

# OFFICERS' Pulse

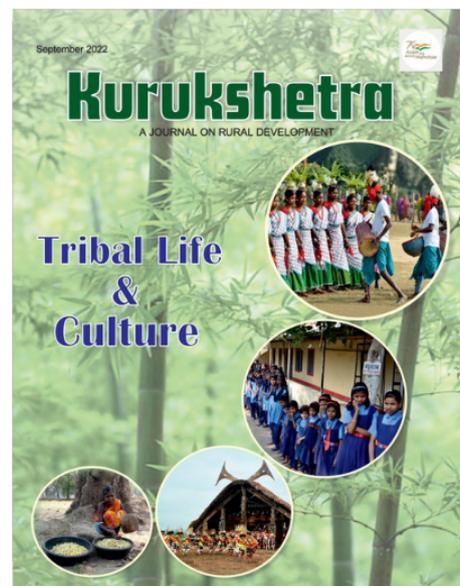
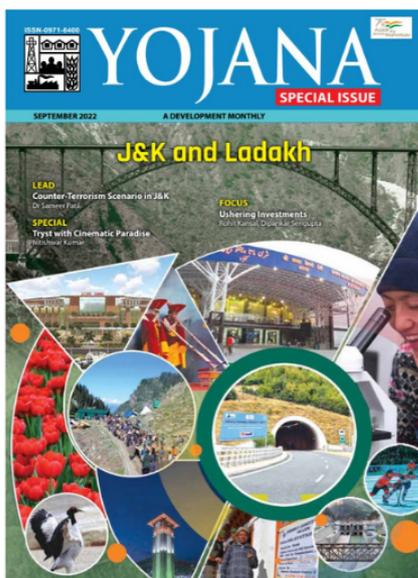
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## 1) Reconsidering Indigenous Knowledge System

*(GS1: Salient features of Indian Society, Diversity of India)*

### Context

- The Constitution of India recognises the special status of tribal people as **'the Scheduled Tribes'** and provides safeguards to protect their rights and culture. However, despite a large number of schemes and programmes, the 104 million (as per Census 2011) tribal people have remained **marginal - geographically, socio-economically, and politically**.
- These communities also witness **varying degrees of discrimination and exclusion** in access to land, job, credit, health, education, housing, basic amenities, and other public services.
- Tribal communities, though marginalised, have rich **Indigenous Knowledge Systems (IKS)**, which could be useful if they are properly integrated in modern and contemporary knowledge systems.

### Significance of Indigenous Knowledge Systems

- Indigenous Knowledge System is an **integral part of tribal culture** and has wide-ranging relevance in livelihood, education, health, agriculture, and livestock.
- Indigenous knowledge is embedded in community practices, institutions, relationships and rituals and is inextricably linked to the identity of indigenous peoples, their experiences with the natural environment, and hence their territorial and cultural rights.
- Indigenous people, therefore, place a **great deal of importance on passing knowledge on to their future generations**—not only for the sake of preserving the

knowledge but also for preserving their own cultures and identities.

### Key Issues and Concerns

- Indigenous communities continue to face challenges in terms of preservation and expansion of their traditional knowledge and innovations in every field.
- The indigenous knowledge is often **not adequately valued and recognised**. Very often comparisons are made to prove that scientific or modern knowledge is better than the indigenous knowledge system.
- But both modern and indigenous knowledge systems have their **own strengths and weaknesses**. It is important to take advantage of the creativity and innovativeness of both systems and **see both systems as complementary sources of wisdom**.
- There are many instances where the subsequent pairing of scientific research with traditional and indigenous experience led to a technology that became widely adopted. For instance, **indigenous knowledge of agricultural practices, plant disease management and cattle treatments** are often utilised by Indian farmers.
- Tribal communities of India also have **rich knowledge systems of traditional medicines**. These systems and their practitioners, healers can be enormously useful if they are properly integrated with the primary healthcare delivery systems in India.
- Another important area of concern is **poor documentation**; i.e., the non-availability of a full fledged institutional framework to map, profile, and accredit the large body of indigenous knowledge and innovations.

- Partly because of **remote and difficult geographical areas** and due to the **low level of education and skill of tribal population**, their knowledge and innovations remain **unnoticed and unrecognised**.
- A more recent threat that is raising concern is the **misappropriation of indigenous knowledge** in the form of '**biopiracy**'. When researchers appropriate indigenous traditional knowledge without proper procedure, acknowledgement, or benefit-sharing agreement, this is considered biopiracy.
- For instance, many Western companies are patenting traditional medicines without granting due recognition to the indigenous communities whose knowledge systems went into identifying the active ingredients as useful for particular ailments.

### Reconsidering Indigenous Knowledge System

- Growing numbers of scientists and organisations are recognising that indigenous knowledge offers **cheap, locally adapted solutions to development problems**, or that it can be melded with scientific knowledge to **boost productivity and living standards**.
- Internationally, the **United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)** recognises the rights of indigenous peoples to self-determination, self-governance, and organisational structures in support of these rights.
- They also have the **right to maintain, control, protect and develop their intellectual property** over such cultural heritage, traditional knowledge,

and traditional cultural expressions.

- The **complementary nature of indigenous and scientific knowledge systems** needs to be recognised.
- There is a need to create a **repository and data management system** to store, display and disseminate IKS. UNESCO has launched its **Local and Indigenous Knowledge Systems (LINKS) Programme**, which aims at **safeguarding traditional knowledge within indigenous communities** by reinforcing their inter-generational transmission.
- There is a need for **more research on IKS and wider dissemination** of those findings.
- Various ministries and Government departments [such as Ministry of Tribal Affairs, Ministry of Social Justice and Empowerment, Tribal Research Institute (TRIs)] who are directly or indirectly working on tribal issues must create a **National Consortium of Indigenous Knowledge Resource Centre**.
- A **strong legal framework** is also the need of the hour that facilitates social participation, indigenous practices, and the protection and conservation of indigenous knowledge and resources.
- **Intellectual Property Right (IPR) and Access and Benefit Sharing (ABS)** are also issues of great concern. All stakeholders such as the Government, corporations and researchers should continue to be held **socially and ethically responsible for R&D and product development** involving Indigenous People and their knowledge.

### Role of Local Institutions

- Local institutions such as Panchayats can also play a crucial role in

- uncovering and validating Indigenous Knowledge,
- including representation of Indigenous people,
- creating a local level Consortium for Indigenous Knowledge (CIK), and
- helping indigenous entrepreneurs to formalise by connecting them to different Government schemes and programmes.

### Conclusion

- The larger goal should be towards creating new, more effective knowledge systems that merge the positive aspects of indigenous and scientific knowledge systems.
- **Role of training, research and extension institutions, social scientists** can become a part of the process of both mediating between indigenous and scientific knowledge systems and orienting research toward accomplishing these more socio-economically just and ecologically sustainable systems.

## 2) Tribal Art and Culture

*(GS1: Salient features of Indian Society, Diversity of India)*

### Context

- India has the **second-largest population** of tribal people worldwide. Scheduled tribes make up **8.6 percent of India's population**, according to the 2011 Census.
- They are **autochthonous** (being indigenous rather than being migrants or re-settlers) to the land. This qualifies them to be the earliest owners of the land.

### Evolution of Tribal Culture in India

#### Palaeolithic period

- The evidence of the earliest tribal culture comes from India's **Upper Palaeolithic period**, when a

variety of tools show that this culture was alive but still developing. During the Upper Palaeolithic era, **artistic attempts sprouted.**

- Twelve years before the discovery of Altamira in Spain - the location of the oldest rock paintings in the world - the first known discovery of rock paintings was made in India in 1867–1868 by archeologist **Archibald Carlleyle** at Sohagihat in the Mirzapur district of Uttar Pradesh.
- **Bhimbetka, Jogimara** in Madhya Pradesh, **Lakhudiyar** in Uttarakhand, **Tekkalkotta** in Karnataka and **Kupgallu** in Telangana, among other places, are some examples of early rock painting sites.
- A **stick-like representation of a human** was in use. The primary animal motifs in the early paintings include a fox, a multi-legged lizard, and a creature with a long nose (later many other animals were drawn).
- There are also **wavy lines**, filled **rectangular geometric patterns**, and a **cluster of dots**. Paintings are **superimposed**, starting with **Black**, moving on to **Red**, and finishing with **White colour**.
- The subjects of paintings evolved during the late historic, early historic, and Neolithic periods, and creatures like **bulls, elephants, sambars, gazelles, sheep, horses, styled humans, tridents, and occasionally vegetal motifs** started to appear.

#### Mesolithic Period

- The Mesolithic period, which came after, is the one with the **greatest concentration of paintings**, the majority of which feature **hunting scenes**. In some of the images, men are being pursued by animals,

while in others, hunter-men brandishing arrows and barbed spears are doing the chasing.

- A common theme is presented by **community dances**.

#### IVC

- Then came the **copper and bronze ages**. The **Indus Valley Civilisation (IVC)** coincided with this era. The civilisation placed great importance on art and culture.
- A **red sandstone figure of a man's torso** and a **soapstone bust of a bearded man** are two excellent illustrations of how to handle three dimensional volumes.
- **Steatite seals and tablets with beautiful animal figures**, including unicorns, bulls, rhinoceroses, tigers, elephants, bisons, goats, and buffalos, are also occasionally made of **agate, chert, copper, faience, and terracotta**.
- **Perforated pottery** was probably used to strain liquids. From **bone and baked clay to gold and semi-precious stones**, beads and ornaments are made from every imaginable material.

#### Popular Tribal Art Forms Across India

- There are numerous tribal painting styles, each with its own set of colours and themes. The **Bhil** are India's largest tribal group, according to the 2011 Census. Bhil culture places a high value on art. Bhil paintings are characterised by **large, un-lifelike shapes of everyday characters** that are filled in with earthy, yet bold colours before being covered with an overlay of uniform dots in a diverse array of colours and patterns that stand out against the background.
- **Warli Painting** is yet another popular tribal form. Warli is a **traditional Maharashtra art form**

that traces its origins back to the **10th century A.D.** **Basic geometric shapes** such as circles, triangles, and squares dominate these paintings. The paintings' central themes are **scenes depicting hunting, fishing, farming, and festivals, with dances, trees, and animals used to surround the central theme**.

- Another tribe, the **Saura**, has a unique culture. States like **Odisha, Jharkhand, Madhya Pradesh, Andhra Pradesh, and Maharashtra** are home to them. **Nature's splendour** is celebrated in Saura art. The **'Tree of Life'**, which has human and animal inhabitants on its branches and symbolises the harmonious coexistence of humans and animals, is the basis for the majority of paintings.
- The **eastern Indian states** of West Bengal, Odisha, Jharkhand, and Chhattisgarh are home to the ancient folk-art tradition known as **dhokra**. Dhokra craft objects are made using the **lost wax-casting technique**, which is one of the earliest and most advanced methods of metal casting known to human civilisation.

#### Tribal Dance Forms

- In 2010, **UNESCO** inscribed **Kalbelia**, a folk dance of **Rajasthan**, on the **Representative List of Humanity's Intangible Cultural Heritage**. Women in flowing black skirts dance and swirl, mimicking serpent movements, while men accompany them on the **khanjari** instrument and the **poongi**, a woodwind instrument traditionally used to catch snakes.
- People from the **Kashmiri tribe Rauf** perform the **Dumhal dance**.

**Drums** are used to accompany the music as dancers sing in chorus.

- **Hojagiri** is a popular tribal dance in India performed by the **Riang community of Tripura**. The performers are **not permitted to move their upper torsos or arms**.
- In **Dadra and Nagar Haveli**, the **Kokna tribesmen** perform the **Bhavada tribal dance**, which features masks and colourful costumes. **Summer nights** are chosen for the performance.
- **Gussadi**, another ancient tribal dance form, is performed by the **Raj Gonds in Telangana**. It lasts a fortnight and is also presented by **Dandari troupes** during the festival.
- There are tribal dances that are **gender specific**, just like in **Kalbelia**. **Mudiyattam** is a type of tribal group dance that is frequently performed by **women in Kerala**.

#### Tribal Music of India

- **Karnataka's Dollu Kunita** is a **drum dance** performed to singing. Most of the men in the **Kuruba community** - a group of shepherds - perform this style of dance.
- The **Tarphaor Pavri**, a wind instrument made of dried gourd, is used to accompany **Kokna tribal dance** in the hilly regions of **northwest India**. As a result, the Kokna dance is also known as **Trapha Nach or Pavri Nach**.

#### Conclusion

- Art is vast, and so is culture. Culture encompasses more than just performing and visual arts. Religion, language, cuisine, and social customs are all included under the broader term of culture. In a sense, culture subsumes within its scope the 'way of life' of communities.

### 3) Education for Tribals

*(GS2: Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources)*

#### Context

- The Ministry of Education and Ministry of Tribal Affairs have been implementing various schemes in the Scheduled Tribe dominated areas of the country with a specific target of uplifting the education amongst tribal communities.

