably use resources and the environment, to increase infrastructure finance, and to ensure the financial stability of infrastructure service providers.
- User fees are important because overuse and resource waste occur in many parts of the nation, in part due to the absence of user fees or extremely low ones.
- This policy objective offers enormous potential for resource production in addition to the sustainability of the environment and efficient use of resources that would result from appropriate user charges.
- **Independent Control of Infrastructure:**
- The private sector would essentially seek autonomous infrastructure regulation as India and the rest of the globe open up more areas to private participation.
- Since the regulatory function is similar in many infrastructure sectors, there is a global trend towards multi-sectoral regulators. These organisations increase regulatory capability, save resources, and guard against regulatory capture.

- **BAM and Asset Recycling (AR):**

- The fundamental goal of brownfield asset monetization, or BAM, is to release capital held in de-risked brownfield public sector assets in order to accelerate greenfield investment and enhance infrastructure resources.
- These assets may be moved to a corporate structure (Toll Operate Transfer, TOT model) or a trust (Infrastructure Investment Trusts, InvITs), which accept investments from institutional investors in exchange for a capital consideration that represents the value of the underlying assets' potential future cash flows.
- India possesses a substantial amount of brownfield assets in several infrastructure domains.

*Source → The Hindu*

## 2 - Completing the NQM implementation strategy:

### GS II

#### Government Policies and Interventions:

- **Context:**

- The establishment of the Mission Coordination Cell (MCC) and the execution strategy and deadlines of the National Quantum Mission (NQM) were the topics of discussion at the recent first meeting of the Mission Governing Board (MGB) of NQM.
- The Department of Science and Technology (DST) will select an institution for the MCC based on merit and available infrastructure. The MCC will operate under the general supervision and direction of the Mission Technology Research Council (MTRC).

- **The National Quantum Mission (NQM): What is it?**

- **About:**

- The mission, which is scheduled for 2023–2021, intends to establish a dynamic and inventive ecosystem in quantum technology (QT) by seeding, fostering, and scaling up scientific and industry R&D.
- The DST, a division of the Ministry of Science and Technology, will carry it out.

- After the US, Austria, Finland, France, Canada, and China, India will become the seventh nation to have a dedicated quantum mission with the launch of this one.

- **Key characteristics of NQM:**

- With 50–100 physical qubits in five years and 50–1000 physical qubits in eight, the goal is to construct intermediate-scale quantum computers.
- "Qubits," often known as "quantum bits," are the fundamental units used by quantum computers to process information, much like bits (1 and 0) are by conventional computers.
- The expedition will contribute to the development of highly sensitive magnetometers for navigation, communications, and precise timing (atomic clocks).
- Additionally, it will help with the creation and synthesis of novel semiconductor architectures, topological materials, and superconductors—all of which are needed to fabricate quantum devices.

- **The advancement of quantum communications:**

- secure quantum communications via satellite between ground stations in India with a 2000 km range.
- Secure quantum communications across long distances with other nations.
- Distribution of quantum keys across 2000 miles between cities.
- Quantum network with several nodes and quantum memories.

- **In prestigious academic institutions and national R&D centres, four Thematic Hubs (T-Hubs) on the subjects of Quantum Technology would be established:**

- Computation in quantum
- Communication in quantum mechanics
- Quantum Metrology and Sensing
- Quantum Devices and Materials
- Technology in Quantum

- The study of matter and energy behaviour at the lowest scale is known as quantum mechanics, and the concepts of this theory are applied in the fields of science and engineering known as quantum technology.
- The area of physics known as quantum mechanics explains how matter and energy behave at the atomic and subatomic scales.

- **A Comparative Analysis of China and India:**

- Research and development (R&D) in China: The country began conducting R&D in the area of quantum technology in 2008.
- China claims to have developed the first quantum satellite in history, built a quantum communication link between Beijing and Shanghai, and possessed two of the fastest quantum computers in the world in 2022.
- This was the outcome of ten years of research that was conducted with the goal of making significant discoveries.
- India: Long-term R&D efforts in the field of quantum technology are still heavily centred there.
- There are currently only a few hundred academics, industry professionals, researchers, and entrepreneurs working in the subject without continuous attention to research and development.

