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GS 2 : Polity, Governance, International Relations

1. Decision soon on oxygen use for industrial purposes

What's in News?

The government would take a decision to lift restrictions on the use of liquid oxygen for industrial purposes as soon as possible.

- In the backdrop of a **shortage of oxygen supply for treating the COVID-19 patients**, the Centre **had banned the supply of oxygen for industrial purposes**.

Industrial applications of oxygen:

- Multi-industry uses are gas welding, gas cutting, oxygen scarfing, flame cleaning, flame straightening, etc.
- It is used in **steel production**. Oxygen is used for **decarburization** (the process of decreasing the level of carbon in metals) and the conversion of hot metal formed in a blast furnace to liquid steel.
- In the **petroleum industry**, it finds application in coal gasification, manufacture of ethylene oxide, propylene oxide, synthesis gas, etc.
- Oxygen is used **in the conversion of air-fuel combustion systems into oxy-fuel combustion systems** for high efficiency and reduction of emissions of oxides of nitrogen.
- Oxygen is used as a **bleaching chemical in paper manufacturing** (pulp bleaching).

2. Thousands of Rohingya protest at Bhashan Char

Context:

Several thousand Rohingya staged protests against living conditions on the Bhashan Char island – a cyclone-prone island off Bangladesh.

- The protest coincided with an **inspection visit by officials from the United Nations refugee agency (UNHCR)**.

Details:

- Rohingya refugees who fled Myanmar in 2017 have been made to live in refugee camps near the Bangladesh-Myanmar border.
- About 8,50,000 people live in poor and cramped conditions in the **Cox Bazar region in Bangladesh.**
- In December 2020, the Rohingyas were **moved to the Bhashan Char island** from **vast camps on the mainland.**
 - Bangladesh has shifted 18,000 out of a planned 1,00,000 refugees to the low-lying silt island of Bhashan Char from the **Cox's Bazar region.**

Issue:

- Bhasan Char is **vulnerable to going under water from tides and flooding.**
- Much of it **gets submerged during the monsoon.**
- Located **near the mouth of the river Meghna** where it flows into the Bay of Bengal, Bhasan Char surfaced only in 2006 from the sediment deposited by the river.

3. As births decline, China to allow couples to have third child

Context:

China will for the first time allow couples to have a third child.

Details:

- The latest decision comes in a further relaxation of family planning rules five years after a “two-child policy” failed to boost birth rates.
- The announcement comes as a part of the **major policy measures to actively address the ageing of the population.**
- It comes in the backdrop of the release of China’s **once-in-a-decade population census** that pointed to **an alarming decline in births.**
 - According to the census, the age group of 60 and over constitute 18.70% of the population.
 - Those in the 15-59 age group were down by 6.79% since 2010 and accounting for 63.35% of the population.
 - China’s workforce in the 15-59 age bracket peaked at 925 million in 2011.
 - That number was down to 894 million in this census and would drop to 700 million by 2050.
 - Forecasts say the **population in China could peak** in the next couple of years and most likely by **2025, when India will become the world’s most populous country.**

China’s Concerns:

- China introduced a “two-child policy” in 2016, but the wide consensus is that it **failed to have the desired impact**.
 - **Financial pressure** is considered one main reason.
- The **ageing crisis** might be the biggest challenge the Chinese nation faces in the next century.
- The **projected drop in the working-age population by 2050** is also a major concern.

4. 'It's time to define limits of sedition'

Context:

The Supreme Court (SC) asserted that it was time to **define the limits of sedition**.

Background:

The SC, while doing so protected two **Television channels** from any **coercive action by the Andhra Pradesh government for their reportage of the COVID-19** pandemic in the State.

Details:

- A three-judge SC Bench pointed out **indiscriminate use of the sedition law against critics, journalists, social media users, activists and citizens** for airing grievances **about the governments' COVID-19 management**, or even for **seeking help to gain medical access**.
- It was asserted that the **ambit and parameters of the provisions of Sections 124A (sedition), 153A and 505 of the Indian Penal Code 1860 would require interpretation**.
- It said, **limits must be defined** particularly in the context of the **right of the electronic and print media to communicate news, information and the rights**, even those that may be **critical of the prevailing regime** in any part of the nation.
- Besides, the SC had categorically told the States **not to initiate penal action against the critics of COVID-19 management measures** in an earlier order.
 - It ordered to immediately cease any direct and indirect threats of prosecution and arrest to citizens, who air their grievances.

What is Sedition?

