* Globalisation in the time of a pandemic

— Four major cause-effect relationship —

(1) Free movement of goods & elimination of trade obstructions

- WTO 2020 data
  - ↳ 9.2% decline in world merchandise trade compared to 2019
- Many countries unable to meet demand & supply
- In India, shortfall of trade due to COVID-19 related restrictions
  - ↳ Merchandise exports from India reduced by 17.76%
- But not everything is dismal
  - ↳ trade of medical goods ↑
  - ↳ with vaccines, Indian pharma export may cross $25 billion

(2) Free flow of capital

- Cross border movements halted due to lockdown.
- Lack of capital movement resulted in

depreciation of the rupee.

- With economy reviving now
  - ↳ FPI & FDI is increasing
  - ↳ Apr-Sept 2020, FDI showed a 15% growth.

(3) Transfer of technology

- COVID-19 widened the gap b/w nations with technological advancement & those lacking it.
- Transfer of capital goods impacted.
  - ↳ Eg. modern medical equipments
- But tech like AI & big data stepped in to gauge spread & ways to prevent it.
- Data sharing facilitated the process of developing a vaccine & mapping mutations

(4) Free movement of people

- Contagious nature of virus has crippled the idea of globalisation.
- Drastic reduction in number of international travellers.
- Countries dependent on tourism have taken a beating

* Rare earth metals at the heart of China-US rivalry

- Rare earth minerals like
  - ↳ Neodymium, prasedymium & dysprosium etc
  - ↳ crucial for magnet manufacture
  - ↳ used in wind turbines, Electric vehicles, Smartphones, computer screens, telescopic lenses etc
- US & EU are heavily dependent on China
  - ↳ US imported 80% of its Rare earths from China while EU imports 98%.
- Cause of alarm in the West
  - ↳ due to rising geopolitical frictions b/w (EU, US) & China.
  - ↳ Transition to green energy ⇒ Rare earths have a role to play.
- Solution:
  - US Senate passed law to improve US competitiveness ⇒ includes provisions to improve critical minerals supply chains.
  - Boost prodⁿ of Rare earths & Lithium
    - ↳ support allies to ↑ global supply and reduce reliance on China.

* A 'bubbles of trust' approach.

- Asymmetric Globalisation
  - ↳ Chinese markets never open to foreign companies but foreign markets fully accessible to Chinese firms.
  - ↳ Chinese firms also made to follow the political agenda of CPC.
- Consequence of such globalisation
  - ↳ China got powerful
  - ↳ Now, China using this power to undermine liberal democratic values.
- Global retreat from free movement of goods, services, capital, people & ideas
  - ↳ a reaction to the skewed pattern of globalisation.
  - ↳ so many, incl. Quad, are pursuing policy of self-reliance.
- But self-reliance is not sustainable.
  - ↳ No single country can replicate the combined genius of the world.
  - ↳ Inward looking policies may lead

to geopolitical marginalisation.

- Quad
  - ↳ cannot survive just on geopolitical & security agenda.
  - ↳ needs an economic prog.
  - ↳ Complementing each other in capabilities

US →	global leader in Intellectual Property
Japan →	High value manufacturing
Aus →	Quantum Computing & cyber security
India →	Human Capital & Software.

  - ↳ But such complementaries need development of 'Bubbles of trust'.

- Bubbles of Trust framework in Quad
  - ↳ can be started by Quad's Critical & Emerging Tech. Working Group.
  - ↳ could be adopted at next Quad summit.
  - ↳ Need not to make it like the complex & long trade agreements.
  - ↳ Limited to Information industries at first.

- Why need such a framework?
  - Not for substituting China
  - But to allow Quad countries to manage their dependencies on China.
  - And to develop a new vision for the global economy.

Can India become a technology leader?

India is presently not a major player in the field of technology

- But major technology companies like Google and its parent company Alphabet, Microsoft and Twitter, Adobe and IBM are all headed by Indians.

The Case of the U.S:

- The Indian immigrants in the U.S are the part of the most educated and professionally accomplished communities in that country.
- The govt of the U.S has been instrumental in the triumphs of enterprise and the free market.
- The govtal agencies have been actively supporting the R&D which carry a higher risk and thus the private sector would not enter into those.
- Google's success and discovery of the molecular antibodies are some of the successful results of such govt fundings.

The strategies of China:

- China marked its dominance on the global market by combining the strengths of the public sector, markets and globalisation.
- It restructured the state-owned enterprises which were seen as inefficient.
- The state-owned enterprises strategically participated in the technologically dynamic industries such as electronics and machinery.
- The state retreated from light manufacturing and export-oriented sectors, leaving the field open for the private sector.

The Case of India:

- Initially there was public sector funding of the latest tech incl. space and atomic research.
- The era of globalisation required greater efforts to strengthen the technological capabilities of the country.
- But the spending on R&D as a proportion of GDP declined in India from 0.85% in 1990-91 to 0.65% in 2018.

- The spending on research and development as a proportion of GDP has increased over the years in China and South Korea.

Favourable Factors For India:

- India can become a leading nation in the field of technology by the right recognition and strengthening of the supply and demand factors.
- India has the highest enrollment for tertiary education after China.
- As per the UNESCO data, India has one of the highest graduates from STEM programmes as a proportion of all graduates.
- India is a potential market for all kinds of new technologies with the increasing internet consumption across the nation.

Challenges for India:

- The educational infrastructure for higher studies poses certain challenges with respect to quality and accessibility.

- The domestic industry has not yet managed to derive the benefits of the large consumer base of India.
- Also, India is operating far below its potential in sectors like electronic manufacturing.
- India is also highly dependent on imports for electronic goods and components.

Suggestive measures:

- Universities and public institutions in the country should be strengthened to deepen and broaden India's technological capabilities.
- The public spending on education should be increased to improve the quality of and access to higher education.
- A strengthened public sector will create more opportunities for private businesses and widen the entrepreneurial base.
- The PSUs should be valued for their long-term contributions to economic growth and asset building for the nation.

- The govt should be more versatile for increasing the business participation of private industries.
    - For example, an initiative like 'Make in India' needs to be more comprehensive than a singular focus on ease of doing business.

- The domestic markets should be categorically strengthened to avail the advantages of a large consumer base for the technology sector.