1. What is Design Linked Incentive (DLI) Scheme?

Why in News?

- India has invited applications from 100 domestic companies, startups and small and medium enterprises to become a part of the design-linked incentive (DLI) scheme.

What is the DLI scheme?

- The DLI scheme aims to provide financial and infrastructural support to companies setting up fabs or semiconductor making plants in India.
- It aims to attract existing and global players as it will support their expenditures related to design software, IP rights, development, testing and deployment.
- Centre for Development of Advanced Computing (CDAC), a scientific society operating under MeitY, will serve as the nodal agency for the implementation of the DLI Scheme.

Components of the Scheme:

- It has three components which are
- Chip Design infrastructure support: C-DAC will set up the India Chip Centre to host the state-of-the-art design infrastructure (viz. EDA Tools, IP Cores and support for MPW (Multi Project Wafer fabrication) & post-silicon validation) and facilitate its access to supported companies.
- Product Design Linked Incentive: Reimbursement of up to 50% of the eligible expenditure subject to a ceiling of Rs. 15 Crore per application will be provided as fiscal support to the approved applicants who are engaged in Semiconductor Design.
- Deployment Linked Incentive: An incentive of 6% to 4% of net sales turnover over 5 years subject to a ceiling of ?30 Crore per application will be provided to approved applicants whose semiconductor design for Integrated Circuits (ICs), Chipsets, System on Chips (SoCs), Systems & IP Cores and semiconductor linked design are deployed in electronic products.

Why need such a Scheme?

- The semiconductor industry is growing fast and can reach $1 trillion dollar in this decade. India can grow fast and reach $64 billion by 2026 from $27 billion today.
- Mobiles, wearables, IT and industrial components are the leading segments in the Indian semiconductor industry contributing around 80% of the revenues in 2021.

- The mobile and wearables segment is valued at $13.8 billion and is expected to reach $31.5 billion in 2026.

A boost to Semiconductor Manufacturing:

- The sudden surge in demand of chips and semiconductor components has underpinned the need to establish a robust semiconductor ecosystem in India.
- Several sectors, including auto, telecom, and medical technology suffered due to the unexpected surge leading to the scarcity of chips manufactured by only a few countries.
- The inception of new companies will help in meeting the demand and supply and Encourage innovation in India.

What are other Countries doing to be Dominant in the race of Chip Making?

- Currently, semiconductor manufacturing is dominated by companies in the U.S., Japan, South Korea, Taiwan, Israel and the Netherlands.
- They are also making efforts in solving the chip shortage problem.
- US wants to bring manufacturing back to America and reduce the country's reliance on a small number of chipmakers based largely in Taiwan and South Korea.
- These chipmakers produce up to 70% of the world's semiconductors.

Challenges in India:

- **No Incubation:** In India, more than 90% of global companies already have their R&D and design centres for semiconductors but never established their fabrication units.
- Strategic sector: Although India has semiconductor fabs in Mohali and Bangalore, they are purely strategic for defence and space applications only
- **Capital Requirement**: Setting up fabs is capital intensive and needs investment in the range of $5 billion to $10 billion.
- **Lack of Supportive Policies:** Lack of investments and supportive government policies are some of the challenges to set up fabs in India.
- **Geopolitical Limitations**: A combination of capital and the geopolitical situation comes into play to build new fabs.

Way Forward:

- Further incentivization: Schemes like the DLI are crucial to avoid high dependencies on a few countries or companies.

- **Raw Material Supply:** Several gases and minerals which are a part of the global semiconductor supply chain are produced in India.
- Large talent pool: We also have excellent colleges which can produce highly-skilled engineers for semiconductor manufacturing.

2. Sacred Ensembles of the Hoysalas

Why in News?

- The Hoysala Temples of Belur, Halebid and Somnathapura in Karnataka have been finalized as India's nomination for consideration as World Heritage for the year 2022-2023.

Sacred Ensembles of the Hoysalas:

- The sacred ensembles of the Hoysalas are extraordinary expressions of spiritual purpose and vehicles of spiritual practice and attainment.
- The sacred ensembles of the Hoysalas at Belur and Halebid are the finest, most exquisite, and most representative examples of the artistic genius and cultural accomplishments of the Hoysalas remaining today.

Belur: Chennakeshava Temple Complex:

- The Chennakeshava temple complex was at the center of the old walled town located on the banks of the Yagachi River.
- The complex itself was walled in a rectangular campus with four rectilinear streets around it for ritual circumambulation of the deity.
- Construction of the temple commenced in 1117 AD and took a 103 years to complete.
- The temple was devoted to Vishnu.
- The richly sculptured exterior of the temple narrate scenes from the life of Vishnu and his reincarnations and the epics, Ramayana, and Mahabharata.
- However, some of the representations of Shiva are also included.
- Consecrated on a sacred site, the temple has remained continuously worshipped since its establishment and remains until today as a site of pilgrimage for Vaishnavites.

Halebid: Hoysaleshwara Temple:

- At the zenith of the Hoysala empire, the capital was shifted from Belur to Halebid that was then known as Dorasamudhra.

- The Hoysaleshwara temple at Halebidu is the most exemplary architectural ensemble of the Hoysalas extant today.
- Built in 1121CE during the reign of the Hoysala King, Vishnuvardhana Hoysaleshwara.
- The temple, dedicated to Shiva, was sponsored and built by wealthy citizens and Merchants of Dorasamudra.
- The temple is most well-known for the more than 240 wall sculptures that run all along the outer wall.
- Halebid has a walled complex containing of three Jaina basadi (temples) of the Hoysala period as well as a stepped well.