#### Tribal Education

- Various research studies have shown that there is a correlation between literacy and poverty. According to the 2011 Census, the **literacy rate of the Scheduled Tribes of India is only 58.96 percent against the national literacy rate of 72.99 percent**.
- The status of tribal students in schooling has improved over the years, particularly at **primary and upper primary level**. However, it starts **decreasing at secondary and senior secondary level**.
- Another challenging factor which has shown consistent improvement in the last few years is the **dropout rate of students**. The data as per **Unified District Information System for Education (UDISE)** on **dropout rates** at primary, upper primary and secondary level from 2016-17 to 2020-21 indicates a **decreasing trend** and hence an improvement in the status of school-going tribal children at all levels.
- All-India annual average drop-out rates fell during 2016-17 to 2020-21 by 5.6 percent for all children in primary level (classes 1-5) and by 6 percent for tribal children.

#### Various Programmes/Schemes on Education

- **The RTE Act:** The **86th amendment** to the Constitution of India was passed in 2002 wherein **Article 21A** was inserted to ensure that every child has a **right to full time elementary education** of satisfactory and equitable quality in a formal school which satisfies certain norms and standards. This subsequently resulted in the formulation of **Right of Children to Free and Compulsory Education (RTE) Act, 2009** which gave a legal mandate to provide **free and compulsory elementary education to every child in the age group of 6-14 years.**
- **Samagra Shiksha Scheme:** Department of School Education and Literacy (DoSEL), Ministry of Education is implementing the Samagra Shiksha scheme from 2018-19. **Bridging gender and social category gaps** at all levels of school education is one of the major objectives of the scheme. The Scheme reaches out to **girls, and children belonging to SC/ST, Minority communities and Transgenders.**
- Under Samagra Shiksha, there is a provision of **Kasturba Gandhi Balika Vidyalayas (KGBVs).** KGBVs are **residential schools from class VI to XII for girls** belonging to disadvantaged groups such as SC, ST, OBC, Minority and Below Poverty Line (BPL).

#### **Schemes with Specific Target of Uplifting the Education amongst Tribal Communities**

- **Eklavya Model Residential School (EMRS):** In Union Budget of 2018-19, Government of India announced that to **provide quality education to the tribal children in their own environment,** EMRS schools will be established in every

block having more than 50 percent ST population and at least 20,000 tribal persons (as per census 2011).

- **National Fellowship and Scholarship for Higher Education of ST Students:** The scheme provides financial assistance for pursuing MPhil and PhD in Universities and for pursuing graduate and post graduate courses in top Institutes like IIT/AIIMS etc.
- **National Overseas Scholarship (NOS) to the ST Students for Studies Abroad:** Under the Scheme, financial assistance is provided to 20 ST students every year for pursuing higher studies abroad.
- **Pre-Matric Scholarship:** It is a Centrally Sponsored Scheme under which financial assistance is provided to ST students studying in classes IX and X.
- **Post-Matric Scholarship:** Under this initiative, financial assistance is provided to ST students studying beyond class X.

#### **Major Challenges for Tribal Education**

- In the case of Scheduled Tribes, the **remoteness of habitations, lack of travelling facilities, insufficient infrastructure facilities, illiteracy of parents, and segregated population** are the primary constraints for the educational attainment of these children.
- Other challenges include:
  - **Medium of Instruction:** It is a well established fact that primary education in the mother tongue has huge benefits. The struggle between mother tongue and dominant language in the classroom leaves the aspiring learners from the

Scheduled Tribes behind in learning.

- **Lack of Teachers and Appropriate Pedagogy:**  
Due to disproportionate teacher's deployment, schools in far flung areas and difficult terrain face shortage of teachers. Further, teachers should adopt **play based and activity based pedagogy** to make learning interesting so that children do not find education irrelevant. **Real life application of knowledge and respect for tribal knowledge** may make a huge difference in educational outcomes of the students.

#### Way Forward

- The **National Education Policy 2020** reaffirms that **bridging the social category gaps** in access, participation, and learning outcomes in both school and higher education will continue to be one of the major goals of all education sector development programmes.
- The NEP 2020 proposed the policy strategy to identify **Special Education Zones (SEZs)**. The SEZs will be the identified regions where significantly large populations from educationally and socio-economically disadvantaged groups reside.
- The next step could be to **preserve and assimilate tribal knowledge in the curriculum framework** to ensure that quality education not only is accessible to all diverse groups but also is relevant and connected with their traditions, aspirations and needs.
- Further, **multilingual education** is required to be promoted in a big way and instruction in mother

tongue as envisaged in **Article 350A** of the constitution which provides for facilities for instruction in mother tongue at the primary stage.

- As rightly envisaged in NEP 2020, **universal access to quality education to all children** is the key to India's continued ascent, and leadership at the global stage in terms of economic growth, social justice and equality, scientific advancement, national integration, and cultural preservation.

#### 4) Tribal Development Strategies (GS2: Government Policies and Interventions for Development in various sectors and Issues arising out of their Design and Implementation)

##### Context

- The Government of India's planned approach expedited the overall development of the Scheduled Tribes (ST) of the country, identified the problems and designed the ways and means to overcome the problems through various social, economic and political initiatives.
- Development of tribes of India has remained a central theme in various perspective Five-Year Plans and Annual Plans. However, challenges do exist today for India's STs due to **remoteness of habitations, dispersed population, and frequent displacement.**

##### Development Plans and Programmes

- The policy makers and planners accorded utmost priority to the welfare and development of STs from the beginning of the **First Five-Year Plan (1951-56)**. The Plan laid down the principle for suitably designing such plans and programmes that could adequately and appropriately cater to the

needs of all the underprivileged. Besides, special provisions were initiated towards securing **effective and intensified developmental drives for the all round development of STs.**

- During the **Second Plan (1956-61)**, the Government grouped development programmes in Scheduled areas under **four heads – (a) communications, (b) education and culture, (c) development of tribal economy, and (d) health, housing and water supply.** In 1961, the Government opened **43 Special Multi-purpose Tribal Blocks**, later termed as **Tribal Development Blocks (TDBs).**
- The **Third Plan (1961-66)** continued the plans and policies prescribed and followed during the Second Plan in order to provide equality and opportunities to STs.
- The **Fourth Plan (1969-74)** vowed to realise a **rapid rise in the standard of living** of the people, ensuring equality and social justice to all.
- The **Fifth Plan (1974-78)** launched the **Tribal Sub-plan (TSP)** envisaging the percolation of direct benefits of development initiatives to the STs. The TSP not only aimed at the promotion of development activities to raise the level of living standards of STs, but also envisaged the protection of interest of the STs through legal and administrative support.
- The **Sixth Plan (1980-85)** sought to ensure a **higher degree of devolution of funds** and earmarked a poverty alleviation programme for ST families to cross the poverty line. Infrastructural facilities in Scheduled areas were expanded.
- During the **Seventh Plan (1985-90)**, the emphasis was on the **economic development of STs** by creating two national-level institutions viz. **Tribal Cooperative Marketing Development Federation (TRIFED)** in 1987, and **National Scheduled Castes and Scheduled Tribes Finance and Development Corporation**, which was later bifurcated into **two separate corporations – one for SCs and other for STs.** While the former tried to provide remunerative prices for the forest and agriculture produce of STs, the latter made provisions for credit support for employment generation.
- The **Eighth Plan (1992-97)** focused on **eliminating the exploitation of STs and paid attention to their special problems** of suppression of rights, land alienation, non-payment of minimum wages and restrictions on the right to collect minor forest produce, etc.
- The **Ninth Plan (1997-2002)** envisaged the **creation of an enabling environment conducive for STs** to exercise their rights freely, enjoy their privileges and lead a life at par with the rest of the society.
- The **Tenth Plan (2002-07)** focused on **tackling the unresolved issues and problems** faced by the tribal society on a time-bound basis.
- The **Eleventh (2007-12)** and **Twelfth Plan (2012-17)** consolidated the welfare measures and offered directions to the States to design proper and appropriate developmental activities specifically relevant for the development of STs.

- The **Annual Plans** thereafter through NITI Aayog of Government of India take care of development needs of STs in States.
- Central Ministries/ Departments have been **mandated by NITI Aayog to earmark funds** in the range of 4.3 to 17.5 percent of their total Scheme allocation every year for **tribal development**.

### Way Forward

- Plans and Programmes of the government have continuously facilitated the socio-economic development of ST population. However, the **achievement is skewed across States**.
- The poverty gap between STs and all populations living below the poverty line shows that **STs are more backward economically**. Most of the STs who are living under the poverty line are **landless agricultural labourers having minimal or no access to productive assets**.
- There is a need to popularise a **tribal-specific participatory self-governance system** where the STs will be empowered in the **tribal-participative and tribal-managed development process**.
- In addition to setting up of educational infrastructure in Scheduled Areas, extra efforts could be made to **enhance the skill and knowledge base** of the ST youth through the provision of **need based training and skill upgradation**.
- Since a majority of the tribal community is dependent on minor forest produce and low-productive agriculture, efforts need to be made to make them **more productive by improving the quality of the produce and linking the tribal produce with the markets in a sustainable manner**.

- **Intra-departmental cooperation, coordination, and convergence** are required for the effective implementation of schemes dedicated to the upliftment of STs.

### 5) Welfare of Tribes

*(GS2: Welfare Schemes for Vulnerable Sections of the population by the Centre and States and the Performance of these Schemes; Mechanisms, Laws, Institutions and Bodies constituted for the Protection and Betterment of these Vulnerable Sections)*

#### Context

- India has a significant population of Scheduled Tribes (ST) comprising about 8.6 percent of total population according to the 2011 Census. **Madhya Pradesh** has the highest ST population followed by **Maharashtra, Odisha, Rajasthan, Gujarat, Jharkhand and Chhattisgarh**.
- The **Ministry of Tribal Affairs** is the nodal ministry for overall policy planning and coordination of programmes for development of STs.

#### Organisations for Development of Scheduled Tribes

##### National Scheduled Tribes Finance and Development Corporation (NSTFDC):

- NSTFDC, a Government of India undertaking under the Ministry of Tribal Affairs was set up with the **prime objective to boost economic development of Scheduled Tribes**.
- NSTFDC strives towards empowerment of ST population through **creation and promotion of sustainable livelihood**. The corporation in collaboration with the state ST corporations and banks works for the economic upliftment of STs by way of providing **concessional loans** for

undertaking various income generation activities.

#### **Tribal Cooperative Marketing Development Federation (TRIFED):**

- TRIFED was established in 1987 as a National level Cooperative body with the basic mandate of bringing about socio-economic development of tribals of the country by providing **remunerative prices for the Forest and Agriculture Produce of tribal people.**

#### **The National Education Society for Tribal Students (NESTS):**

- This is an autonomous organisation under the Ministry of Tribal Affairs. It has been registered as a **Society**, under the Societies Registration Act XXI of 1860 to establish, endow, maintain, control and manage **Eklavya Model Residential Schools** and to do all acts and things necessary for or conducive to the promotion of such schools.

#### **The National Commission for Scheduled Tribes (NCST):**

- This was set up in 2004 by amending **Article 338** and inserting a new **Article 338A** in the Constitution, through the **Commission (Eighty-ninth Amendment) Act, 2003.**
- Main duties of the Commission are to investigate and monitor all matters relating to the safeguards provided for the Scheduled Tribes and to evaluate the working of such safeguards, and to inquire into specific complaints with respect to the deprivation of rights and safeguards of the Scheduled Tribes.

#### **Schemes of Central Government**

- For the Finance Cycle 2021-26, many existing schemes have been merged, revamped and the scope has been widened. The 3 schemes meant for comprehensive

development of tribals are as under.

#### **1. Pradhan Mantri Adi Adarsh Gram Yojna:**

- The PMAAGY aims at **mitigating gaps and providing basic infrastructure in villages** with significant tribal populations.
- It is envisaged to cover 36,428 villages having **at least 50% ST population and 500 STs across States/UTs** with notified STs during 2021-22 to 2025-26.

#### **2. Pradhan Mantri Janjatiya Vikas Mission:**

- The Mission seeks to achieve livelihood driven tribal development in the next five years through formation of **Van Dhan groups** who have been organized into **Vandhan Kendras**. The **Minor Forest Produce (MFP)** gathered by tribals will be processed in these kendras and marketed through **Van Dhan Producer Enterprises.**

#### **3. Venture Capital Fund for STs:**

- The 'Venture Capital Fund for Scheduled Tribes' (VCF-ST) scheme is aimed at **promoting entrepreneurship among the STs** and to support and incubate the start-up ideas by ST youth.

#### **Conclusion**

- The Government of India has been making consistent efforts to empower STs. **Institutional instruments for entrepreneurship building** viz. skilling, motivation, hand-holding, technology, incubation, common facility and marketing support besides financing need to be integrated effectively.
- The financial assistance from the government through its various schemes and institutions may not fulfil the existing gaps unless it is proportionately blended with effective contribution of private

stakeholders in development and community participation.