The **IPC Section 124 A** says, “Whoever, by words, either spoken or written, or by signs, or by visible representation, or otherwise, brings or attempts to bring into hatred or contempt, or excites or attempts to excite **disaffection towards the Government established by law in India** shall be **punished with [imprisonment**

for life], to which fine may be added, or with imprisonment which may extend to three years, to which fine may be added, or with fine.

5. Recognising caste-based violence against women

Intersectionality:

- Intersectionality is an analytical framework for understanding how **aspects of a person's social and political identities combine to create different modes of discrimination and privilege.**
- Intersectionality identifies multiple factors of advantage and disadvantage. Examples of these factors include gender, caste, sex, race, class, sexuality, religion, disability and physical appearance. These intersecting and overlapping social identities may be both empowering and oppressing.

Intersectional approach to feminism:

- An intersectional approach to feminism acknowledges that while women share similar experiences of discrimination, harassment, sexism, inequality and oppression on the basis of their sex and gender, not all women are equally disadvantaged or have equal access to resources, power and privilege.
 - For example, intersectional discrimination faced by black women in the U.S., intersectional discrimination faced by women from SC and ST classes in India.
- Thus intersectionality approach seeks to **recognise the multiple grounds of marginalisation faced by women.**

Patan Jamal Vali v. State of Andhra Pradesh case:

- The Supreme Court in its judgement in the Patan Jamal Vali v. State of Andhra Pradesh case addresses this **intersectionality of caste, gender and disability.**
- The Supreme Court, argued for such an intersectional approach, to take into account the multiple marginalities that the rape victim had to face and which could have contributed to her facing sexual violence. It noted how multiple sources of oppression operated cumulatively to produce a specific experience of subordination for the blind Dalit woman.

6. Ending encryption

Context:

- WhatsApp has moved the Delhi High Court against **the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules 2021**.

Details:

- The one major cause for concern raised by WhatsApp is Rule 4(2) of the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021.
 - Rule 4(2) of the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 imposes an obligation on significant social media intermediaries providing a messaging function, to ensure **traceability of the originator of information** on their platforms.
 - A “significant social media intermediary” is one with more than 50 lakh registered users.
 - Failure to implement the traceability obligation by the intermediaries can lead to them being held responsible for any illicit content on their platforms and thus the companies could lose their ‘safe harbour’ protection.
 - The safe harbour protection gives the social media intermediaries protection against liability (civil as well as criminal) for content posted on their platform by third party users. The safe harbour protection is granted under Section 79 of the IT Act.

WhatsApp’s arguments:

- WhatsApp’s argument is that the traceability provision of the new rules would require it to **break its end-to-end encryption service** which would **amount to the encroachment of user privacy**.
 - End-to-end encryption service allows messages to be read only by the sender and the receiver thus enabling privacy protections.

Government’s argument:

- The Government primarily relies on the argument that **privacy is not an absolute right**, and that the traceability obligation is only a reasonable restriction on the right to privacy.
- The government argues that the traceability provision is in line with the K.S. Puttaswamy judgment which held that any restriction to the right of privacy must be necessary, proportionate and includes safeguards against abuse.

- The government's main line of argument in favour of the traceability guidelines is that such powers would be **vital to law enforcement in dealing with and tackling harmful online content**.
- The Ministry of Electronics and IT has stated that the traceability measure will be **used by law enforcement as the "last resort"** and in the absence of any alternatives. Also, it will only be **used in specific situations**, such as for prevention, detection, investigation, prosecution or punishment of offences related to the sovereignty and integrity of India, child sexual abuse material, etc.
- The intermediaries are mandated to undertake traceability **subject to an order being passed by a court or government agency**.

Counter arguments:

- The article discusses some of the major concerns regarding the new IT rules.

Against the judiciary's observations in the K.S. Puttaswamy case:

- As against the government's claim that the concerned provision is in line with the K.S. Puttaswamy judgement, the article argues that a closer analysis reveals that the **traceability provision in fact goes against the basic tenets of the judgement**.
 - The Supreme Court of India in the K.S. Puttaswamy judgement has clarified that **any restriction on the right to privacy must be necessary, proportionate and includes safeguards against abuse**.

Not proportionate:

- The general obligation to enable traceability as a systemic feature is not proportionate.
- There could be an immense adverse impact of the traceability provision on the general digital ecosystem in terms of the overall cybersecurity and privacy concerns.
- **The general weakening of the encryption regime would compromise the privacy and security of all individuals at all times**, despite no illegal activity on their part.

