

UPSC Syllabus Topic : GS paper3- Science and technology-indigenisation of technology.

Understanding India's Defense Procurement and Self-Reliance

Acceptance of Necessity (AON) Explained "Acceptance of Necessity" (AON) represents the Ministry of Defence's initial approval for procuring defense equipment. This green signal kicks off an extensive acquisition process involving requests, evaluations, and contracts, signifying the go-ahead for the proposed procurement plan.

India's Pursuit of Self-Reliance in Defense

1. **Focus on Indigenous Production:** India aims for self-reliance in defense, prioritizing DRDO (Defence Research and Development Organisation)-developed systems, with approximately 80-90% of AON directed towards Indian companies.
2. **Private Sector Participation:** Companies like Bharat Forge and Tata are gaining ground in defense by partnering with DRDO for projects like the Advanced Towed Artillery Gun System, showcasing their growing influence and involvement.
3. **Rise in Defense Exports:** India's private sector plays an expanding role in defense exports, with exports reaching ₹16,000 crore this year, indicating a significant growth trend.
4. **Decreasing Dependency on Imports:** The objective is to reduce reliance on foreign technology, evident in the Ministry of Defence's report of decreased defense imports from 46% to 36.7% since 2018-19.

Challenges Faced by India's Defense Sector

1. **Protracted Procurement Procedures:** Lengthy stages in defense acquisition lead to prolonged timelines, hindering prompt deployment. Bureaucratic delays and a slow adaptation to defense requirements also hamper private sector involvement.
2. **Technological Gaps:** Despite strides in domestic production, certain advanced technologies remain to be imported due to existing capability gaps, especially in sophisticated platforms like fifth-generation stealth fighters.

Moving Ahead

India's focus should persist in strengthening its indigenous defense capabilities, particularly in technology, leveraging the promising growth in the private sector and defense exports as demonstrated by companies such as Bharat Forge. Balancing strategic foreign acquisitions remains crucial to address immediate needs and bridge technological gaps, ensuring a robust and self-reliant defense sector.

UPSC Syllabus Topic : GS paper 3 – Indian economy- changes in industrial policy and their effects on industrial growth.

India's Move to Lower Import Taxes on Electric Vehicles: Impacts and Measures

India's Electric Vehicle Market Snapshot India holds the fourth position in the global automobile market, valued at approximately \$250 billion, following China, the US, and Japan.

The market is projected to witness an annual growth rate of over 9% from 2022 to 2027. In 2023, electric vehicle (EV) sales in India experienced a notable surge of 45%, indicating a rising market potential.

However, fully assembled EVs priced above \$40,000 face a steep 100% import duty, while those under \$40,000 are levied with a 70% duty. These rates stand significantly higher compared to countries like the US, France, Saudi Arabia, and China.

Implications of Import Duty Reduction on EVs

Positive Impacts:

- **Attraction of Foreign Investment:** Lower duties might incentivize companies such as Tesla to establish manufacturing units within India.
- **Competitive Pricing:** Increased competition could potentially result in improved and more affordable EVs, ultimately benefiting consumers.
- **Global Integration:** Lowering tariffs becomes essential for India's engagement in free trade agreements and for attracting global industry players.

Negative Impacts:

- **Threat to Local Industry:** Reduced duties may flood the market with imported EVs, posing a risk to local manufacturers and investments.
- **Risk to Emerging Industry:** Lower import duties might discourage investments in the domestic EV sector, considered a nascent but promising industry.

Government Initiatives Supporting the EV Market

- **Production-Linked Incentive Scheme:** With an outlay of ₹25,938 crore, this initiative aims to boost local manufacturing in the automotive sector, including EVs.
- **National Programme on Advanced Chemistry Cell:** An investment of ₹18,100 crore dedicated to promoting advanced cell chemistry for batteries.
- **FAME Scheme:** The Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles scheme (FAME 1, 2, and 3) incentivizes the usage of hybrid and electric vehicles.

Way Forward Finding a balance between reduced import duties and nurturing the local industry remains pivotal. The right policies, coupled with lowered duties, could potentially foster a more competitive market, ultimately leading to superior and more affordable EVs, benefiting consumers and the industry as a whole.

UPSC Syllabus Topic : GS Paper 3 – Science and Technology- developments and their applications and effects in everyday life.

The Decline of the Indian Science Congress: Challenges and Suggestions

About the Indian Science Congress

The Indian Science Congress, established in 1914, serves as a platform uniting scientists, researchers from premier institutions, laboratory experts, science teachers, and university professors.

Issues Plaguing the Indian Science Congress

- **Declining Reputation:** Over time, the Congress has witnessed a significant decline in participation from prominent scientists and prestigious institutions, impacting its stature and influence.
- **Lack of Meaningful Scientific Dialogue:** The event seems to lack substantive discussions on contemporary scientific matters, diminishing its importance as a forum for scientific exchange.
- **Controversial Presentations:** Recent Congresses have been marred by controversies rather than being recognized for substantial scientific advancements, often featuring unqualified individuals dominating the platform.
- **Financial Troubles:** The withholding of Rs 5 crore in funding by the government has further exacerbated the Congress's challenges.

Recommended Actions for Improvement

- **Implement Rigorous Screening:** Enforce stringent scrutiny of papers and presentations to ensure their quality, relevance, and authenticity.
- **Engage Esteemed Scientists and Institutions:** Actively involve respected scientists and research institutions in both planning and participation to enhance the Congress's credibility.
- **Focus on Pertinent Scientific Topics:** Direct discussions towards relevant and contemporary scientific issues, revitalizing the event's significance.
- **Seek Government Support:** Demonstrate improvements and advocate for renewed or increased government funding, showing a commitment to enhance the Congress's quality.
- **Advocate for Reform:** Push for a reformed and revitalized Congress instead of its dissolution, aiming to address its shortcomings and enhance its value.
- **Utilize Initiatives like the National Research Foundation:** Leverage such initiatives to bolster capacities within universities and colleges, fostering a more dynamic scientific environment.