## 6) Counter-Terrorism Scenario in J&K

*(GS3: Challenges to Internal Security through Communication Networks, Role of Media and Social Networking Sites in Internal Security Challenges, Basics of Cyber Security; Money-Laundering and its prevention)*

### Context

- The Union Territory of Jammu and Kashmir has been affected by the problem of cross-border terrorism, separatist violence and armed militancy for the last three decades. However, since the heydays of terrorist violence in the early 1990s, this militancy has transformed radically.
- Although there are some evolving and emerging challenges from the Counter-Terrorism (CT) perspective, security forces are confident of effectively tackling them.

### Current Terrorism Outlook for the Region

- A vital indicator of the improved security situation in Kashmir Valley is the **residual strength of the terrorists** operating in the region. This number stretched to thousands at the peak of militancy in the early 1990s. Current terrorist strength in Kashmir stands at approximately 163, the lowest in decades.
- They primarily belong to the three terrorist groups— **Lashkar-e-Taiba (LeT)**, **Jaish-e-Mohammed (JeM)** and **Hizbul Mujahideen (HM)**. Some are part of the **local affiliates of pan-Islamic groups** such as **Al-Qaeda's Ansar Ghazwat-ul-Hind**, and **Islamic State J&K**. However, their numbers are marginal.

- Security forces note that, unlike the previous times, Pakistani terrorists have been reduced to guiding and motivating the local terrorists, who have taken charge of the militancy in the region.

### Tackling Cross-Border Militant Infiltration

- Pakistan-based terrorist groups have used the **mountainous terrain in north Kashmir** to sneak into the Kashmir Valley. **Pakistani security establishment** actively supports them by bringing infiltrating terrorists right up to the LoC in army vehicles, monitoring the infiltration routes, giving covering fire while terrorists infiltrate, and supplying sophisticated communication equipment.
- Militants also enter from the **south of Pir Panjal range** (the Jammu-Samba-Kathua plains and the hilly Rajouri-Poonch area), sometimes through **tunnels**.
- To counter this infiltration, security forces have raised a highly-effective **three tiered counter-infiltration grid**. In this, the **Indian Army** forms the first tier on the LoC, followed by the second tier of **paramilitaries** such as the Central Reserve Police Force (CRPF), and the third one of the **J&K Police (JKP)**.
- In addition, the security forces have deployed **Anti Infiltration Obstacle System (AIOS) fencing** and **strengthened surveillance through reconnaissance drones, night-vision equipment, and hand-held thermal imaging devices**.
- These efforts combined have contributed to the **infiltration levels going down significantly**. For example, in 2020 and 2021, the number of infiltration attempts

went down to double digits— 62 and 58 respectively, with only 72 managing to successfully infiltrate together in those two years.

### Crackdown on Terrorist Groups and their Ecosystem

- Meanwhile, security forces have kept up the pressure on the terrorist groups in the hinterland through several **Counter-Insurgency (CI) operations**. These have yielded significant success by eliminating the top militant leadership and disrupting their subversive plans.
- Thus, barring the February 2019 suicide attack on the CRPF convoy at **Lethpora in Pulwama** district, militants have been reduced to carrying out an **intermittent campaign of targeted killings against soft targets**. This random violence denotes their **desperation and an attempt to stay relevant** in Kashmir's changing security scenario.
- A crucial part of the security crackdown is the **punitive action against the subversive elements of the ecosystem that support the terrorists**. It includes not just the network of the **Over Ground Workers (OGWs)** and **terrorist sympathisers** but also the **cadres of Jamaat-e-Islami (JeI)**. In 2019, the Union Ministry of Home Affairs (MHA) **banned the JeI**, terming it an "unlawful association."
- **Countering terrorist finances** has been another focus area for the security establishment. For this, the **National Investigation Agency (NIA)** has launched several investigations into the cases of terrorist financing.
- Besides, the MHA has set up a **Terror Monitoring Group**, comprising representatives of security (NIA, Central Bureau of Investigation, Intelligence Bureau and JKP) and financial agencies (Central Board of Direct Taxes, and Central Board of Indirect Taxes and Customs) to closely monitor terrorist financing cases.
- This crackdown has **dramatically reduced the stone-pelting incidents** which had once become a striking feature of unrest in Kashmir Valley.
- Significantly, the security forces have also implemented several **soft measures** that the locals have appreciated. These include **exercising maximum restraint, avoiding pellet guns and minimising collateral damage** during the CI operations and protest demonstrations.
- Besides, top security officials have made an **outreach to the families of active militants to request their kids to surrender**. These initiatives have deprived ISI and terrorist masterminds of significant propaganda material.
- These measures have improved the security situation in the valley and **boosted the local tourism sector**, with tourist arrivals hitting a new high.

### Evolving and Emerging CT Challenges

- **Radicalisation and Terrorist Recruitment:** While security forces have broadly controlled the situation, a major concern for them is the **uptick in local terrorist recruitment** in some areas. A significant contributor to this local recruitment is the **radicalisation of the local youth**, which has emerged as the most critical security challenge.
- Several factors aid the radicalisation process, including **peer pressure, victimhood feelings and self-radicalisation**

**enabled by the Salafi and Wahhabi propaganda.**

- Furthermore, **cyberspace**, including the **dark web and social media platforms**, amplifies this religious propaganda, accelerating radicalisation.
- Countering this radicalisation process is a work in progress, and security forces have launched multiple initiatives to reverse the trend. For instance, the Indian Army's '**Sahi Raasta**' initiative aims to bring the youth on the right track through national integration tours, sports training programmes and festivals, and skill development workshops.
- **Hybrid terrorists and virtual terrorist outfits:** With increased CI operations and neutralisation of many active militants, terrorist masterminds have now changed their strategy to obfuscate their activities. To commit violence, they are now using **terrorist sympathisers**.
- Most of them have **no criminal records** and are therefore **likely to escape police scrutiny**. These '**hybrid terrorists**' are the ones who are primarily responsible for the recent acts of targeted killings in and around Srinagar.
- In addition, security forces have noted the **proliferation of virtual terrorist groups** like the **Jammu Kashmir Ghaznavi Force** and **The Resistance Front**, which are nothing but front organisations for LeT and other terrorist outfits or organisations.
- In response, the JKP is **strengthening its human and technical intelligence capabilities**. This is proving helpful in apprehending these hybrid terrorists.
- **Pakistan's information warfare:** Since 2019, ISI's disinformation machinery has gone into overdrive on social media platforms with **anti-India propaganda**. With Pakistan's material and financial support to anti-India terrorist groups like LeT and JeM coming under the global scanner, the ISI has sought to **project Kashmir's militancy as 'indigenous resistance.'**
- In addition, it has sought to **label India as a major human rights violator**. This propaganda aims to draw attention to Kashmir and gain international sympathy.
- This information warfare campaign by Pakistan is a significant challenge because it exploits any minor incident to create a narrative of falsehood against India and the security forces.
- Countering these narratives will require a **comprehensive national effort** anchored in India's democratic credentials.

### Conclusion

- It is clear that despite a flux in the regional security environment and Pakistan's attempts to stir trouble, Kashmir's security situation has remained remarkably calm and stable. The security forces have decisively turned the tables against Pakistan-sponsored cross-border terrorism and its proxies.
- To maintain this advantage, other government agencies will need to carry the baton forward to deliver better governance and establish the writ of the sovereign.

## 7) Rediscovering the Bay of Bengal

*(GS2: India and its Neighborhood-Relations)*

## Context

- The Bay of Bengal (the Bay) is experiencing an increase in **geo-economic, geopolitical, and geo-cultural** activity. It is poised to once again play a key role in shaping the maritime order in Asia.
- Recently, Prime Minister Narendra Modi announced the opening of the **Centre for Bay of Bengal Studies (CBS)** at Nalanda University.
- The official launch of the CBS has once again demonstrated India's commitment to advancing constructive agendas by forging connections and setting up platforms for all those with an interest in the Bay.

## Rethinking the Bay

- CBS will offer **collaborations in areas such as geo-economics and geopolitics, ecology, trade and connectivity, maritime security, maritime law, cultural heritage, and blue economy** to generate opportunities for the Bay region.
- This will **strengthen India's overall framework for maritime engagement**, which aims to advance sustainable economic growth for all by fostering closer nautical ties.
- The Bay has long been a **major commerce hub** for the Indian Ocean. It created a conduit between the East and the West in terms of trade and culture.
- An Indo-Pacific orientation and the realignment of global economic and military power towards Asia have had a considerable impact on the Bay region.
- The **key sea lanes of communication** in this area are **lifelines for global economic security** and are crucial to the energy security that powers the economies of many countries in the region.

- Further, **non-traditional dangers** including **terrorism and climate change** have become more prevalent. The Bay also provides an opportunity for **greater regional cooperation** in the environmentally friendly exploration of marine and energy resources.
- The Bay has a **biodiverse marine environment**. It receives water from some of the world's largest rivers. It is a partially enclosed sea that has given rise to several geological characteristics. It is home to many **rare and endangered marine species and mangroves**, which are essential to the survival of the ecology and the fishing sector.

## Disorder at the Bay

- The region's maritime environment has changed as a result of **major powers expanding their economic and geopolitical influence**. Political and cultural engagement, together with economic competition, have taken on new dimensions.
- More crucially, the Bay's ecosystem is going through an unprecedented crisis brought on by widespread **environmental exploitation and geopolitical unrest**.
- **Species extinction** is a result of careless exploitation of the maritime environment, which has **severe consequences on biodiversity**.
- Problems such as population growth, altered land use, excessive resource exploitation, salinisation, sea level rise, and climate change are exerting significant strain on the Bay's environment.
- Operational discharge from small and medium feeder ships, shipping collisions, unintentional oil spills, industrial waste, pollution, and the

accumulation of non-biodegradable plastic litter are all contributing to the deterioration of the Bay.

- A **dead zone** has formed as a result, and the mangrove trees that protect the shore from the fury of nature are under more threat than ever.

#### Need of the CBS

- For a better knowledge of challenges, and strategies to overcome them for the sustainable development of the region, **more focused and interdisciplinary study** is required on these issues.
- By founding the CBS, Nalanda University has already started its journey and given the nation a unique interdisciplinary **research centre devoted to Bay-focused teaching, research, and capacity building.**

#### Way Forward

- It is essential that **nautical neighbours develop a partnership and cooperate** because of the maritime domain's interrelated and interdependent nature, transnational character, and cross-jurisdictional engagement of various governments and diverse organisations and enterprises.
- A few concerns that need immediate attention include **expanding cooperation in maritime safety and security, enhancing cooperation on maritime connectivity and the ease of maritime transit, and boosting investment possibilities in the maritime connectivity sector.** These require addressing non-traditional threats and fostering group efforts to reduce illicit, unreported, and unregulated fishing.

### 8) Pitching India as a signature destination

*(GS2: Government Policies and Interventions for Development in various sectors and Issues arising out of their Design and Implementation)*

#### Context

- The Dhauladhar ranges in the Himalayas recently witnessed the gathering of State Tourism Ministers — a first-of-its-kind meeting to discuss, debate and deliberate on modes and mechanisms to develop tourism in India.
- The Ministers brainstormed for three days, co-developing **'The Dharamshala Declaration'** by drawing inspiration from Prime Minister Narendra Modi's **'Whole of Government'** approach, which enables the breaking down of silos and encouraging synergies across various government corridors.

#### Dharamshala Declaration

- 'The Dharamshala Declaration' aims to recognise India's role in contributing towards **global tourism** as well as focusing on recovery by also **promoting domestic tourism** which has been overlooked for long.
- In the declaration, the Tourism Ministry has come up with a strategy and action plan to encourage more Indians to travel domestically and explore India's natural, cultural, and spiritual beauty while simultaneously reaching the goal of an **'Ek Bharat Shreshtha Bharat'** (interaction and mutual understanding).
- In parallel, the Ministry has also been working with the Ministry of External Affairs to **identify 20 Indian missions abroad** with the highest tourist footfalls to India and **build country-specific strategies** to attract foreign tourists.

### Draft National Tourism Policy 2022

- The Ministry of Tourism, after wide-ranging consultations, has prepared a draft **National Tourism Policy 2022**, which aims at improving the framework conditions for tourism development in the country, supporting tourism industries, strengthening tourism support functions and developing tourism sub-sectors.
- The guiding principles include **promoting sustainable, responsible and inclusive tourism in line with our civilisational ethos**.
- From Gautama to Gandhi, India has always spoken about the inherent need to live harmoniously with nature and within our means. The **National Green Tourism Mission** aims at institutionalising this approach.
- The National Tourism policy also aims to give impetus to digitalisation, innovation and technology through the **National Digital Tourism Mission** and skilling through the **Tourism and Hospitality Sector Skill Mission**.
- The policy also gives a special **impetus to private sector participation through public-private-partnerships (PPP)**.
- Once the new policy is ratified, the Ministry would have a new set of tools and frameworks that are required to execute on the vision and goals we have set for ourselves.

### Potential during the G20 presidency

- The country has an opportunity to position itself as a **major tourism destination during India's presidency of the G20 (December 2022- November 2023)**. India's age-old dictum of 'Atithi Devo Bhava' (A guest is akin to God) will come to the fore as it welcomes

delegates from the 20 countries/European Union.