Lack of safeguards:

- The Rules lack effective safeguards by **failing to provide any system of independent oversight over tracing requests** made by the executive.
- The lack of safeguards like independent or judicial oversight in enforcing traceability would allow government agencies to seek user's identity and this could compromise the anonymity of whistle-blowers and journalistic sources.

Availability of alternate avenues for government:

- The Government already has **numerous alternative means of securing relevant information to investigate online offences**.
 - The Government is empowered to seek access to encrypted data under **Section 69(3) of the IT Act, and Rules 17 and 13 of the Information Technology (Procedure and Safeguards for Interception, Monitoring and Decryption of Information) Rules, 2009** under which intermediaries are required to assist the administration with decryption when they have the technical ability to do so and when law enforcement has no other alternative.
 - The administration is also empowered to seek unencrypted data, metadata and digital trails from intermediaries.
- The **Justice B.N. Srikrishna Committee report of 2018** recognizes the surveillance powers of the Government as being vast and overreaching.

Lack of scrutiny:

- There has been a **lack of adequate consultation** with the stakeholders prior to the introduction of the traceability provision under the new rules.
- Ideally, the new Rules should have been put through a period of consultation before being notified.

Conclusion:

- While there are problems in the digital ecosystem that are often exacerbated or created by the way intermediaries function, ill-considered regulation such as the new IT Rules is not the way forward.
- While the weakening of encryption systems will no doubt make it easy for law enforcement agencies in dealing with online challenges, **the costs involved in weakening the encryption regime seem to be high**.
- The Government needs to revisit the provisions on traceability and instead **revise and reform the IT Act, 2000** in line with existing global best practices, also legislate the long-pending **Data Protection Bill**. This would be a more viable long term solution to tackle the challenges in the digital ecosystem.

GS 3 : Economy, Science and Technology, Environment

7. GDP shrinks by 7.3%; Q4 uptick moderates 2020-21 carnage

Context:

India's Gross Domestic Product (GDP) **contracted by 7.3% in 2020-21**, as per provisional National Income estimates released by the National Statistical Office.

Details:

- This is the **first full-year contraction in the Indian economy in the last four decades** since 1979-80, when GDP had shrunk by 5.2 per cent.
- GDP growth in 2019-20, prior to the COVID-19 pandemic, was 4%.
- The Gross Value Added (GVA) shrank 6.2% in 2020-21, compared to a 4.1% rise in 2019-20.
- Only two sectors recorded positive GVA growth – **agriculture, forestry and fishing**, which rose 3.6%, and **electricity, gas, water supply and other utility services** (up 1.9%).
- According to economists, these numbers would **moderate growth prospects for 2021-22 through the base effect**, even as the burden of the virus is hurting economic activity.
- The **combination of the second wave and the revised base effect** may imply a lower GDP growth for the Indian economy for 2021-22.

Fiscal Deficit:

- **Higher tax collections helped arrest fiscal deficit** (excess of government expenditure over revenue) **at 9.3 per cent of the GDP in FY21** as against 9.5 per cent projected previously.
- Before the outbreak of the pandemic, the fiscal deficit had soared to a seven-year high of 4.6 per cent of GDP in 2019-20 mainly due to poor revenue growth.
- The government has pegged the **fiscal deficit during the current 2021-22 fiscal at 6.8 per cent of GDP**.

Note:

- The National Statistical Office has attributed the improvement over its earlier growth estimates, to the **improved performance of indicators, used in the compilation of GVA**, in the fourth quarter of 2020-21.
- The NSO also warned that **data collection had been impacted** as much as any other activity by the pandemic, so its **estimates could undergo sharp revisions**.

8. Defence Ministry notifies 108 negative imports

Context:

The Defence Ministry has notified the **second negative import list**.

Details:

- The negative import list has been renamed as the '**positive indigenisation list**'.
- The **108 items in the list** can now be **only purchased from indigenous sources**.
- The new list takes the total number on the list to 209.
- Indigenisation of defence purchases is planned to be **implemented progressively with effect from December 2021 to December 2025**.

Second positive indigenisation list:

- It comprises complex systems, sensors, simulator, weapons and ammunitions like helicopters, next generation corvettes, Air Borne Early Warning and Control (AEW&C) systems, tank engines, medium power radar for mountains, Medium Range Surface to Air Missile (MRSAM) weapon systems and many more such items.
- It lays special focus on **weapons and systems which are currently under development/trials** and are likely to translate into firm orders in the future.
- **Import substitution** of ammunition which is a **recurring requirement** has been given special focus.