- **What Benefits Does Quantum Technology Offer?**

- Enhanced Processing Power: Compared to current computers, quantum computers operate at a significantly faster pace. They are also capable of resolving difficult issues that are past our existing capabilities.
- Enhanced Security: Quantum encryption techniques are far more secure than conventional encryption systems since they are based on the concepts of quantum physics.
- quicker Communication: With the potential for entirely unhackable communication, quantum communication networks have the capacity to send information quicker and more securely than traditional networks.
- Improved AI: The use of quantum machine learning techniques may make it possible for AI models to be trained more precisely and efficiently.
- Improved Sensing and Measurement: Because quantum sensors are able to identify minuscule environmental changes, they are valuable in fields including geological exploration, environmental monitoring, and medical diagnostics.

- **What Drawbacks Can Quantum Technology Offer?**

- Expensive: Compared to standard technologies, this one is more costly due to the need for specific materials and equipment.
- Restricted Uses: At the moment, quantum technology is only beneficial for a few uses, including communication, computation, and cryptography.
- Sensitivity to Environment: Environmental interference, including vibrations, magnetic fields, and temperature fluctuations, can greatly affect quantum technology.
- Because qubits are easily disturbed by their environment, they may lose their quantum characteristics and perform operations incorrectly.
- Limited Control: Managing and controlling quantum systems is challenging. AI driven by quantum may have unexpected effects.

- Because quantum computing operates on fundamentally different principles from classical computing, it is possible that systems driven by this technology will reach unexpected or difficult-to-explain conclusions.
- **What Path Should We Take Next?**
- **Boost the Investment:** To reach its full potential, quantum technology needs a significant investment in infrastructure, human resources, and research and development.
- With a budget of Rs. 6000 crores, India launched the National Quantum Mission as a first step in this direction.
- Nonetheless, additional public and private investment is required to facilitate the expansion of academic institutions, service providers, and quantum start-ups.
- The financing for R&D in the private sector, which is currently very low in India as compared to industrialised nations, can be increased in this area.
- A regulatory framework is essential because, before being made broadly accessible, quantum technology raises ethical, legal, and societal issues that must be resolved. For instance, quantum weapons have the potential to unleash massive devastation and quantum sensing may violate private rights.
- It would be wise to create a regulatory framework for quantum technology that strikes a balance between security and creativity.
- **Encourage Quantum Education:** To fully utilise the ideas and techniques of quantum technology, experts with the necessary training and expertise are also needed. Consequently, it is critical to advance quantum understanding and education among researchers and students from a variety of academic fields.
- Quantum courses in universities and colleges, workshops and seminars, and the development of internet platforms and resources can all help achieve this.
- **Collaboration across Stakeholders:** Proper collaboration and cooperation amongst government agencies, industry players, and institutions is necessary for a better understanding of quantum technology.
- This can promote information exchange, creativity, and standardisation among various quantum technology fields and applications.
- It may also make it possible for India to join international networks and activities related to quantum technologies.