- India will be hosting close to 200 meetings and this can be used as an opportunity to **showcase the country's cultural richness** while welcoming the world to India.
- The Ministry of Tourism also plans to work with other Ministries to bring in necessary interventions such as visa reforms, ease of travel, traveller-friendly and improved immigration facilities at airports.

### Way Forward

- Over the past few months, all the major tourism indices such as domestic air passenger traffic, hotel occupancy and tourist footfalls have shown signs of recovery and are going back to pre-pandemic levels.
- By **mid-2024**, we would be at pre-pandemic levels, with India achieving **\$150 billion as GDP contribution from tourism** and **\$30 billion in foreign exchange earnings** with 15 million foreign tourist arrivals.
- By **2030**, India is estimated to grow at 7%-9% compounded annual growth rate and the government is focused to bring an enabling policy framework to bring in **\$250 billion in GDP contribution from tourism**, **140 million jobs** in the tourism sector and **\$56 billion in foreign exchange** earnings with more than 25 million foreign arrivals.
- The Government must be committed to delivering these goals to ensure the positioning of India as one of the world's best tourism destinations by 2047.

**9) The future of old times in India**  
(GS2: Welfare Schemes for Vulnerable Sections of the population by the Centre and States and the Performance of these Schemes; Mechanisms, Laws,

### *Institutions and Bodies constituted for the Protection and Betterment of these Vulnerable Sections)*

#### Context

- **Life expectancy** in India has **more than doubled** since Independence — from **around 32 years** in the late 1940s to **70 years** or so today. Many countries have done even better, but this is still a historical achievement.
- Over the same period, the **fertility rate has crashed** from about six children per woman to **just two**, liberating women from the shackles of repeated child-bearing and child care.
- The **share of the elderly** (persons aged 60 years and above) in India's population, close to **9% in 2011**, is growing fast and may reach **18% by 2036** according to the **National Commission on Population**.

#### Depression in old age people

- Recent work on mental health among the elderly in India sheds new light on their dire predicament.
- Evidence on depression from a collaborative survey of the **Abdul Latif Jameel Poverty Action Lab (J-PAL)** and the **Government of Tamil Nadu** is particularly telling. Among persons aged 60 and above, **30% to 50%** (depending on gender and age group) had **symptoms that make them likely to be depressed**. The proportion with depression symptoms is **much higher for women than men, and rises sharply with age**. In most cases, depression **remains undiagnosed and untreated**.
- As one might expect, depression is **strongly correlated with poverty and poor health, but also with loneliness**. A large majority of elderly persons living alone are **women, mainly widows**.

- Among the elderly living alone, in the Tamil Nadu sample, **74% had symptoms that would classify them as likely to be mildly depressed or worse**.

#### Role of Pensions

- The first step towards a dignified life for the elderly is to protect them from destitution and all the deprivations that may come with it. That is why **old-age pensions** are a vital part of social security systems around the world.
- India has important schemes of non-contributory pensions for the elderly, widowed women and disabled persons under the **National Social Assistance Programme (NSAP)**, administered by the **Ministry of Rural Development**.
- The eligibility for NSAP is restricted to **"below poverty line" (BPL) families**, based on **outdated and unreliable BPL lists**, some of them are 20 years old.
- Further, the central contribution to old-age pensions under NSAP has stagnated at a tiny **₹200 per month since 2006**, with a slightly higher but still paltry amount (**₹300 per month**) for widows.
- Many states have enhanced the coverage and/or amount of social-security pensions beyond NSAP norms using their own funds and schemes. Some have even achieved **"near-universal" (say 75%-80%) coverage of widows and elderly persons**.

#### Beyond Targets

- **"Targeting" social benefits is always difficult**. Restricting them to BPL families has not worked well: there are huge **exclusion errors** in the BPL lists.
- When it comes to old-age pensions, targeting is not a good idea in any case. For one thing, **targeting**

**tends to be based on household rather than individual indicators.**

A widow or elderly person, however, may experience major deprivations even in a relatively well-off household.

- A pension can help them to **avoid extreme dependence on relatives** who may or may not take good care of them, and it may even lead relatives to be more considerate.
- For another, targeting tends to **involve complicated formalities** such as the submission of BPL certificates and other documents. The formalities can be **particularly forbidding for elderly persons with low incomes or little education**, who are in greatest need of a pension. In the Tamil Nadu sample, eligible persons who had been left out of pension schemes were found to be much poorer than the pension recipients.
- A better approach is to **consider all widows and elderly or disabled persons as eligible, subject to simple and transparent “exclusion criteria”**. Eligibility can even be **self-declared**, with the burden of **time-bound verification** being placed on the **local administration or gram panchayat**.
- Some cheating may happen, but it is unlikely that many privileged households will risk trouble for the sake of a small monthly pension.
- And it is **much preferable to accommodate some inclusion errors than to perpetuate the massive exclusion errors** we are seeing today in targeted pension schemes.

#### Widening the net

- The proposed move from **targeted to near-universal pensions** is not particularly new. It has already happened in several States. Of

course, it requires larger pension budgets, but **additional expenditure is easy to justify**.

- India’s social assistance schemes have low budgets and make a big difference to large numbers of people (about 40 million under NSAP). They are well worth expanding. It would be much easier for all States to do the same if the central government were to revamp the NSAP.
- The **NSAP budget** this year is just **₹9,652 crore** — more or less the same as 10 years ago in money terms, and much lower in real terms.

#### Way Forward

- Social security pensions, of course, are just the **first step towards a dignified life** for the elderly.
- They also need **other support and facilities** such as health care, disability aids, assistance with daily tasks, recreation opportunities and a good social life. This is a critical area of research, policy and action for the near future.

### 10) India’s cyber infrastructure needs more than patches

*(GS3: Role of External State and Non-state Actors in creating challenges to Internal Security; Challenges to Internal Security through Communication Networks, Role of Media and Social Networking Sites in Internal Security Challenges, Basics of Cyber Security; Money-Laundering and its prevention)*

#### Context

- There has been a steady spike in cases of cybercrime in India during the last five years. According to the **National Crime Records Bureau (NCRB)**, from 12,317 cases of cybercrime in 2016, there were 50,035 cases registered in 2020.
- Cybercrime is increasing with the **increased use of information and**

**communication technology (ICT).** However, despite this alarming trend, the **capacity of enforcement agencies to investigate cybercrime remains limited.**

### No Procedural Code

- With 'police' and 'public order' being on the **State List**, the primary obligation to check crime and create the **necessary cyberinfrastructure lies with States.** At the same time, with the **IT Act and major laws being central legislations**, the central government is no less responsible to **evolve uniform statutory procedures** for the enforcement agencies.
- Though the Government of India has taken steps that include the setting up of the **Indian Cybercrime Coordination Centre (I4C)** under the **Ministry of Home Affairs** to deal with all types of cybercrime, much needs to be done to plug the infrastructural deficit.
- There is **no separate procedural code** for the investigation of cyber or computer-related offences. As electronic evidence is entirely different in nature when compared to evidence of a traditional crime, **laying down standard and uniform procedures to deal with electronic evidence is essential.**

### Shortage of Technical Staff

- There have been half-hearted efforts by the States to recruit technical staff for the investigation of cybercrime.
- A regular police officer, with an academic background in the arts, commerce, literature, or management may be unable to understand the nuances of the working of a computer or the Internet.

- He can at best, after proper training, act as a **first responder** who could identify digital evidence and secure the scene of a crime or preserve digital evidence till the arrival of an expert. It is **only a technically qualified staff who could acquire and analyse digital evidence.**
- It is essential that State governments **build up sufficient capacity** to deal with cybercrime. It could be done either by setting up a **separate cyberpolice station** in each district or range, or having **technically qualified staff in every police station.**
- Further, the **Information Technology (IT) Act, 2000** insists that offences registered under the Act should be **investigated by a police officer not below the rank of an inspector.** The fact is that police inspectors are limited in number in districts, and most of the field investigation is done by sub-inspectors.
- Therefore, it will be pragmatic to consider a **suitable amendment** in Section 80 of the Act and **make sub-inspectors eligible** to take up investigation of cybercrimes.

### Upgrading Cyber Labs

- The **cyber forensic laboratories of States must be upgraded** with the advent of new technologies.
- **Offences related to cryptocurrency** remain **under-reported** as the capacity to solve such crimes remains limited. The central government has proposed launching a **digital rupee using blockchain technology** soon. State enforcement agencies need to be ready for these technologies.
- The Centre helps in upgrading the State laboratories by providing **modernisation funds**, though the

corpus has gradually shrunk over the years.

### Need for Localisation

- Most cyber crimes are **trans-national** in nature with **extra-territorial jurisdiction**. The collection of evidence from foreign territories is not only a difficult but also a tardy process. India has extradition treaties and extradition arrangements with 48 and 12 countries, respectively.
- In most social media crimes, except for the prompt blocking of an objectionable website or suspect's account, other details do not come forth quickly from large IT firms.
- Therefore, '**data localisation**' must feature in the proposed **Personal Data Protection law** so that enforcement agencies are able to get timely access to the data of suspected Indian citizens.
- Also, the police still get CyberTipline reports on online **Child Sexual Abuse Material (CSAM)** from the U.S.'s non-profit agency, the **National Center for Missing & Exploited Children (NCMEC)**. It would be a step forward if India **develops its in-house capacity and/or makes intermediaries accountable** to identify and remove online CSAM for immediate action by the police.

### Way Forward

- The Centre and States must not only work in tandem and frame statutory guidelines to facilitate investigation of cybercrime but also need to commit sufficient funds to develop much-awaited and required cyber infrastructure.

## 11) The gender pay gap, hard truths and actions needed

*(GS1: Role of Women and Women's Organization, Population and Associated Issues, Poverty and*

*Developmental issues, Urbanization, their problems and their remedies)*

### Context

- The **disproportionate effect of the COVID-19 pandemic on women workers** in terms of job and income losses has been tremendous in India.
- While the full impact of the pandemic is yet to be known, it is clear that its impact has been uneven, with women being among the worst affected in terms of their **income security** — partly due to their representation in sectors hard hit by COVID-19, combined with the **gendered division of family responsibilities**.
- Many women reverted to **full-time care of children and the elderly** during the pandemic, foregoing their livelihoods to do so.

### A wider pay gap

- This is attested by the **International Labour Organization's "Global Wage Report 2020-21"** which suggests the Covid crisis inflicted massive downward pressure on wages and disproportionately affected women's total wages compared to men. This greater wage reduction for women means that the **pre-existing gender pay gap has widened**.
- Despite notable progress in closing the gender pay gap over time in India, the gap remains high by international standards. Indian women earned, on an average, 48% less compared to their male counterparts in 1993-94. Since then, the **gap declined to 28% in 2018-19** as in the labour force survey data of the **National Sample Survey Office (NSSO)**.
- The **pandemic reversed decades of progress** as preliminary estimates from the **Periodic**

**Labour Force Survey (PLFS) 2020-21** show an **increase in the gap by 7%** between 2018-19 and 2020-21.

- The data further suggests that faster decline in female wages during the pandemic contributed to this decline, compared to a faster growth in male wages, which requires urgent policy attention.

### Discrimination as Factor

- While individual characteristics such as education, skills or experience explain part of the gender pay gap, a large part of the gender pay gap can still be attributed purely to **discrimination based on one's gender or sex**.
- Gender-based discriminatory practices include: **lower wages** paid to women for work of equal value; **undervaluation of women's work** in highly feminised occupations and enterprises, and **motherhood pay gap** — lower wages for mothers compared to non-mothers.

### International Efforts

- At the international level, the **United Nations** has put the challenge of closing various forms of gender inequality at the heart of its actions.
- The **ILO** has enshrined '**equal pay for work of equal value**' in its Constitution and the **Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)** provides an international legal framework for realising gender equality and addressing the intersecting forms of discrimination and vulnerabilities among women and girls.
- One of the targets of the **UN Sustainable Development Goal 8** is "achieving full and productive employment and decent work for

all women and men, including for young people and persons with disabilities and equal pay for work of equal value" by 2030.

- In support of this Goal, the **Equal Pay International Coalition (EPIC)**, was launched in 2017 as a multi-stakeholder initiative **led by the ILO, UN Women and the Organisation for Economic Co-operation and Development (OECD)** that seeks to achieve equal pay for women and men everywhere.