Significance:

- The government wants to **reduce the dependence on imported items** in defence and give a **push to the Atmanirbhar Bharat initiative**.
- The domestic industry is given **the opportunity to manufacture for fulfilling the needs of the armed forces**.
- The manufacturers could be private sector players or Defence Public Sector Undertakings (DPSUs).
- It provides an **excellent opportunity for start-ups and Micro, Small and Medium Enterprises (MSMEs)**.

9. New IT Rules is not the way forward

Traceability clause and issues involved

- **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021** imposes certain obligation on significant social media intermediaries.
- Rule 4(2) puts an obligations to **ensure traceability of the originator** of information on their platforms.
- Consequently, WhatsApp has filed a petition in the Delhi High Court.
- WhatsApp contends that the mandate for **traceability violates the privacy rights of Indian citizens**, by rendering WhatsApp unable to provide encrypted services.

Government's response

- The Government primarily relies on the argument that: **privacy is not an absolute right**, and that the traceability obligation is **proportionate**, and sufficiently restricted.
- Notably, the new Rules mandate traceability only in the case of significant social media intermediaries i.e. those that meet a user **threshold of 50 lakh users**, which WhatsApp does.
- Traceability is also subject to an order being passed by a court or government agency and only in the absence of any alternatives.
- While it is indeed true that **privacy is not an absolute right**, the Supreme Court of India in the two **K.S. Puttaswamy decisions of 2017 and 2018** has laid conditions for restricting this right.
- In Puttaswamy cases, the Supreme Court clarified that any restriction on this right must be **necessary, proportionate and include safeguards against abuse**.

Issues with traceability

- **Not proportionate:** A general obligation to enable traceability as a systemic feature across certain types of digital services is neither suitable nor proportionate.
- **No safeguard against abuse:** The Rules lack **effective safeguards** in that they fail to provide any **system of independent oversight** over tracing requests made by the executive.
- This allows government agencies the ability to seek any messaging user's identity, virtually at will.
- **Presumption of criminality:** Weakening encryption – which a traceability mandate would do – would **compromise the privacy and security of all individuals** at all times, despite no illegal activity on their part, and would create a **presumption of criminality**.

Way forward

- **Explore the alternatives:** The Government already has **numerous alternative means of securing relevant information** to investigate online offences including by accessing unencrypted data such as metadata, and other digital trails from intermediaries.
- **Already has ability to access encrypted data:** The surveillance powers of the Government are in any case vast and overreaching, recognised even by the Justice **B.N. Srikrishna Committee report of 2018**.
- Importantly, the Government already has the **ability to access encrypted data under the IT Act**.
- Notably, Section 69(3) of the **Information Technology Act** and Rules 17 and 13 of the Information Technology Rules, 2009 **require intermediaries to assist with decryption** where they have the technical ability to do so, and where law enforcement has no alternatives.
- **Judicial scrutiny of Section 79 of IT Act:** The ability of the government to issue obligations under the guise of “due diligence” requirements under Section 79 of the IT Act must be subject to judicial scrutiny.
- **Legislative changes needed:** The long-term solution would be for legislative change along multiple avenues, including in the form of revising and reforming the now antiquated IT Act, 2000.

Conclusion

While, undoubtedly, there are numerous problems in the digital ecosystem that are often exacerbated or indeed created by the way intermediaries function, ill-considered regulation of the sort represented by the new intermediary rules is not the way forward.

THE INDIAN EXPRESS

GS 2 : Polity, Governance, International Relations

1. EPFO and ESIC Extension To Covid-Hit Families

Why in News

Recently, the government has announced an **extension of pension coverage and insurance benefits** for families of those who died due to **Covid-19**.

- The pension coverage will be extended under the **Employees' state Insurance Corporation of India (ESIC) scheme** and insurance benefits under the **Employees' Deposit-Linked Insurance (EDLI) scheme** for members registered under the **Employees' Provident Fund Organisation (EPFO)**.