*Source → The Hindu*



### 3 - Investing in PLI Plans:

#### GS II

#### Government Policies and Interventions:

- **Context:**
- Up until November 2023, investments in Production Linked Incentive (PLI) schemes totaled over Rs. 1.03 lakh crore.
- Production of Rs. 8.61 lakh crore and the creation of over 6.78 lakh jobs have resulted from it.
- **What are the PLI Scheme's principal accomplishments?**
- Exports from PLI Schemes have surpassed Rs. 3.20 lakh crore, with notable contributions from industries including telecom & networking equipment, large-scale electronics manufacturing, pharmaceuticals, and food processing.
- Beneficiaries of the PLI include 176 Micro, Small, and Medium-Sized Enterprises (MSME) in industries such bulk drugs, medical devices, pharma, telecom, white goods, food processing, textiles, and drones.
- An incentive payment of approximately Rs. 4,415 crore was made available for eight sectors under PLI schemes. IT hardware, bulk pharmaceuticals, medical devices, pharmaceuticals, telecom and networking products, food processing, large-scale electronics manufacturing (LSEM), drones and drone components.
- The Pharma industry's imports of raw materials have significantly decreased as a result of the PLI Scheme.
- India produces bulk medications and special intermediate materials, such as Penicillin-G.
- 39 medical devices, including CT scans, MRIs, cath labs, linear accelerators (LINAC), rotational cobalt machines, C-arms, ultrasound, dialysis machines, heart valves, and stents, are now being produced.
- In the telecom industry, a 60% import substitution rate was attained, and PLI beneficiary enterprises sold telecom and networking products in FY 2023–2024.
- With a 90.74% compound annual growth rate (CAGR), the drone sector is expected to have a significant influence on investment.
- The PLI Scheme for Food Processing has greatly increased the amount of raw materials sourced from India, which has improved the income of MSMEs and Indian farmers.
- Through branding and marketing overseas, sales of organic products rose and Indian brand recognition in the global market was strengthened.

- Additionally, as a result of the Scheme, millet procurement grew to 3,703 MT (FY 22–23) from 668 MT (FY 20–21).
- The PLI Scheme in these important, targeted industries has begun to increase the competitiveness of Indian manufacturers on the international stage, draw capital to core competencies and cutting-edge technology, and establish India as a crucial link in the global value chain.
- India's export portfolio now includes high-value-added items like electronics and telecommunications equipment, processed food items, and other items instead of just basic commodities.
- During FY 2020–21, mobile phone exports climbed around four times while mobile phone production increased by more than 125%.
- The PLI plan for LSEM has resulted in a ~254% increase in Foreign Direct Investment (FDI).

- **The Production Linked Incentive Scheme (PLI): What is it?**

- The PLI programme was designed to increase employment and import substitution while also increasing indigenous industrial capacity.

- **When the programme was first introduced in March 2020, it focused on three industries:**

- Transportable and related Component Production
- Manufacturing of Electrical Components and medical equipment.
- Currently, the programme is in operation in fourteen major industries: mobile manufacturing; medical device manufacturing; pharmaceuticals; drugs; telecom & networking products; electronic products; white goods (ACs and LEDs); food products; textile products; solar PV modules; advanced chemistry cell (ACC) battery; and drones and drone parts.
- Domestic and foreign businesses who manufacture in India are rewarded financially under the PLI plan, which pays out up to five years' worth of income as a percentage of the total revenue.

- **What worries people about the PLI scheme?**

- **Competition and Market Dynamics:** The plan may lead to pricing wars or other market distortions among the involved businesses, which would have an impact on their long-term viability and profitability.
- **Compliance and Reporting Burden:** In order to qualify for the incentives, businesses must submit a number of paperwork and reports, which could add to their administrative burden and cause delays.
- The value addition that results from importing components and assembling them in India is not distinguished by the programme from that which results from manufacturing in India. Low value addition and innovation in the local business could be the outcome of this.

- **Production of Low-Value Goods:** Compared to High-Value Goods, Low-Value Goods production is more common. The main commodities that are traded between the US and the EU are expensive products.
- **Research and Development:** When export-oriented policies are being formulated, not enough thought is given to research and development.
- **Problems with Implementation and Coordination:** Because the plan incorporates several ministries and departments, there may be misunderstandings and discrepancies in how it is carried out and overseen.
- **The next steps:**
  - **Market Impact study:** To foresee any distortions, carry out a comprehensive market impact study. Put rules or safeguards in place to stop unhealthy pricing wars.
  - **Documentation:** To lessen administrative burdens, simplify the documentation requirements.
  - **Include comprehensive social and environmental impact studies in the plan.**
  - **Value Addition and Innovation:** Establish incentives for high-value innovation and addition.
  - **Interact with Stakeholders:** Get in touch with the right parties to discuss issues pertaining to employment rights, land acquisition, and pollution.
  - **Encourage cooperation between ministers to guarantee the consistent and well-thought-out application of policies.**
  - **Research and Development:** Provide more incentives to businesses who spend money on this kind of work. Encourage collaborations between academic institutes and industry to boost innovation.
  - **Creation of Fund:** Create a special fund to aid in the development of novel ideas and technology.