Somnathpur: Kesava Temple:

- The Keshava temple at Somanathapura is another magnificent Hoysala monument, perhaps the last.
- This is a breathtakingly beautiful Trikuta Temple dedicated to Lord Krishna in three forms – Janardhana, Keshava and Venugopala.
- Unfortunately, the main Keshava idol is missing, and the Janardhana and Venugopala idols are damaged.
- Still this temple is worth a visit just to soak in the Artistry and sheer talent of the sculptors who created this Magnificent Monument to the Divine.

3. Reverse Repo Normalisation in India

Why in News?

- Recently, State Bank of India has stated that it believes the stage is set for a Reverse Repo Normalisation in India.

Highlights:

- The Repurchase agreement (Repo) and the Reverse repo agreement are two key tools used by the Reserve Bank of India (RBI) to control the money supply.
- The tools used by the Central bank to control money supply can be quantitative or qualitative.
- It means the reverse repo rates will go up i.e. raising the reverse repo rate in one or two stages.
- In the face of rising inflation, several central banks across the world have either increased interest rates or signalled that they would do so soon.

- In India, too, it is expected that the RBI will raise the repo rate. But before that, it is expected that the RBI will raise the reverse repo rate and reduce the gap between the two rates.
- The process of normalisation is mainly aimed at curbing inflation.
- However, it will not only reduce excess liquidity but also result in higher interest rates across the board in the Indian economy.
- Thus reducing the demand for money among consumers (since it would make more sense to just keep the money in the bank) and making it costlier for businesses to borrow fresh loans.

About Repo and Reverse Repo Rates:

- Repo rate is the rate at which the central bank of a country (RBI in case of India) lends money to commercial banks in the event of any shortfall of funds. Here, the central bank purchases the security.
- The reverse repo is the interest rate that the RBI pays to the commercial banks when they park their excess "liquidity" (money) with the RBI. The reverse repo, thus, is the exact opposite of the repo rate.
- Under normal circumstances, that is when the economy is growing at a healthy pace, the repo rate becomes the benchmark interest rate in the economy.
- That's because it is the lowest rate of interest at which funds can be borrowed. As such, the repo rate forms the floor interest rate for all other interest rates in the economy - be it the rate for a car loan or a home loan or the interest earned on fixed deposit etc.
- When the RBI pumps more and more liquidity into the market but there are no takers of fresh loans — either because the banks are unwilling to lend or because there is no genuine demand for new loans in the economy.
- In such a scenario, the action shifts from repo rate to reverse repo rate because banks are no longer interested in borrowing money from the RBI.
- Rather they are more interested in parking their excess liquidity with the RBI. And that is how the reverse repo becomes the actual benchmark interest rate in the economy.

4. National Commission for Women (NCW)

Why in News?

- The 30th Foundation Day of the National Commission for Women (NCW) was recently, celebrated on 31st January .

Highlights:

- According to the Prime Minister, given the evolving needs of women in the country, the scope of NCW must be broadened.
- What is the need to expand the scope of the NCW?
- The Atmanirbhar Bharat (self-reliant India) campaign has shown the link between the ability of women with the development of the country.
- This change is visible as about 70% beneficiaries of Pradhan Mantri MUDRA Yojana are women.
- The country has seen a threefold increase in the number of women self-help groups in the last 6-7 years.
- Similarly, in more than 60 thousand startups that have emerged after 2016, 45% have at least one woman director.
- Industries from textile to dairy have progressed due to women's skills and power.
- India's economy relies on Micro, Small and Medium Enterprises and there is a need to Promote women Entrepreneurs in the country.
- However, people with old thinking are of the view that the women's roles are restricted to domestic work.
- In 2021, the NCW had informed that there was a rise of 46% in complaints of crimes against women in the first eight months of 2021 over the corresponding period of preceding year.
- Crimes that women were subjected to: Domestic violence, Harassment of married women or dowry harassment, Sexual harasment at workplace, Rape and attempt to rape, Cyber crimes.

5. Bomb Cyclone

Why in News?

- Bomb cyclone hits eastern US, which triggers transport chaos, outages.

Highlights:

- It is a large, intense midlatitude storm that has low pressure at its center, weather fronts and an array of associated weather, from blizzards to severe thunderstorms to heavy precipitation.
- Bomb cyclones put forecasters on high alert, because they can produce significant harmful impacts.
- This can happen when a cold air mass collides with a warm air mass, such as air over warm ocean waters. The formation of this rapidly strengthening weather system is a process called bombogenesis.
- It occurs when a midlatitude cyclone rapidly intensifies, dropping at least 24 millibars over 24 hours.
- A millibar measures atmospheric pressure.
- Hurricanes tend to form in tropical areas and are powered by warm seas. For this reason, they're most common in summer or early fall, when seawater is warmest.
- Bomb cyclones generally occur during colder months because cyclones occur due to cold and warm air meeting. During the summer, there's generally not much cold air across the atmosphere; this means a bomb cyclone is much less likely to occur.
- Hurricanes form in tropical waters, while bomb cyclones form over the north-western Atlantic, north-western Pacific and sometimes the Mediterranean Sea.