Key Points

- **Extension of Benefits Under ESIC Scheme:**
 - **All dependent family** members of such persons (who died of Covid) will be eligible for a pension **equivalent to 90%** of the average daily wage drawn by the worker as per the existing rules.
 - This benefit will be available retrospectively with effect **from 24th March 2020 till 24th March 2022**.
 - The eligibility conditions for the **ESIC** benefits are likely to include the norm that the insured person must have been registered on the **ESIC online portal** at least **three months prior** to the diagnosis of **Covid resulting in death**, the insured person must have been employed for wages and contributions for **at least 78 days**.
- **Under EPFO-EDLI:**
 - The maximum insurance benefit has been increased to **Rs 7 lakh from Rs 6 lakh**.
 - The **provision of minimum** insurance benefit of **Rs 2.5 lakh** has been restored and it will apply retrospectively from February 2020 for the next three years.
 - Benefits are being made available to families of **even those employees** who may have changed jobs in the **last 12 months preceding his/her death**.
 - All surviving dependent family members of **EPFO** are eligible to avail **benefits of EDLI** in case of death of the member.
 - **About 6.53 crore** families are expected to be eligible.

Employees' State Insurance (ESI) Scheme

- **About:**
 - It is a multidimensional social system which provides **socio-economic protection** to the **worker population** and immediate dependent or family covered under the **ESI scheme**.

- The ESI is an integrated measure of **social Insurance** embodied in the **Employees' State Insurance Act, 1948**.
- **Coverage:**
 - ESI Act **applies** to all factories and notified establishments located in implemented areas **employing 10 or more persons** and is applicable on employees drawing wages up to **Rs 21,000 per month (Rs 25,000 for persons with disabilities)**.
 - It covers about **3.49 crore of family** units of workers and provides cash benefits and medical facilities to **13.56 crore beneficiaries**.

Employees' Deposit-Linked Insurance

- It is an insurance cover provided by the EPFO for **private sector salaried employees**. It was **launched in 1976**.
 - **Any employee** who has an **EPF account** automatically becomes eligible for the **EDLI** scheme.
- The registered nominee receives a lump-sum payment in the event of the death of the person insured, during the period of the service.
 - It applies to **all organisations registered under the Employees Provident Fund and Miscellaneous Provisions Act, 1952**.
- The **EDLI** scheme is managed on the basis of **0.5%** of monthly wages **paid by the employer** to the fund and there is no employee contribution. The nominee registered by the employee is eligible to claim the benefit under the scheme.

Employees' Provident Fund Organisation

- It is a government organization that manages provident fund and pension accounts for the workforce engaged in the organized sector in India.
- **It implements the Employees' Provident Fund (EPF) and Miscellaneous Provisions Act, 1952.**
 - **The Employees' Provident Fund and Miscellaneous Provisions Act, 1952** provides for the institution of provident funds for employees in **factories and other establishments**.
- It is administered by the **Ministry of Labour & Employment**, Government of India.

Employees' Provident Funds Scheme

- **EPF** is the main scheme under the **Employees' Provident Funds and Miscellaneous Act, 1952**.
- It offers the institution of provident funds for factory employees and other establishments.

- The **employee and employer** each contribute **12% of the employee's** basic salary and dearness allowance **towards EPF**.
 - The **Economic Survey 2016-17** had suggested that employees be allowed to choose whether or not to save 12% of their salary into EPF or keep it as take home pay.
- As per **current laws**, a person mandatorily becomes a member of **EPF** if his monthly salary does not **exceed Rs. 15,000**.

2. Horticulture Cluster Development Programme

Why in News

The **Ministry of Agriculture and Farmers Welfare** has launched the **Horticulture Cluster Development Programme (CDP)** in order to **promote the export of horticultural produce**.

- **Horticulture** is the branch of plant agriculture dealing with garden crops, generally fruits, vegetables, and ornamental plants.

Key Points

- **Cluster Development Programme (CDP):**
 - **About:**
 - It is a **central sector programme** aimed at growing and developing identified horticulture clusters to make them globally competitive.
 - **Horticulture cluster** is a regional/geographical concentration of targeted horticulture crops.
 - **Implementation:**
 - It will be implemented by the **National Horticulture Board (NHB)** of the **Ministry of Agriculture and Farmers' Welfare**.
 - In a **pilot phase**, the programme will be **implemented in 12 horticulture clusters out of the total 53 clusters** selected for the programme.
 - These clusters will be implemented through **Cluster Development Agencies (CDAs)** which are appointed on the recommendations of the respective State/UT Government.
 - **Objectives:**
 - To address all **major issues related to the Indian horticulture sector** including pre-production, production, post-harvest management, logistics, marketing and branding.
 - To leverage **geographical specialisation** and promote integrated and market-led development of horticulture clusters.