*Source → The Hindu*

## **4 - Laws and Market Monopoly in India:**

### **GS III**

#### **Indian Economy:**

- **Context:**
  - A complaint against PVR, a well-known multiplex chain, for allegedly abusing its dominant market position and raising concerns about market monopoly, was recently dismissed by the Competition Commission of India (CCI).

- **What were the accusations and the ruling of the CCI?**

- It was claimed that PVR abused its influence by treating films from strong, financially successful production companies differently, so making it more difficult for independent filmmakers to get their work seen.
- PVR denied the claims, claiming there was insufficient evidence to back them up and that the complaint was an attempt to coerce the release of his movie without any kind of legal requirement.
- CCI discovered no glaring issues with competition. It stressed that regulatory action may have unfavourable effects and preserve exhibitors' autonomy unless there was clear harm to competition.

- **Market Monopoly: What Is It?**

- A market monopoly occurs when one firm, or a group of enterprises, controls and dominates a sizable portion of a specific market or industry.
- A monopoly occurs when a single supplier or manufacturer offers a certain good or service, and customers are not able to find reasonably priced alternatives.
- As a result, the monopolistic company gains significant market power that it can use to regulate the supply of products and services, establish prices, and affect market conditions.

- **Qualities of a Monopoly Market:**

- **Producer or Single Seller:**

- A monopoly occurs when a single organisation controls the whole market. This business is the only one offering a specific commodity or service.

- **High Entry Barriers:**

- When major obstacles keep new competitors out of the market, monopolies frequently develop. High initial costs, exclusive access to resources, legal restrictions, or fervent brand devotion are a few examples of barriers.

- **Not a Replacement:**

- Customers that use the monopolistic company's product or service have few, if any, other options. There aren't any comparable products on the market.

- **Pricing control and market power:**

- Because of its strong market position, the monopoly can set its own prices without having to worry too much about competition. Customers may pay more as a result, and production may be decreased.
- **Impact on Supply:**
- The supply of the good or service is under the monopoly's control. It has the ability to calculate production volume and modify supply to influence market dynamics.
- **Absence of rivalry:**
- Monopolies operate in a market where there is no direct competition for their particular good or service since there are no rivals. Less competition may mean less motivation for efficiency and innovation.
- **Important Words Concerning Anti-Competitive Activities:**
- **Predatory Costs:**
- When a business purposefully sets its prices below cost in an effort to force rivals out of the market, this is known as predatory pricing. After eliminating rivals, the business might increase prices to make up for lost revenue and consolidate its monopoly.
- **Cartels:**
- Cartels are groups of independent companies or nations that come together to control the manufacturing, selling, and distribution of goods and services.
- Generally speaking, cartels are prohibited and are known to promote anti-competitive activity.
- **Collusion:**
- An agreement between two or more parties to suppress competition by tricking, swindling, or stealing from others is known as collusion. To obtain an unfair edge, covert assistance is frequently used.
- **Combinations:**
- Combining two or more businesses into one is known as a merger. Even if not all mergers have anti-competitive effects, some could lessen competition in a specific market and draw attention from authorities.

- **Discrimination in Price:**

- When a seller charges different customers for the same good or service, this is known as price discrimination. If something hurts competition, even if it's not necessarily against the law, it might be deemed anti-competitive.

- **Agreements on Price Fixing:**

- When rival businesses agree to set a fixed price for their goods or services, this is known as price fixing. Antitrust rules are broken because of this artificial price inflation and elimination of competition.

