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

Facing the Realities of the AI Revolution – Navigating Dystopian Challenges

The Bletchley Declaration involves the collaboration of 29 countries, including the US, the UK, China, Australia, Brazil, and India, along with the European Union. The agreement aims to collectively address and prevent "catastrophic harm, either deliberate or unintentional," arising from artificially intelligent computer models and engines. The document highlights the imperative to align AI systems with human intent and advocates for a deeper exploration of the full capabilities of AI.

However, several issues are associated with the Bletchley Declaration:

1. **Technological Curve Pace:** The declaration lags behind the swift pace of the technological curve, representing the rapid advancement of technology. Regulators find it challenging to fully anticipate and comprehend the implications of new developments.
2. **Enforceability:** The declaration lacks enforceability, as there is no binding agreement adopted by participating countries for nations or AI developers. This raises questions about the effectiveness of the agreement in ensuring compliance.
3. **Continued AI Research and Development (R&D):** Signatories have persisted in encouraging AI research and development. Nations are reluctant to deliberately slow down AI R&D, fearing economic consequences and the risk of falling behind in the global AI landscape, where there are currently over 120 AI unicorns.

The increasing funding for AI, coupled with the proliferation of AI unicorns globally, underscores the challenges in achieving a unified and enforceable approach to the ethical and responsible development of artificial intelligence.

India has undertaken several initiatives in the field of Artificial Intelligence (AI):

1. **Global Partnership on Artificial Intelligence (GPAI):** India actively participates in the GPAI, demonstrating its commitment to international collaboration in shaping the development and application of AI.
2. **National Strategy for Artificial Intelligence:** The Indian government has published a comprehensive document outlining the National Strategy for Artificial Intelligence. This initiative aims to develop an ecosystem for the research and adoption of AI, emphasizing the hashtag #AIFORALL.
3. **INDIAai - National AI Portal:** The Government of India has launched INDIAai, a dedicated national AI portal serving as a repository for various AI-based initiatives within the country. This centralized platform facilitates accessibility and information dissemination.
4. **Corporate and Academic-Corporate Initiatives:** India has witnessed collaborative efforts between corporations and academic institutions in the AI domain. Partnerships involving entities like Nvidia, IBM, IIT Madras-Ericsson, among others, contribute to advancing AI research and applications.
5. **Semiconductor Mission:** India has initiated the Semiconductor Mission, focusing on building high-end manufacturing capacity. This mission is expected to augment the AI ecosystem by providing the necessary technological infrastructure.

As predicted by the author, the future applications of AI span various sectors:

- **Physical Infrastructure:** By 2030, AI is anticipated to manage all aspects of physical infrastructure, including power grids, telecom networks, highway systems, ports, metros, airports, city traffic lights, satellite networks, and municipal water supplies.
- **Defence Sector:** AI is predicted to play a dominant role in the defence sector, with autonomous weapons systems, robotic vehicles, and munitions design becoming commonplace.
- **Miscellaneous Sectors:** AI's impact will extend to healthcare, drug research, law enforcement, retail, financial systems, and autonomous cars, showcasing its versatility across diverse industries.

However, the AI revolution poses several challenges:

1. **Mass State Surveillance:** AI's capabilities in facial recognition and data analysis enable governments to maintain constant profiles of citizens, potentially hindering dissent against governmental actions.
2. **Autonomous Weapons:** The development of AI-powered drones capable of independent target identification and elimination raises ethical concerns, as life-and-death decisions may be made without direct human intervention.
3. **Cybersecurity Issues:** AI's ability to replicate voices and faces poses cybersecurity risks, enabling the creation of convincing fake news, deception of individuals, and circumvention of security measures.
4. **Biases in Algorithms:** Algorithms trained on existing data may perpetuate biases, leading to recommendations such as granting STEM scholarships exclusively to males or providing bank loans solely to individuals from upper-caste backgrounds.
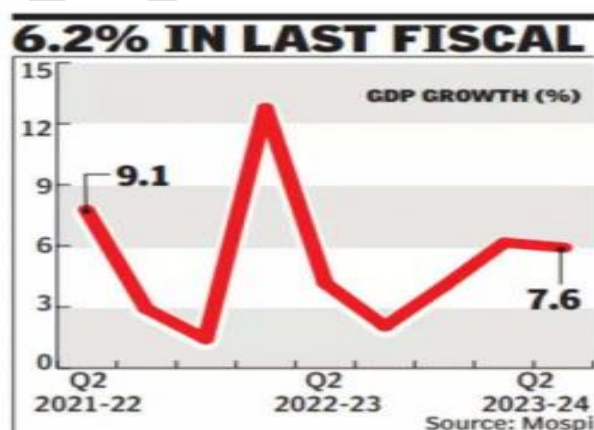
While the economic benefits of AI development are promising, addressing these challenges and implementing safeguards is crucial to prevent harm and ensure responsible AI deployment.