- To converge with other initiatives of the Government such as the **Agriculture Infrastructure Fund**.
- **Expected Benefit:**
 - The programme will benefit about **10 lakh farmers** and is expected to attract **an investment of Rs. 10,000 crore** when implemented in all the 53 clusters.
- **Horticulture Sector in India:**
 - **India is the second-largest producer of horticulture crops globally**, accounting for approximately 12% of the world's production of fruits and vegetables.
 - India is a leader in producing fruits like Mango, Banana, Pomegranate, Sapota, Acid Lime and Aonla.
 - In 2018-19, **Andhra Pradesh followed by Maharashtra and UP** were the **top states in fruit production**.
 - **West Bengal, Uttar Pradesh and Madhya Pradesh** were the **top States in vegetable production**.
 - The **area under horticulture crops increased to 25.5 million hectare in 2018-19**, which is 20% of the total area under foodgrain, and produced 314 million tonnes.
 - **Recent steps taken for this sector:**
 - The Ministry has provided an enhanced allocation of **Rs. 2250 Crore** for the year **2021-22** for '**Mission for Integrated Development of Horticulture**' (MIDH).
 - MIDH is a **Centrally Sponsored Scheme** for the holistic growth of the horticulture sector covering fruits, vegetables, root & tuber crops, mushrooms, spices, flowers, aromatic plants, coconut, cashew, cocoa and bamboo.

Way Forward

- There is tremendous scope for enhancing the productivity of Indian horticulture which is imperative to cater to the **country's estimated demand of 650 Million MT of fruits and vegetables by the year 2050**.
- Some of the new initiatives like focus on planting material production, cluster development programme, credit push through **Agri Infra Fund**, formation and promotion of **FPOs (Farmers Producer Organisations)** are the right steps in this direction.

3. World No Tobacco Day

Why in News

Every year, on 31st May, the World Health Organization (WHO) and global partners celebrate World No Tobacco Day (WNTD).

Key Points

- **Focus of WNTD 2021:**
 - The **theme** for the World No Tobacco Day 2021 is “Commit to Quit”.
 - The **WHO has honoured Indian Union health minister Harsh Vardhan** with **Director-General Special award** for his efforts to control tobacco consumption in India.
 - His leadership was instrumental in the **2019 national legislation** to ban **E-cigarettes & heated tobacco** products.
- **Socio Economic Burden of ‘Tobacco’:**
 - In India, **over 1.3 million deaths** are attributable to tobacco use every year amounting to 3500 deaths per day, imposing a lot of avoidable socio-economic burden.
 - **In addition to the death and diseases** it causes, tobacco **also impacts the economic development** of the country.
 - **Smokers face a 40-50% higher risk** of developing severe disease deaths from Covid-19.
 - As per the **WHO study** (Published in August 2020) titled “**Economic Costs of Diseases and Deaths Attributable to Tobacco Use in India**”.
 - It has been estimated that the **economic burden of diseases and deaths attributable to use of tobacco** in India was as high as **Rs. 1.77 lakh crores**, amounting to **approx 1% of GDP**.
- **Measures towards tobacco control in India:**
 - **India adopted the tobacco control provisions** under **WHO Framework Convention on Tobacco Control (WHO FCTC)**.
 - **Cigarettes and Other Tobacco Products Act (COTPA), 2003:**
 - It replaced the **Cigarettes Act of 1975** (largely limited to statutory warnings- ‘Cigarette Smoking is Injurious to Health’ to be displayed on cigarette packs and advertisements. It **did not include non-cigarettes**).
 - The **2003 Act also included** cigars, bidis, cheroots, pipe tobacco, hookah, chewing tobacco, pan masala, and gutka.
 - **Promulgation of the Prohibition of Electronic Cigarettes Ordinance, 2019:** Which **prohibits** Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage and Advertisement of **e-Cigarettes**.
 - **National Tobacco Quitline Services (NTQLS):** Tobacco Quitline Services have the potential to reach a large number of tobacco users

with the sole objective to provide telephone-based information, advice, support, and referrals for tobacco cessation.

- **mCessation Programme:** It is an initiative using mobile technology for tobacco cessation.
 - India launched mCessation using text messages in 2016 as part of the government's **Digital India initiative**.
- **Decline in Tobacco Consumption:**
 - The prevalence of tobacco use has decreased by **six percentage points** from **34.6% in 2009-10** to **28.6% in 2016-17**.
 - Under the **National Health Policy 2017**, India has set an ambitious target of **reducing tobacco use by 30% by 2025**.