### Steps Taken by India

- India has taken several steps in the legislative sphere to close the gender pay gap, especially at the low-end of the wage distribution.
- In this regard, it was one of the pioneering countries to enact the **Minimum Wages Act in 1948** and followed by the adoption of the **Equal Remuneration Act in 1976**.
- In 2019, India carried out comprehensive reforms in both the legislation and enacted the **Code on Wages**.
- Evidence shows that the **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)** in 2005 benefited rural women workers and **helped reduce the gender pay gap, both directly and indirectly**.
- Directly, by raising the pay levels of women workers who participated in the programme, and indirectly, benefits accrued to women involved in agricultural occupations through higher earnings, as MGNREGA contributed to the rapid rise in overall rural and agricultural wages in the country.
- In **2017**, the Government amended the **Maternity Benefit Act of 1961**, which increased the '**maternity leave with pay protection**' from **12 weeks to 26 weeks** for all

women working in **establishments employing 10 or more workers.**

- This is expected to reduce the motherhood pay gap among mothers in the median and high-end wage earners working in the formal economy.
- Apart from enabling legislation, efforts are being made through the **Skill India Mission** to equip women with market-relevant skills to bridge the learning-to-livelihood gap and the gender pay gap.

### Way Forward

- While the **gender pay gap is slowly narrowing**, at the current rate of progress it will **take more than 70 years to close it completely.**
- Accelerated and bold action is needed to prevent a widening of the gender pay gap and closing the existing gap. Equal pay for work of equal value is necessary to close the gender pay gap.
- Closing the gender pay gap is key to achieving social justice for working women, as well as economic growth for the nation as a whole.

## 12) Connecting the dots to boost the patent ecosystem

*(GS3: Awareness in the fields of IT, Space, Computers, Robotics, Nano-technology, Bio-technology and issues relating to Intellectual Property Rights)*

### Context

- The recent report of the **Economic Advisory Council to the Prime Minister (EAC-PM)**, “**Why India Needs to Urgently Invest in its Patent Ecosystem?**” highlights the significance of a robust patent system for a knowledge economy and for the promotion of technological innovations.

### Highlights of the Report

- It highlights the **rising share of residents in the total number of**

**patent applications filed in India**, which has **more than doubled** during the last decade.

- And, for the **first time**, the **number of patent applications by residents has surpassed that of foreign applications** during the last quarter of the financial year 2021-22.
- A major concern expressed in the EAC-PM report is the **long pendency of processing patent applications in India.**
- Therefore, it has **recommended several measures** to reduce this. **Increasing the efficiency of processing patent applications** will certainly improve the patent ecosystem in the country.
- At the same time, we need to investigate the patent ecosystem more closely to connect the dots so that appropriate measures are adopted to improve the patent ecosystem, keeping in view the national innovation ecosystem.

### On Abandoned Applications

- The **total number of patent applications** to the Indian patent office has **increased by 48%** between 2010-11 and 2020-21, largely driven by **applications by residents.**
- Interestingly, the number of **abandoned patent applications also increased** at an astonishing rate during this period.
- The latest Annual Report (2019-20) of the Office of the Controller General of Patents, Designs, Trademarks and Geographical Indications (CGPDTM) shows that the number of abandoned patent applications, on account of not meeting the requirements under Sections 9(1) and 21(1) of the Patents Act, grew from 5,186 in 2010-11 to 23,291 in 2019-20, an increase by almost 350%.

- **Section 9(1)** of the Patents Act provides that those applications accompanied by provisional specifications be supported by **complete specifications within one year**.
- **Section 21(1)** requires patent applicants to **re-file documents** if the patent examiner finds them not meeting the requirements.
- The **share of such abandoned patents in the total number of patent applications** soared from 13.6% in 2010-11 to **48% in 2019-20**.
- A plausible reason for this could be that the **applicants are not confident about their applications passing scrutiny** and, therefore, do not pursue their applications. It may also be possible, especially in the case of innovations with short-life spans, that the **long pendency discourages applicants** from following up on their applications.
- But certainly, this is an aspect of the patent ecosystem where we need more information to connect the dots.

#### Another Key Issue

- Since the adoption of the **National Intellectual Property Rights Policy 2016**, a lot of emphasis has been attached to the filing of patent applications.
- It is worth examining if **perverse incentives** have been created in the process, which encourage the filing of patent applications even when the innovator knows that their claims will not pass scrutiny. If that is the case, **eliminating such perverse incentives** itself will add to **improving the patent ecosystem of India**.

#### Academia & Industry Linkage

- The **higher education sector** of India is rising in prominence in the research and development spending and patenting landscape of India.
- The share of this sector in the **gross domestic expenditure on R&D (GERD)** has increased from **5% in 2013 to 7% in 2018**. The share of top 10 academic institutes and universities in India in the patent applications by residents doubled from 6.4% to 12.2% during the same period.
- The growing prominence of this sector in patenting activity indicates the priority it attaches to commercially significant technological innovations.
- When the higher education sector is increasingly focusing on the development component of R&D, it is also expected that the **collaboration between industry and academia will also increase** in the area of R&D. But the **reverse is true in the case of India**.

#### Poor Performance

- The **Global Innovation Index (GII)** is prepared based on the score that each country gets under **80 indicators — industry-academia collaboration is one**.
- India's score for this indicator has in fact **declined over the last few years, from 47.8 in 2015 to 42.7 in 2021**. Consequently, India's ranking in this indicator in the GII declined from 48 to 65 during this period.
- However, **improvements in some other indicators** have resulted in **India's overall ranking in the GII improving** from 81 in 2015 to **46 in 2021**.

#### Way Forward

- The draft of the **National Auto Policy 2018 (Draft)** points out that collaboration between the industry

and academia in India has been limited to **niche research areas that have low commercial significance.**

- It also admits that innovations from India, originating from collaborative research projects, and implemented and commercialised in the automotive space have been scarce. This is not confined to the automotive sector but is a **phenomenon prevalent across most sectors in India.**
- As the patent system is a critical aspect of the national innovation ecosystem, **investing in the patent ecosystem** will help in strengthening the innovation capability of India.
- The right interventions should be made for the **promotion of the quality of patent applications and collaboration between academia and industry.**

### 13) An essential pit stop in parliamentary business

*(GS2: Parliament and State Legislatures—Structure, Functioning, Conduct of Business, Powers & Privileges and Issues Arising out of these)*

#### Context

- Recent trends have shown that the Government is worried about delay in legislative process due to frequent disruptions in the parliament and considers referring the bills to the Standing Committees may be counterproductive — that could only add to this delay.

#### Department Related Parliamentary Standing Committees

- Parliament has **24 Department Related Parliamentary Standing Committees (DRSC)**, comprising **members of the Parliament of both the Lok Sabha and the Rajya Sabha in the ratio 2:1**, which are

duly constituted by the Speaker of the Lok Sabha and the Chairman of the Rajya Sabha, jointly.

- The mandate of these committees is to **examine various legislations** referred to it, the **budget proposals** of different Ministries, and also to do **policy thinking** on the vision, mission and future direction of the Ministries concerned.
- The **percentage of Bills having been referred to the DRSCs** during the tenures of the 14th (2004-2009), 15th (2009-2014) and 16th Lok Sabhas (2014-2019) has been **60%, 71% and 27%**, respectively.

#### Committee versus Parliament

- Even though it is **not obligatory** for the Government to agree to refer each Bill to the DRSC, the experience, both nationally and internationally, has been that **referring a Bill to the DRSC has been of use to the process of lawmaking.**
- It has been alleged that Bills which are not being referred to the parliamentary committees, are not examined properly, especially from the perspective of consumers and stakeholders and remain just a **bureaucratically conceived piece of legislation.**
- The examination of the Bills by the parliamentary committees is more to the benefit of the Government than the Opposition. The simple reason for this is that the **tenor and the ambience of the discussions in the parliamentary committee and in Parliament are two entirely different things.**
- The committee meetings are in **camera** and, therefore, the meetings are held in a **comparatively congenial atmosphere of bonhomie and**

**cordiality** than they would be in Parliament.

- The **deliberations** in these committees **mostly add value to the content of the legislation** and, more often than not, the Members, their party positions notwithstanding, try to reach a **consensus**.
- Additionally, such pieces of legislation after examination in the committees, have **some sort of ownership of the members of the committee**, both from the ruling side and the Opposition, even though it is also a function of the skill of the chairman of the committee.

### Suggestions

- The following changes could be suggested to be made into procedures meant for consideration of Bills.
- First, the **Speaker of the Lok Sabha and the Chairman of the Rajya Sabha have powers to refer Bills to a DRSC of Parliament**. This requirement is often given a go by for various political or administrative reasons. It may be useful to make the **process of reference of Bills** to these committees **compulsory/an automatic process**. An exemption could be made with the **specific approval of the Speaker/Chairman after detailed reasons** for the same.
- Second, **all discussions** in the Parliamentary Standing Committee should be **frank and free**. For this, it may be provided that during the discussions of the committee meetings, **no whip of the party would apply to them**. In any case, they have the **liberty to vote in favour or against the Bill** in Parliament.
- Third, the committees can be given a **fixed timeline** to come up with the recommendation and present its report which can be decided by the Speaker/Chairman. The committees mostly abide by this direction of the Speaker/Chairman. But to deal with just political exigencies, it can be provided that in case the committee fails to give its recommendation within the approved/extended time, the **Bill may be put up before the House concerned directly**.
- Fourth, to ensure quality work in the committees, **experts in the field may be invited** who could bring with them the necessary domain knowledge and also help introduce the latest developments and trends in that field from worldwide. It would be value for money if some subject matter experts/young researchers could be associated with the committee for a short period.
- Fifth, between two sessions, there is generally enough time to organise committee meetings for discussions on Bills in the parliamentary committees. Sometimes, the government and the committee chairmen are lax in this respect, and then try to push through these pieces of legislation when the next session is announced. Hence, it is important for the **Ministry of Parliamentary Affairs to keep an eye on this** and, in collaboration with the committee chairmen, get these **parliamentary works organised during the inter-sessional period, in advance**.
- Sixth, when it comes to the **budget proposals** of the Ministries, the committees **should not limit themselves to discussing just the budget proposals and endorsing**

them with a few qualifications here or amendments there. They should also come up with **suggestions** for the Ministry to take up new initiatives and **people-friendly measures**.

## 14) Great G20 power, great responsibility

*(GS2: Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests)*

### Context

- India will assume the presidency of the G20 from December 1, 2022 to November 30, 2023. It is slated to host several ministerial meetings, working groups, and events before the G20 Head of State summit next year.

### Multilateral Forum

- By hosting the summit of the G20, the world's **most influential economic multilateral forum**, India will have the opportunity to **assume centre stage in proposing and setting the global agenda and discourse**.
- The G20 holds a strategic role in securing global economic growth and prosperity. Together, its members represent **more than 80% of the world's GDP, 75% of international trade and 60% of the world's population**.
- The G20 Head of State summit will arguably be the most high-profile event ever hosted by India. India can assert its **political, economic and intellectual leadership** while hosting the G20 presidency.

### Balancing Act

- India will have to perform a delicate balancing act. On the one hand, we have the West, the North Atlantic Treaty Organization, and G7 partner nations setting the agenda. And on the other, we have an emerging nexus between China and

Russia, which are taking divergent views from the first group.

- India might be caught in the middle as it is **part of both the Quad and the SCO** which somewhat lie on the opposing sides of the geopolitical spectrum.
- So, India might have to address issues that help in **bridging the emerging divide in the world order**. Notwithstanding the noise and opposing views at this forum, India can find a common ground for setting its G20 agenda by addressing issues of global concern.

### Opportunities

- India needs to promote its **specific priorities** related to domestic and regional issues such as **economic recovery, trade and investment, unemployment, patent waivers on diagnostics, therapeutics, vaccines to tackle COVID-19 and terrorism**.
- More specifically, India could forge greater cooperation with many G20 members such as the European Union, the U.K., and Canada, thereby **accelerating their coordination on realising free trade agreements**.
- The overarching issues could be related to charting a road map for **quick global economic recovery**, focusing on the **supply chain resilience mechanism** and stressing on **green and digital transformations** in the economy and its impact on societal well-being. This would ensure a sustainable and inclusive growth for the global economy.

### Voice of Developing & Least Developed Countries

- G20 is a unique global institution, where **developed and developing countries have equal stature**. It offers India an opportunity to also **champion the causes of**

**developing and least developed countries** so as to ensure that this summit does not turn out to be a western-dominated high table gathering or one where large economies impose their aspirations on the world.

- India could **invite and engage countries from Africa and South America** to ensure better and more balanced representation at the G20.
- Areas such as technology transfer, assistance towards green economy, greater access to trade for developing countries, addressing debt distress of countries by offering sustainable aid and loan programmes, tackling food and energy prices/security for vulnerable economies etc. could be relevant.

#### Way Forward

- The coming months will be a testing time for Indian foreign policy and diplomacy as the country prepares to host the **G20 and SCO summits next year**.
- India will be central in outlining key priority areas and in ensuring that the forum does not remain just a 'talk shop' but translates into a 'walk shop' in terms of meaningful actions and outcomes. Only this will give credibility to India's pivotal role in the international community.

### 15) Academia, research and the glass ceiling in India

*(GS1: Role of Women and Women's Organization, Population and Associated Issues, Poverty and Developmental issues, Urbanization, their problems and their remedies)*

#### Context

- The general bias against women which arose out of suspected capability of their intelligence and

their mettle in undertaking the arduous task of research was quite common in the 20th century. Things have changed and the glass ceiling has been broken to a greater extent.