UPSC Syllabus Topic : GS Paper 3 Indian Economy – Growth.

On the State of India's Economy – Uneven Expansion

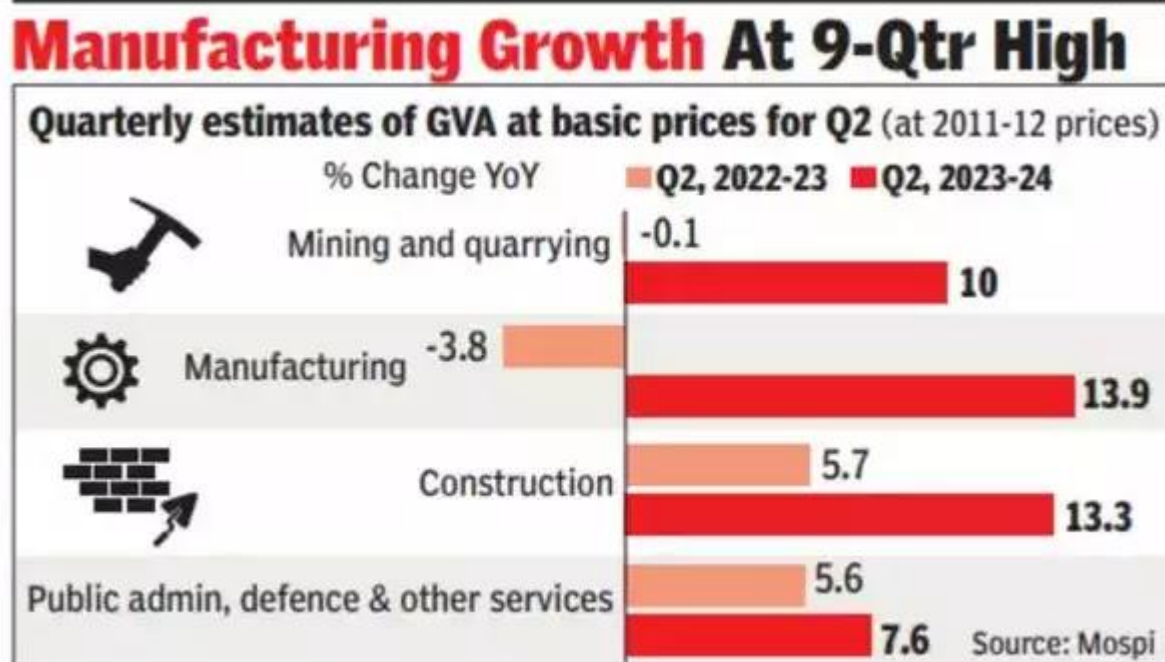**India's Macroeconomic Figures for Quarter 2 (2023-24) Released by the NSO**

GDP Growth Rate: The most recent provisional estimates of GDP for the July-August-September quarter project a growth rate of 7.6%.

GVA Growth Rate: Gross Value Added (GVA) across 8 broad sectors of the economy recorded a 7.4% expansion.

High-Growth Sectors: Double-digit expansion was observed in the manufacturing, mining and quarrying, construction, and utilities sector.

Manufacturing Growth At 9-Qtr High

Quarterly estimates of GVA at basic prices for Q2 (at 2011-12 prices)

% Change YoY — Q2, 2022-23 — Q2, 2023-24

Sector	Q2, 2022-23	Q2, 2023-24
Mining and quarrying	-0.1	10
Manufacturing	-3.8	13.9
Construction	5.7	13.3
Public admin, defence & other services	5.6	7.6

Source: Mospi

Slowdown in Agriculture Sector: The agriculture, livestock, and fishing sector experienced contraction for the third consecutive quarter. It also witnessed a significant slowdown in year-on-year growth, dropping to just 1.2%. This highlights the severe financial uncertainty affecting individuals reliant on farming and related activities in rural areas.

Slowdown in Services Sector: The trade, hotels, transport and communication, and the financial and realty services sectors, two crucial components of the service industry, experienced a decline in growth. This suggests that the post-pandemic recovery in services might be losing momentum.

Slowdown in Private Final Consumption Expenditure: Private consumption spending, the single-largest component of demand in the economy, is also encountering challenges. Its growth notably decelerated to 3.1%, down from 6% in the previous quarter. This is because rural demand remained affected by a below-average monsoon.

Public Spending-fuelled Growth: The recent surge in the economy can mostly be attributed to the boost provided by government spending, both in terms of consumption demand and asset-creating capital investments.

Policymakers must focus on expanding the base of growth to maintain the current pace and reduce inequality.