WHO Framework Convention on Tobacco Control

- Governments adopt and implement the tobacco control provisions of the **WHO Framework Convention on Tobacco Control (WHO FCTC)**.
- It is the first international treaty negotiated under the **auspices of the WHO**.
- It was adopted by the **World Health Assembly** (apex decision making body of WHO) on **21st May 2003** and entered into force on **27th February 2005**.
- It was developed in **response to the globalization of the tobacco epidemic and is an evidence-based treaty** that reaffirms the right of all people to the highest standard of health.
- The **FCTC's** measures to combat tobacco use include:
 - **Price and tax** measures.
 - **Large, graphic warnings** on tobacco packages.
 - **100% smoke-free** public spaces.
 - **A ban** on tobacco marketing.
 - Support for **smokers** who want to quit.
 - Prevention of **tobacco industry** interference.

GS 3 :Economy, Science and Technology,Environment

4.AmbiTAG

Why in News

Recently, Indian Institute of Technology (IIT) Ropar, Punjab has developed a **first-of-its-kind IoT (Internet of Things) device - AmbiTag** that records **real-time ambient temperature** during the **transportation of perishable products, vaccines** and even **body organs and blood**.

- The device has been developed under **Technology Innovation Hub - AWaDH (Agriculture and Water Technology Development Hub)** and it's Startup **ScratchNest**.

Agriculture and Water Technology Development Hub

- **AWaDH** is a research center at **IIT Ropar** established with support from the **Department of Science and Technology (DST)** and **Science and Engineering Research Board (SERB)** to carry out extensive research in the **field of agriculture and water**.

Key Points

- **About AmbiTAG:**
 - This is **shaped as a USB (Universal Serial Bus) device**.
 - It is **India's first indigenous** temperature data logger for **cold chain management**.
 - It continuously records the temperature of its immediate surroundings **from -40 to +80 degrees in any time zone for a full 90 days on a single charge**.
 - Most of the similar devices available in the international market record data only for a duration of 30- 60 days.
 - It **generates an alert** when the temperature goes **beyond a pre-set limit**.
 - The recorded data can be retrieved by **connecting the USB** with any computer.
- **Significance:**
 - Besides **perishable items** including **vegetables, meat and dairy products**, it can also monitor the temperature of **animal semen** during transit.
 - The device will be made available to all companies involved in **Covid-19** vaccine transportation from production facilities to the last mile vaccination centers in the country.
 - It is a push towards **Atmanirbhar Bharat** as such devices are being imported by India in a massive quantity from other countries such as **Singapore, Hong Kong, Ireland, and China**.

5.Nano Urea Liquid: IFFCO

Why in News

Recently, the **Indian Farmers Fertiliser Cooperative Limited (IFFCO)** introduced the **world's first Nano Urea Liquid** for farmers across the world.

Indian Farmers Fertiliser Cooperative Limited

- **About:**
 - It is **one of India's biggest cooperative societies** which is **wholly owned by Indian Cooperatives**.
 - **Founded in 1967** with just 57 cooperatives, today it is an amalgamation of over 36,000 Indian Cooperatives with **diversified business interests ranging from General Insurance to Rural Telecom** apart from its core business of manufacturing and selling fertilisers.
- **Objective:**
 - To **enable Indian farmers to prosper through timely supply of reliable, high quality agricultural inputs and services** in an environmentally sustainable manner and to undertake other activities to improve their welfare.

Key Points

- **About:**
 - It is a **nutrient (liquid) to provide nitrogen to plants** as an alternative to the conventional urea.
 - It is **developed to replace conventional urea** and it can **curtail the requirement of the same by at least 50%**.
 - It contains 40,000 mg/L of nitrogen in a 500 ml bottle which is **equivalent to the impact of nitrogen nutrient provided by one bag of conventional urea**.
 - **Conventional urea is effective 30-40%** in delivering nitrogen to plants, while the effectiveness of the **Nano Urea Liquid is over 80%**.
 - Its **effectiveness** has been tested in over **11,000 farmers' fields for 94 crops like rice and wheat**.
 - An average **8% increase in yield** has been witnessed.
- **Developed At:**
 - It has been **indigenously developed at Nano Biotechnology Research Centre, Kalol, Gujrat** in line with **Atmanirbhar Bharat** and **Atmanirbhar Krishi**.
 - India is **dependent on imports** to meet its **urea requirements**.
- **Significance:**
 - **Improves Plant Nutrition:**
 - It has been found effective and efficient for plant nutrition which **increases the production with improved nutritional quality**.