- However, there is still a gender bias that persists and which has not been removed fully.

#### Government's Incentives

- Despite the remarkable improvement in the participation of women in higher education and participation in the workforce over the past decades, **progress has still been quite uneven**.
- The **Government of India** has been ramping up efforts to remove gender inequality by providing **incentives for women's higher education**.
- Some of these initiatives such as the **Gender Advancement for Transforming Institutions (GATI)**, i.e., a pilot project under the Department of Science and Technology to promote gender equity in science and technology, and **Knowledge Involvement in Research Advancement through Nurturing (KIRAN)**, i.e., a plan under the Department of Science and Technology to encourage women scientists in science and technology and also prevent women scientists from giving up research due to family reasons, are noteworthy.
- Some institutions are setting up **creches** so that the scientist mothers can carry on with their research work uninterrupted. **Universities** too are trying their best to be **equal opportunity employers**.
- However, despite all these endeavours, there is still a **gender bias** that persists and which has not been removed fully. **Women are**

still an under-represented population globally in hardcore science, technology, engineering, and mathematics (STEM).

### Women and STEM

- According to UNESCO data on some selected countries, **India is at the lowest position, having only 14% female researchers working in STEM areas.**
- In India, about **43% of women** constitute the **graduate population in STEM**, which is **one of the highest in the world**, but there is a downside to this; **only 14% of women join academic institutions and universities.**
- Although male and female participation in graduate studies is comparable, the **participation of women in research has dropped significantly (27% female as compared to 73% male).**
- According to a report published recently, at most STEM institutes, **women occupy only 20% of all professorial positions.** The more prestigious the institute, the lower the number of women employees.
- The **percentage of women in faculty positions begins to shrink with each step up the ladder.** The **number of female participants in decision-making bodies** such as the board of governors or council of institutes of higher education of repute is **abysmally low.**
- According to the University Grants Commission (UGC), out of the six Indian Institutes of Technology (IIT) established in the 20th century, only IIT Kharagpur and IIT Delhi have women members on their governing body.

### In the Corporate World

- On the contrary, **participation of women in leadership and decision-making positions in private enterprises** (the corporate

sector) is **startling** when compared to the reality in academics.

- The number of women in **senior management positions** in the corporate sector in India is **39%**, which is **higher than the global average.**
- Number of women CEOs in Fortune 500 companies is 15% while female board members in the management of private enterprises has been growing from 15% (2016), 16.9% (2018) to 19.7% in 2022. If this trend continues, **near parity will be reached by 2045.**

### Two Different Scenario

- It is worth reflecting on the reasons for this discrepancy in female participation in higher positions in these two sectors.
- The **mechanism of selection and promoting personnel** in the **private sector** is mostly based on **competence or merit** because it is more result (market) oriented with a definite matrix than what it is in the academic institutes.
- **Encouraging the participation of women** in the workforce in the private sector with the **adoption of various schemes for women began long ago** when compared to the initiatives taken by the Government of India in recent years.
- Various schemes such as **flexi-hour work time, rejoining the workforce after an interim break, sections operated only by women**, etc. were introduced in private enterprises as early as the 1990s with the benefits being reaped now.

### Way Forward

- It is hoped the programmes that have been initiated by the Government to empower women in the workforce will usher in gender parity by 2047, which would mark

the centenary of India's Independence.

- Most importantly, gender equality or parity will happen only when there is a **change in mindset and institutions consider women as assets** rather than simply a diversity rectification issue.

## 16) Drying Planet

*(GS3: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment)*

### Context

- Drought has become a planetary disaster as around 300 million people in Asia, Africa, North America and Europe are at the grip of drought.
- According to the United Nations Convention to Combat Desertification (UNCCD), the **world loses 12 million hectares of land every year to drought and desertification.**
- The **Indian Meteorological Department** defines drought as a **situation occurring in any area when the mean annual rainfall is less than 75% of the normal rainfall.**

### Global Scenario

- The **United Nations** reveals that **globally drought frequency and duration has increased by a third** since 2000.
- **Africa** holds the highest burden of drought with East Africa facing droughts for four decades. **Europe** has witnessed 45 major droughts in the last century.

### Indian Context

- In India states like **Odisha** and **Jharkhand** and those in the **Northeast** are already under drought-like conditions, notwithstanding the severe floods that hit these areas.

- **Delay in the onset of monsoon, variability in rainfall and failed monsoon** are the major drivers of droughts in India.

### Implications

- Droughts are becoming a **lethal disaster**, accounting for **15 percent of natural disasters** in the world, killing 0.65 million during 1970-2019.
- Forecasts by the **International Organization for Migration** reveal that by 2050, around **215 million people could be displaced** due to drought and other climate-related factors.
- **Climate Change is fueling the intensity of drought** in already vulnerable regions and tightening its grip in the not so vulnerable regions.
- Drought has been an **existential hazard** for those who depend on natural resources such as land for sustenance.

### International Efforts

- The **United Nations Convention to Combat Desertification** is the sole legally binding international agreement linking environment and development to sustainable land management. It addresses specifically the **arid, semi-arid and dry sub-humid areas**, known as the **drylands**, where some of the most vulnerable ecosystems and peoples can be found.
- The overarching objective of the UNCCD is to create a resilient livelihood base and secure long-term benefits while enhancing the healthy functioning of ecosystems.
- **Bonn Challenge** is a global effort to bring 150 million hectares of the world's deforested and degraded land into restoration by 2020, and 350 million hectares by 2030.
- The **Integrated Drought Management Programme (IDMP)**

, contributes to the global coordination of drought-related efforts of existing organizations and agencies with regard to: Better scientific understanding and inputs for (i) Drought management (ii) Drought risk assessment, monitoring, prediction and early warning (iii) Policy and planning for drought preparedness and mitigation across sectors (iv) Drought risk reduction and response

- The **Integrated Drought Management Programme (IDMP)** of the **World Meteorological Organization (WMO)** promotes an integrated approach to drought management that cuts across sectors, disciplines, and institutions and responds to specific regional and national needs. It aims to build climate resilience, reduce economic and social losses, and alleviate poverty in drought-affected regions around the world.

#### Way Forward

- Water and soil conservation measures must be put in place to protect agriculture from dry spells

and ensure enough water for domestic consumption.

- It is necessary for both the rich and the poor to return to their roots and to indigenous communities who have mastered ways to tame disasters.

### 17) Abraham Accords and India

*(GS2: Effect of Policies and Politics of Developed and Developing Countries on India's interests, Indian Diaspora)*

#### Context

- It has been two years since the signing of the historic Abraham Accords agreement.

#### What is Abraham Accord?

- The Abraham Accord is a collaboration between **Israel, the United Arab Emirates and Bahrain mediated by the USA**. It is the **first Arab-Israeli peace deal** in 26 years.
- The accords are named after Abraham to emphasize the **shared origin of belief between Judaism and Islam**, both of which are **Abrahamic religions** that strictly espouse the monotheistic worship of the God of Abraham.



### The Economist

#### Why was it signed?

- To foster new hope for **peace and prosperity in the Middle East.**
- To **bring Israel closer to the Gulf nations** that shared common values and mutual interests, and to take forward the peace initiative.

#### Benefits of Abraham Accord after two years

- Deepening **people-to-people ties and business opportunities.**
- New joint ventures are being undertaken in critical sectors such as clean energy, health, innovation, technology, agriculture, water, trade, tourism, sustainability and much more.
- **Academic collaborations** between universities and activities for **promotion of cultural exchange** in the arts field are being carried out.

#### What benefits does it hold for India?

- **Regional connectivity:** The launch of **direct flights** has increased connectivity between nations to facilitate the movement of tourists, business people and students. The boost to regional connectivity has also benefited the people of India.
  - For example, the thriving Indian diaspora throughout the Gulf can now fly directly from the UAE to Israel or from Israel to Bahrain.
- **Economic cooperation:** The Accords have paved the way for **greater regional and multinational cooperation** through major **commercial collaborations** between companies from the UAE, Israel, Bahrain and the United States with the Indian private sector.

- For instance, High-level economic cooperation between our governments resulted in the formation of the **I2U2 Group**.

### Significance of I2U2 grouping

- The grouping was established by **Israel, India, the UAE, and the United States**.
- The I2U2 Group will focus on joint investments in water, energy, transportation, space, health, and food security.
- I2U2 partners will **mobilise private sector capital and expertise** to help modernize infrastructure, decarbonise industries, improve public health, and promote the development of green technologies.
- I2U2 combines the strengths and resources of each member country to find **innovative solutions to pressing global challenges**.
- It will serve as a **model for multilateral cooperation** with other like-minded countries.

### Conclusion

- India is one of the important partners of the countries which signed the Abraham Accords, and the breadth of cooperation reflects the mutual interests: **Championing a sustainable recovery from the Covid-19 pandemic, expanding trade, addressing climate change, and combating threats to international security and stability**.
- In collaboration with the public and private sectors of all these countries, it is possible to deliver promising results for the entire world.

## 18) A digitally-powered and sustainable innovation hub

### *(GS3: Science and Technology-Developments and their Applications and Effects in Everyday Life)*

#### Context

- This article highlights the vision for India in the 100th year of its Independence and the ways to achieve the vision.
- The author's vision for India in the 100th year of its Independence is that of a **global innovation leader focused on equitable and inclusive economic growth**.

#### How can it be achieved?

##### 1. To foster innovation culture

- I. **Invest in breakthrough ideas and embrace entrepreneurship** as an economic model of growth.
- II. **Enable and support innovative start-ups and businesses and encourage technopreneurs** to grow from small and medium enterprises (SMEs) to large industrial-scale operations.
- III. Aim to be among the **top 20 countries in the Global Innovation Index** by 2047.

##### 2. To build a robust digital economy

- I. **Digital and data-backed innovation combined with an affordable internet** will help India build a robust digital economy of the future.

##### 3. To transform to a digital healthcare system

- I. Coordinate policymaking, funding and implementation in the healthcare system to reap the benefits of technology.
- II. Put in place appropriate **regulatory frameworks** that foster patient trust and privacy, as well as enable faster adoption of emerging technological innovations.

- III. **Raise healthcare spending to 5 percent of GDP by 2047** to truly deliver standardized and quality universal healthcare.

#### 4. To capture higher share of pharmaceutical value chain

- I. Focus on **emerging opportunities** across novel biologics, biosimilars, cell and gene therapies, high-end contract research and manufacturing services, mRNA and other new-generation vaccines, orphan drugs, precision medicines and molecular diagnostics.
- II. Pursue cutting-edge research and innovation, conduct global-scale operations and create a **robust regulatory system**.
- III. **Research Linked Incentives (RLIs)** can provide the impetus for the pharma industry to increase R&D investments, as well as encourage greater industry-academia partnerships.

#### 5. To empower women

- I. Focus more on **women-centric programmes** aimed at ensuring their education, health, economic security, safety and fundamental rights.
- II. Give women the opportunities and freedom to engage in productive work in the economic mainstream.
- III. **Female participation in the formal labour force** in India is currently estimated at a dismal **24 per cent**, among the lowest in developing nations. It is estimated that the Indian economy could grow by an

**additional 60 percent by 2025, adding \$2.9 trillion**, if women were represented in the formal economy at the same rate as men. It is crucial to raise the level of **women's participation in the formal sector to at least 50 per cent** by 2047.

#### 6. Focus on renewable energy

- I. Formulate and implement **environmental change policies that reconcile development and sustainability goals**.
- II. Need to have a fully integrated environmental sustainability in its growth models by focusing on renewable energy and reducing waste, effluents, emissions and consumerism.
- III. Aim to meet **80 percent of our electricity requirements from renewable energy sources by 2047**.

#### What would be the result?

- India will be able to **unleash the power of innovation to ensure a better life for all its citizens**.
- Research and innovation, fuelled by technology will make the country **one of the world's top three economies** and bring it **closer to developed nation status by 2047**.
- Technology can help **boost productivity and efficiency in the sphere of healthcare**. The spurt in technological innovation will empower patients, address the needs of underserved populations and **ensure universal access and affordable care to all Indians by 2047**.
- The **Indian pharma industry**, which is known as "**the Pharmacy of the World**", will be able to grow from the current \$50 billion to **\$500 billion** by 2047 and **rank among the top five countries in**

value terms and No. 1 in volume terms.

### Conclusion

- Creating a digitally empowered society and knowledge economy that is transparent, efficient, and economically inclusive will enable India to emerge as the third largest economy in the world and a true global power by the 100th year of its Independence.

## 19) India- a manufacturing hub: Need and challenges

*(GS2: Government Policies and Interventions for Development in various sectors and Issues arising out of their Design and Implementation)*

### Context

- The global supply chain disruption and geo-political tension of the last few years have made it imperative for India to reduce dependence on China.
- To achieve this objective, it is crucial to focus on our manufacturing sector which can also be a likely solution for India's rising unemployment problem as it has a good job creating potential.