- **How Does India Handle Market Monopoly Practices?**

- **Competition Act, 2002:**

- The main piece of legislation in India that deals with antitrust issues is the Competition Act, 2002. It was passed in order to safeguard consumer interests, stop anti-competitive behaviour, and encourage and maintain market competition.
- The Act forbids anti-competitive agreements, the exploitation of a dominating position by businesses, and mergers that could materially harm Indian competition.

- **Competition Amendment Bill 2022:**

- The purpose of the proposed change is to improve the efficacy of competition law enforcement, strengthen the regulatory framework, and meet new difficulties.

- **Competition Commission of India (CCI):**

- Under the Competition Act of 2002, CCI is the competition regulator for the Indian market and is in charge of upholding the Act's requirements. It is composed of Members chosen by the Central Government and a Chairperson.
- Anti-competitive agreements, misuse of dominant position, and anti-competitive practices are all investigated and dealt with by the CCI.

- **NCLAT and the Competition Appellate Tribunal:**

- At first, challenges against CCI rulings were heard by the Competition Appellate Tribunal (COMPAT).

- Nevertheless, the National Company Law Appellate Tribunal (NCLAT) took the position of COMPAT in 2017 and is currently in charge of hearing appeals pertaining to competition-related issues.
- **Which international initiatives are in place to stop anti-competitive behaviour?**
- **OECD Competition Committee:**
  - Through a number of initiatives, such as the OECD Competition Committee, which promotes collaboration and dialogue among member nations on matters pertaining to competition, the OECD (Organisation for Economic Cooperation and Development) combats anti-competitive practises.
- **UNCTAD, the United Nations Conference on Trade and Development:**
  - The goal of UNCTAD is to advance global development and commerce. Through its Intergovernmental Group of Experts on Competition Law and Policy, it offers advice on competition law and policy and assists nations in putting into place efficient frameworks for competition.
  - It also addresses curb laws that hinder competition and policies that protect consumers from abuse.
- **International Competition Network (ICN):**
  - A global network of competition authorities is called the ICN. In order to face the issues of global competitiveness, it makes member states' communication and cooperation easier. The ICN offers a forum for exchanging best practices and creating standards pertaining to different areas of competition law.
- **World Trade Organization (WTO):**
  - Through its Working Group on the Interaction between Trade and Competition Policy, the WTO examines competition policy even though its primary concentration is on trade-related matters.
  - The goal is to guarantee that trade obstacles are not unnecessarily imposed by competition regulations.
- **What Court Decisions Concern India's Market Monopoly?**
  - Steel Authority of India Ltd. (SAIL) v. Competition Commission of India (2010):

- The CCI's directive to look into SAIL's anti-competitive behaviour in providing Indian Railways with rails was upheld by the Supreme Court.
- The Supreme Court decided that SAIL was not excluded from the Competition Act and that there was no initial appeal rights for its judgement.
- The Court further declared that in any appeal before the COMPAT, the CCI was an appropriate or essential party.
- Google LLC & Ors. v. Competition Commission of India, 2021:
- Investigating suspected anti-competitive actions by Google in India's smart TV and Android app store markets, CCI filed an appeal against the Karnataka High Court's ruling.
- Because the HC lacked jurisdiction over the CCI's order and Google was not given a chance to make its case, the order was overturned.
- The SC sent notices to all parties concerned and halted CCI's probe.
- **Way Ahead:**
- Antitrust laws should be strengthened and reviewed often to make sure they are strong and capable of handling new issues in the corporate world. The legal framework can be better able to adjust to changing market conditions with regular changes.
- Give the Competition Commission and other regulatory bodies the necessary resources and authority to successfully implement antitrust laws. The ability to look into, punish, and discourage anti-competitive behaviour should be provided by the authorities.
- Make that the procedures for evaluating mergers and acquisitions are open, effective, and transparent. A comprehensive and lucid evaluation aids in preventing the formation or fortification of monopolies via consolidation.

**Source → The Hindu**