### Challenges in becoming a manufacturing hub

- Infrastructure issues;
- High cost and hurdles in ease of doing business;
- High taxes as well as frequent policy changes;
- **Regulatory failures** in enforcing quality consciousness among manufacturers;
- Increasing dependency on China for both inputs and manufactured goods.

### Why is regulatory failure a big issue?

- India adopts **lower standards than developed countries** in most of the industries such as pharmaceuticals, food, consumer electronics or automobiles. Also

there is the issue of **poor enforcement** of these standards.

- For instance, in **automobiles**, Indian manufacturers routinely export products with higher safety features and safety norms to other markets than the ones they sell to domestic customers.
- **Indian drug makers** exporting medicines, build and operate manufacturing facilities that pass the US Food and Drug Administration's inspections, but the same medicines sold in the domestic market have far less regulatory scrutiny and are made in factories with fewer quality controls.

### Why are stringent quality norms being neglected?

- Indian manufacturers did not have to worry about quality **until the economic liberalization in the 1990s**. Even when the economic reforms started, the gap between what the Indian consumer expected and what consumers in developed markets demanded remained fairly large.
- The Indian middle-class consumer often accepted products that their counterparts in developed countries would reject.

### Government initiatives to promote manufacturing sector

- The **Make in India initiative** was launched in 2014 to facilitate investment, foster innovation, enhance skill development, protect intellectual property and build best in class manufacturing infrastructure in the country. The primary objective of this initiative is to **attract investments from**

**across the globe and strengthen India's manufacturing sector.**

- The government has launched the **Production-Linked Incentive (PLI) Scheme** in 14 key sectors to give companies incentives on incremental sales from products manufactured in domestic units.
- **PM Gati Shakti- National Master Plan (NMP)** was launched recently as a digital platform that connects 16 ministries with a view to **ensuring holistic planning and execution of infrastructure projects.**
- The Government of India has launched a **National Single Window System** involving clearances by Ministries /Departments and States Governments to provide end-to-end facilitation support.
- For creating world class infrastructure through developing nodes, Government of India is developing various **Industrial Corridor Projects** as part of **National Industrial Corridor programme** which is aimed at development of futuristic industrial cities in India which can compete with the best manufacturing and investment destinations in the world.
- **Start-up India** is a flagship initiative of the Government of India, intended to build a strong eco-system for nurturing innovation and Startups in the country that will drive sustainable economic growth and generate large scale employment opportunities.
- The Department for Promotion of Industry and Internal Trade (DPIIT) has developed an **India Industrial Land Bank** (earlier known as Industrial Information System) which provides a GIS-

enabled database of industrial areas including clusters, parks, nodes, zones, etc. across the country to help investors identify their preferred location for investment.

- The government is also implementing **Industrial development schemes** for North-East States, Himachal Pradesh, Uttarakhand and Union Territory of Jammu & Kashmir to boost industrialization in the industrially backward and hilly States.

### Way Forward

- India needs to enforce stringent quality norms for goods produced within the country for both domestic and international consumers if it wants to become a manufacturing hub.

## 20) What should India's FTA agenda be?

*(GS3: Effects of Liberalization on the Economy, Changes in Industrial Policy and their Effects on Industrial Growth)*

### Context

- The world is full of regional trade agreements. India is no exception.
- Through 2012, India signed trade agreements with **Sri Lanka, Bangladesh, ASEAN, Japan and South Korea.**
- After a long gap, India has returned to the FTA negotiating table. Agreements have been signed with **the UAE and Australia**, and negotiations are at various stages of conclusion with **the UK, Canada and the EU.**

### Issues surrounding India's FTA agenda

- FTAs have had **little effect on trade**, accounting for 16 percent of our trade in 2000 and **18.5 percent of it now.**
- **Our major trading partners remain non-FTA countries: The US, China and the EU.**

- FTAs that we signed are **inherently limited**, leaving out many of the highest consumption items or imposing extended tariffs with long adjustment periods.
- By **withdrawing from the Regional Comprehensive Economic Partnership** or RCEP in 2019 India has limited itself from engaging with Asia's supply chain.

### What should our FTA agenda be?

#### Sign FTAs that matter:

- FTAs with countries and areas that **matter to us today or in future have to be prioritized**. For instance we should focus on deals with,
  - with top **current export markets** — the US, EU and Bangladesh
  - top **future export markets** namely, Africa and Latin America.
- In addition to these, India should immediately join the **trade pillar of the Indo-Pacific Economic Framework** as it includes many countries of greatest interest to us including the US, Indonesia, Japan, South Korea, Singapore, Vietnam and excludes China.

#### Expand ambition:

- Focus on signing FTAs with **more and more countries**.
- Focus on making FTAs **wider and deeper** by including more items into the list.
  - For instance, India can aim for **Zero for Zero agreements**, where zero items are excluded from the FTA and a zero tariff often apply in both directions.

#### Foster trade competitiveness:

- India should use FTAs to force competitiveness on firms and firms in turn must force change in all those areas such as infrastructure,

regulation, ease of doing business that reduce competitiveness.

#### Capitalise on China+1 strategy:

- India should take **advantage of China+1 supply resilience**, the world is looking for. It refers to a strategy in which **companies avoid investing only in China and diversify their businesses to alternative destinations**.
- To take advantage of this, India should target items that not only matter now such as white goods, textiles and garments, chemicals and pharmaceuticals, and engineering but also the items that matter in the future such as e-commerce, electric vehicles, and data privacy in FTAs.

#### Conclusion

- Indian industry must believe in our own ability to compete with the best within India and the rest of the world. Trade can then drive the future of Indian industry.

## 21) What's ahead for urbanisation?

*(GS1: Poverty and Developmental issues, Urbanization, their problems and their remedies)*

#### Status of urbanisation in India

- According to the **World Urbanisation Prospects**, released by the **Population Division of the UN Department of Economic and Social Affairs (UN DESA)**, an **urbanisation growth rate of 2.4 per cent** was observed between 2010 and 2018.
- By 2022, India's projected rate of urbanisation was expected to be 35.9 per cent, and by 2047, this is expected to increase to approximately 50.9 per cent.

#### Challenges with India's urbanisation journey

- **Asymmetric pattern of urbanisation**: The states that saw

economic growth urbanised at a faster pace. For instance, **Kerala** has a projected urban population of around 73.19 per cent in 2022. In comparison, states like **Assam** that have a projected population of 15.4 per cent in 2022.

- **Unplanned urbanisation:** Unplanned urbanisation has led to neglecting key elements of urban planning. Eg: Stormwater drains are not planned properly and lakes and rivers are neglected while concretizing urban spaces.

#### Why is planned urbanisation needed?

- Well-planned cities lead to **value creation** through optimal distribution and utilisation of resources.
- It fosters **ease of living and prosperity** through sustainable growth and economic productivity that the residents can benefit from.

#### Global precedents in planning urban spaces

- The **Garden City movement** evolved in the **west** during the 20th century to provide **healthier living spaces for factory workers**. The ideal garden city was planned on a concentric pattern with open spaces, public parks and boulevards etc. Once a garden city reaches maximum capacity, another city would be developed nearby.
- In **the US**, the garden city movement evolved into the **neighbourhood concept**, where residential houses and streets were organised around a local school or community centre, with a push for lowering traffic and providing safe roads.
- **London** has a **metropolitan green belt** around the city, covering 5 lakh hectares of land, to offset pollution and congestion and maintain biodiversity.

- **Paris** has launched the “**15-minute city**” initiative with the idea that every Parisian should be able to do their shopping, work, and recreational activities and fulfil their cultural needs within a 15-minute walk or bike ride.

#### Way Forward

- Every Indian city should ideally have a **Master Plan**, a strategic urban planning document which would be updated every decade or two that also considers poverty mitigation, affordable housing and livability for urban migrants.
- **Urban land use needs to be better** from being informal, unplanned to a **planned one** in order to provide urban services and infrastructure to keep up with growth.
- For instance, in **Mumbai**, almost 1/4th of the land is open public space — while **over half of it is the underutilised space around buildings**. Such open spaces have to be utilised properly.
- Dense construction on the peripheries of our major cities (for instance, dense construction in Delhi’s suburbs, like Noida and Gurugram) will lock India into a **high emissions future** and hence has to be paid attention.
- All ongoing and upcoming urban infrastructure projects must be reconsidered from a **future climate resilience perspective**.
- **Lack of town planning education** in the country necessitates creation of more schools along with a push for local IITs and NITs to have a **standalone planning department**.
- India also needs to focus on the districts lagging behind and push for a faster rate of planned urbanisation.

## 22) Restricted in the Gir

*(GS3: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment)*

### Context

- Despite scientific evidence and a Supreme Court order to translocate lions from **Gir Forest of Gujarat to Kuno National Park in Madhya Pradesh**, the relocation hasn't taken place.

### Asiatic Lion

- It is a population of **Panthera Leo** species that is **found only in the Gir National Park** and the adjoining areas in the state of Gujarat.
- Historically it also inhabited West Asia and Middle East before it became extinct in these regions.
- They are regarded as **Endangered** on **IUCN red list** and are listed in **Schedule I** of the **Wildlife (Protection) Act, 1972**.

### Conservation Efforts

- Because of the conservation efforts by the government, the lion population which was as low as 20 in the late 1800s, significantly rose to **647 in 2020**.
- Long term success of conservation has been made possible through **emphasis on technology for monitoring, enhanced community participation, proper habitat management, promotion of wildlife healthcare**, etc.
- **"Asiatic Lion Conservation Project"** was launched by the Ministry of Environment, Forest and Climate Change (MoEFCC) for three financial years from 2018 to 2021 with an aim to protect and conserve the world's last ranging free population of Asiatic Lion and its associated ecosystem.
- The project has a **"Species Conservation over a large landscape"** approach by

incorporating the participation of various communities in coordination with multi sectoral agencies for habitat improvement, disease control, addressing man animal conflict for overall well being of lions.

### Recent Findings

- Nearly **50 per cent** of Asiatic lion population is found **outside the protected areas**, and their numbers have nearly doubled from 167 to 329, since 2015.
- These findings reveal that the **lion carrying capacity has been exceeded and all future growth will occur outside in areas that are a mix of unprotected forests, wasteland and human habitats**.

### Threats

- Asiatic Lions are also **vulnerable to encroachment, forest fire, natural calamities, poaching and tourism**.
- Due to the limited availability of wild prey in human-dominated habitats, Asiatic lions depend on livestock as well as carcasses dumped outside villages. This greatly increases the **risk of disease transmission**, such as **Canine distemper virus, babesiosis, etc.**
- More than two dozen lions died due to babesiosis and canine distemper virus in 2018 and many more died due to babesiosis outbreak in 2020.
  - **Canine Distemper Virus (CDV)** is a **contagious viral disease** caused by **morbillivirus**, which affects the gastrointestinal tract and central nervous system of animals. It is spread through direct and indirect contact with infected animals and materials. CDV among Gir lions was

primarily due to contact with infected feral dogs.

- **Babesiosis** is a disease caused by **parasites of babesia species**, which destroy red blood cells. The disease is transmitted mainly by ticks which become infected by feeding on infected cattle, rodents, etc. which are the main reservoirs of this parasite.

### Way Forward

- Experts have pointed out that as the sub-population of Asiatic lions is limited to the Gir area, the **entire species was vulnerable to extinction in event of an epidemic or other natural calamities.**
- Hence, they suggested a second population of free-ranging lions by translocating some to a place geographically isolated from Gir as an **“insurance” against such threats.**
- Kuno National Park in Madhya Pradesh has now been selected as the best candidate area for Asiatic lion Relocation. This is essential to **promote population safety and maximize genetic diversity of the lions.**

## 23) All zeroes and ones

*(GS3: Awareness in the fields of IT, Space, Computers, Robotics, Nano-technology, Bio-technology and issues relating to Intellectual Property Rights)*

### Context

- The **Fourth Industrial Revolution (4IR) or Industry 4.0**, conceptualizes rapid change to technology, industries, and societal patterns and processes due to increasing interconnectivity and smart automation.
- To secure India's active involvement in the fourth industrial

revolution, it will be necessary to **restructure vital domestic industries and strengthen institutional capability.**

### Emerging Technologies

- Fourth industrial revolution, simply put, is the **use of different technologies to blur the boundaries between the digital, physical and biological worlds.**
- For instance: US researchers have unveiled a **pacemaker** which monitors vitals such as temperature, oxygen levels and the heart's electrical activity that dissolves in the human body after completing its job. The pacemaker is a near-perfect example of the ongoing 4IR.
- Researchers have also demonstrated the **reproductive ability of the first living robot**, called **xenobots**, created from the stem cells of the African clawed frog and can be programmed using artificial intelligence. When the researchers put the xenobots into a petri dish, they were able to gather hundreds of tiny stem cells inside their mouths and create new xenobots a few days later.
- Once perfected, xenobots could be useful for tasks like **cleaning up microplastics and regrowing or replacing dead cells and tissues inside human bodies.**

### Industrial Revolutions so far

- The **first industrial revolution** used **water and steam power** to mechanize production (1800s). The **second** used **electric power** to create mass production (early 1900s). The **third** used **electronics and information technology** to automate production (late 1900s).
- The **4IR**, which is building on the third revolution, has **data at its core**. It is a collection of nine technologies: **cloud computing**,

**big data, augmented reality, system integration, autonomous robots, cybersecurity, simulation, additive manufacturing, and the internet of things (IoT).**

#### Indian Initiatives for 4IR

- The Union Ministry of Heavy Industries has launched the **Smart Advanced Manufacturing and Rapid Transformation Hub (SAMARTH) scheme**, which brings together manufacturers, vendors, and customers to make them aware of 4IR technologies.
- The Government of India has launched the **Drone Shakti** initiative to facilitate and promote drones as a service through startups. The government has called for drones to be used to spray pesticides and nutrients and to evaluate crops to help agricultural communities.
- In the field of education, **Desh Stack** ecosystem has been launched recently which aims to **empower citizens to skill, re-skill or upskill through on-line training**.
- India is also exploring **digital twin technology** for creating models. A digital twin means creating a highly **complex virtual model** that is the exact counterpart (or twin) of a physical thing, which can be anything from a car, building or even a person.

#### Concerns

- There are fears that technological development will lead to **job destruction**. For example, Automation could be harmful for Indian Railways, with 1.4 million jobs, which is the largest employer in India and the eighth largest in the world.
- Experts warn that as the technologies mature, the **demand for jobs such as artificial**

**intelligence engineers, data scientists and robot maintenance workers, will also shrink.**

- **Developing and least developed countries lack the data framework and infrastructure** necessary for 4IR.
- There are other critical concerns surrounding **safety, ethics and the short- and long-term socio-economic impacts** that remain unanswered.

#### Way Forward

- The success of the 4IR rests on policies and socio-economic acceptance. The need of the hour is a paradigm shift where processes are developed to plug the overall challenges with 4IR to make them more inclusive and acceptable to all.

### 24) A lot is at stake for India-Bangladesh ties

*(GS2: India and its Neighborhood-Relations)*

#### Context

- Following the conclusion of the seventh round of the India-Bangladesh Joint Consultative Commission in June, the two neighbours have expanded their partnership to include **Artificial Intelligence, Fintech, cybersecurity, startups, and connectivity**.
- Both countries are also in the process of starting negotiations for a **Comprehensive Economic Partnership Agreement (CEPA)**.

#### Trade and Connectivity

- Bangladesh is **India's sixth largest trade partner** with **bilateral trade** rising from \$2.4 billion in 2009 to **\$10.8 billion in 2020-21**.
- Bangladesh imports **critical industrial raw material** from

India on which its exports are reliant.

- India and Bangladesh have implemented several projects to boost **eastern India-Bangladesh connectivity**. India's connectivity projects with ASEAN and Bangladesh will **open up the region to economic growth**.
- Bangladesh has **expressed its interest** in joining the **India-Myanmar-Thailand (IMT) highway project**.
  - *The IMT Highway Project is an ambitious project that seeks to connect India with Myanmar and onwards to Thailand, which Delhi hopes will be its gateway to ASEAN.*
- **India-Bangladesh bilateral waterway trade** will get **boosted** as India can now use the **Mongla and Chittagong ports**.
- India is rallying Bangladesh to **divert its exports through Indian ports** in place of **Malaysian or Singaporean ports**.
- **Enhancing connectivity through India's Northeast and Bangladesh** is important for bilateral cooperation.
- Currently, **three express trains and international bus services** operate between Indian and Bangladesh.

### Disputes

- The **sharing of the waters of the Teesta** has remained a thorny issue between the two countries since 1947.
- For West Bengal, Teesta is important to sustain its impoverished farming districts which comprise 12.77% of its population. For Bangladesh, the Teesta's flood plains cover about 14% of the total cropped area of the country and provide direct livelihood opportunities to

approximately 7.3% of the population.

- In **2015**, India and Bangladesh resolved the **decades-long border dispute** through the **Land Swap Agreement**.
- Indian Home Minister Amit Shah recently reviewed the security arrangements in the **Assam-Meghalaya-Bangladesh tri-junction**, which **used to be a smugglers' route**.
- In **2019**, India enacted the **National Register of Citizens and the Citizenship (Amendment) Act**, which created an uproar within and beyond the borders. Bangladesh Prime Minister Sheikh Hasina termed the move as "unnecessary". But her government has mostly kept silent on India's "internal matter" even as political commentators and citizens have feared it could have ripple effects for Bangladesh.

### Regional Geopolitics

- **Chinese inroads** into the neighborhood have been a cause of worry for India. China has been actively pursuing bilateral ties with Bangladesh.
- Bangladesh had successfully approached China for a mega project to enhance Teesta river water flow. Bangladesh also requires China's support in resolving the **Rohingya refugee crisis**.
- Bangladesh is the **second biggest arms market for China after Pakistan**.
- Although memories of 1971 remain, Bangladesh has expressed its interest in establishing **peaceful relations with Pakistan**.

### Way Forward

- For India, the **challenge is to earn the trust and confidence of**

### **Bangladeshis across the spectrum and strata.**

- Both the governments have deepened ties, but the two have failed to resolve long-standing issues such as Teesta water-sharing and killings at the border.
- Just as Bangladeshis remain grateful to India for the generous support extended by India during the Liberation War of 1971, they are equally sensitive to being treated with respect and fairness, no matter who rules their country.

## **25) Geopolitics without geoeconomics**

*(GS2: Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests)*

### **Context**

- Over the past few years, New Delhi has developed a keen desire to be part of the geopolitical developments in the Indo-Pacific.
- It has managed to emerge as a major pivot of the global Indo-Pacific grand strategic imagination, avoided the temptations to militarise/securitise the Quad (Australia, Japan, India and the United States), and has ensured that the Association of Southeast Asian Nations (ASEAN) states do not feel uneasy by the ever-increasing balance of power articulations in the Indo-Pacific.

### **Missing Piece**

- India's decision to take to the Indo-Pacific and Quad in a big way while **unwilling to join two of the region's key multilateral trading agreements** (RCEP & Trade pillar of IPEF) goes to show that geoeconomics and geopolitics are imagined and pursued parallelly in New Delhi, not as complimenting each other.

- The most recent example is India's **refusal to join the trade pillar of the Indo-Pacific Economic Framework (IPEF)** while deciding to join the three other pillars of the IPEF — supply chains, tax and anti-corruption, and clean energy.
- India's move to stay out of IPEF comes two years after India walked out of the negotiations on the **Regional Comprehensive Economic Partnership (RCEP)** which came to effect earlier this year.
- **Both the agreements lay at the heart of the Indo-Pacific and could potentially shape the economic character of the broader Indo-Pacific region.**
- The recent decision to stay out of the IPEF shows a clear policy direction in New Delhi: by not becoming a part of the IPEF and RCEP, and signing FTAs with individual states, New Delhi has made it clear that it **favours bilateral agreements**, and is **not keen on multilateral and plurilateral such as the IPEF.**

### **A regressive step, China factor**

- There are several reasons why New Delhi's decision to stay out of various regional trading agreements is a regressive policy decision.
- For one, the **absence of the world's fifth largest economy** from various regional trading platforms will **invariably boost China's geo-economic hegemony in Asia.**
- Given the growing fear in India about the **negative implications of China-India trade**, it is important to have a **nuanced view** of this. For one, the fear in India of China dominating the Indian market is not entirely unreasonable.

- To be more precise, there is a fear in India that a **deeper Sino-Indian economic partnership** could be **weaponised by Beijing for geopolitical purposes**. And yet, the only viable option to deal with such a challenge is to **prepare for and face the challenge**, even if it means incurring costs in the short term, **so as to eventually overcome the challenge**.
- There is an attempt, however feeble, by countries such as the **U.S. to economically decouple from China**, and to create forums without China on board, the IPEF being one such example.
- In other words, **India must not shy away from trading with China as part of multilateral arrangements** while at the **same time joining arrangements which have no Chinese presence**.
- The second reason why staying out of IPEF is a bad idea is because for India, it would be **hard to integrate itself into the regional and global supply chains without being a part of important regional multilateral trading agreements**.
- Third, we have no option but to **address some of the deeper challenges plaguing the investment and business environment in India**. Even those firms that have left China due to the **so-called U.S. decoupling from China**, have **not turned up at India's doorstep**. Most of them went to countries such as **Vietnam** thereby highlighting the fact that we need to get our house in order; joining some of these multilateral trading arrangements will force us to do precisely that.
- Fourth, if India is indeed serious about its **maritime grand strategy**, which cannot be solely military in nature, it needs to get the states in the region to create economic stakes in India (something China has done cleverly and consistently) and vice-versa.
- More so, without creating economic stakes with the states of the region, India's **'Act East' policy** will revert to its earlier avatar — **'Look East'**. India has an **FTA with the ASEAN**, but it is also important for India to become part of trading arrangements which have major non-regional states so as to become a major part of the region's supply chains.
- Yet another impact of India's hesitation about joining regional multilateral trading arrangements is its **potential regional economic isolation**. The less India engages with the region economically, and the more China does so, and given the Sino-Indian rivalry, India might risk getting economically isolated in the broader region.

#### Missing Indo-Pacific moment

- The most important long-term consequence of New Delhi's decision not to join the RCEP or the IPEF is that **India will miss out on the unfolding Indo-Pacific moment in a big way**.
- The **Indo-Pacific and the Quad are not military arrangements**. They could be characterised as **geoeconomic instruments** which will allow its key members to pursue their geopolitical interests.
- If so, by deciding not to be a part of two of the Indo-Pacific's key trade agreements, New Delhi may have effectively undermined the pursuit of its own geopolitical interests in the region.

### The door is still open

- New Delhi should rethink its geo-economic choices if it is serious about enhancing its geopolitical influence in the region.
- Given that **India has not closed the door on the trade pillar of the IPEF**, we have an opportunity to **rethink our position**.
- In fact, India should also **reconsider its decision not to join the RECP** and seek to join the **Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)** from which the U.S. walked out and China is seeking to join.
- If joining all three is too radical for New Delhi, India should start with the IPEF and the CPTPP, both of which do not have China on board.
- India should also proactively lobby to become a part of the **Minerals**

**Security Partnership**, the U.S.-led 11-member grouping to secure supply chains of critical minerals.

### Way Forward

- If indeed, India seeks to be a part of the Asian century and its economic growth story in particular (China's share in global trade today is 15% and India accounts for 2%), it must let go of its historical hesitations and phobias regarding multilateral trading arrangements.
- To that extent, the current policy of pursuing geopolitical ends without geo-economic ballast is ill-thought out.

### Model Questions

- 1) A multipronged approach is needed to overcome the challenges faced by indigenous communities in expanding and preserving their knowledge systems. Discuss.
- 2) Culture subsumes within its scope the 'way of life' of communities. In the light of the above statement, discuss popular forms of tribal art, dance and music.
- 3) What are the major challenges for tribal education? Discuss how far the government measures had helped in addressing them.
- 4) Discuss the evolution of Tribal Development Strategies in India.
- 5) List out various initiatives of Government of India for the welfare of tribals and suggest measures to improve their effectiveness.
- 6) How has the Counter-Terrorism Scenario in Jammu & Kashmir changes in the recent days. Discuss the emerging threats and suggest measures to counter the same.
- 7) Critically analyse the role of Centre for Bay of Bengal Studies in developing the Look East Policy of India.
- 8) Critically analyse the Draft National Tourism Policy 2022 and its potential on developing India as one of the best tourism destinations in the world.
- 9) Explain the role of old age pensions in improving the livelihood of elderly population.
- 10) Critically analyse the need for cyber infrastructure in the modern 5G India.
- 11) Equal pay for equal work boosts empowerment of women. Critically analyse the above statement.
- 12) Patent ecosystem needs systemic change in India. Comment
- 13) Discuss the role of departmental related standing committees in parliamentary democracy.
- 14) With great power comes great responsibility. Critically analyse the above statement with respect to India's hosting of G20 summit.
- 15) Critically analyse the need for women in STEM Background as well as in the corporate world.
- 16) The process of Desertification does not have climate boundaries. Justify with examples.
- 17) What is Abraham Accord? What significance does it hold for the signatory countries and India?

18) Explaining the potential of India to become a global innovation leader. Enumerate the steps to be taken in this direction.

19) What are the challenges faced by the Indian manufacturing sector? Mention the steps taken by the Government of India to boost the manufacturing industry.

20) Has the Free Trade Agreements served India well? How should India reshape its FTA agenda to tap its full benefits?

21) There is a pressing need for planned urbanisation for India to reap the full benefits arising out of urbanisation. Comment.

22) In recent times epidemics have become a major threat to biodiversity conservation. Critically analyze this statement in light of disease outbreaks in Gir National Park.

23) Define Fourth Industrial Revolution (4IR). How does it have the potential to affect our everyday lives?

24) Explain the deep rooted ties between India and Bangladesh from 1971.

25) Both bilateral agreements and multilateral agreements are necessary for the economic growth of the country. Critically analyse the above statement in light of India not joining the trade pillar of IPEF.