- It will boost a **balanced nutrition program** by reducing the **excess use of Urea application** in the soil and will make the crops stronger, healthier and protect them from **lodging effect**.
 - **Lodging** is the bending over of the stems near ground level of grain crops, which makes them very difficult to harvest, and can **dramatically reduce yield**.
- **Improves Environment:**
 - It will also have a **huge positive impact on the quality of underground water**, a very **significant reduction in global warming** with an **impact on climate change** and **sustainable development**.
- **Increase Farmers' Income:**
 - It is easy on the pocket of farmers and will be effective in **increasing farmers' income**. It will also significantly **bring down the cost of logistics and warehousing**.

6. Disinfection System Vajra Kavach

Why in News

Vajra Kavach is a simple disinfection process that enables Corona Warriors to **reuse their masks and PPEs**.

- The technology has been developed under the **NIDHI-PRAYAS** program initiated by the **Department of Science and Technology (DST)**.

Key Points

- **About Vajra Kavach:**
 - Vajra Kavach's **UV (Ultra Violet)** disinfection system **removes any possible traces of the disease-causing SARS-Cov-2 (Covid-19) virus** from **Personal Protective Equipment (PPE)**, **N95 masks, coats, gloves and gowns**.
 - It **enables reuse** of PPEs and other materials used by healthcare workers.
 - It thus protects not only them, but our environment too, by **helping reduce biomedical waste generation**. It is also making personal protective equipment more available, affordable, and accessible.
- **NIDHI-PRAYAS:**
 - NIDHI-PRAYAS is **National Initiative for Developing and Harnessing Innovation PRomoting and Accelerating Young and aspiring Innovators & startups**.

- The **Department of Science & Technology** has launched a **NIDHI** program under which programmes for setting up of **incubators, seed fund, accelerators** and **'Proof of concept' grants** for innovators and entrepreneurs have been launched.
 - Under **NIDHI, PRAYAS** programme has been initiated in which established **Technology Business Incubators (TBI)** are supported with **PRAYAS grant** to support innovators and entrepreneurs with grants for **'Proof of Concept (PoC)'** and developing prototypes.
 - **PoC** is evidence that a business idea works.
- A maximum grant of **Rs. 220 lakh** is given to a **TBI** for establishing a **PRAYAS Centre** which includes **Rs.100 lakh for PRAYAS SHALA, Rs. 20 lakh** for operational cost of **PRAYAS Centre** and maximum of **Rs. 10 lakh** to one innovator for developing prototype. Funding for ten innovators is given to the TBI in a year.
- **Objectives:**
 - To enable translation of an innovative idea to a prototype.
 - To provide a platform for faster experimentation and modify approaches in the idea to market journey.
 - To generate innovative solutions relevant to local and global problems.
 - To attract a large number of youth who demonstrate problem solving zeal and abilities.
 - To work on their new technology/knowledge/innovation based startups.
 - To enhance the pipeline in terms of quality and quantity of innovative startups to the incubators.

7. Explained: India's GDP fall, in perspective

India's Gross Domestic Product (GDP) contracted by 7.3% in 2020-21.

GDP contraction

There are two ways to view this contraction:

1. One is to look at this as an outlier – after all, India, like most other countries, is facing a once-in-a-century pandemic – and wish it away.
2. The other way would be to look at this contraction in the context of what has been happening to the Indian economy since the regime change.

Impact of the new regime

Let's look at the most important ones.

(1) Gross Domestic Product

- Contrary to perception advanced by the Union government, the GDP growth rate has been a point of growing weakness for the last 5 of these 7 years.
- The GDP growth rate steadily fell from over 8% in FY17 to about 4% in FY20, just before Covid-19 hit the country.
- The economy was already struggling with massive bad loans which were further deteriorated by demonetization and the GST regime.

(2) GDP per capita

- Often, it helps to look at GDP per capita, which is total GDP divided by the total population, to better understand how well-placed an average person is in an economy.
- At a level of Rs 99,700, India's GDP per capita is now what it used to be in 2016-17 – the year when the slide started.
- As a result, India has been losing out to other countries. A case in point is how even Bangladesh has overtaken India in per-capita-GDP terms.

(3) Unemployment rate

- This is the metric on which India has possibly performed the worst.
- First came the news that India's unemployment rate, even according to the government's own surveys, was at a 45-year high in 2017-18 – the year after demonetization and GST.
- Then in 2019 came the news that between 2012 and 2018, the total number of employed people fell by 9 million – the first such instance of total employment declining in independent India's history.
- As against the norm of an unemployment rate of 2%-3%, India started routinely witnessing unemployment rates close to 6%-7% in the years leading up to Covid-19.
- The pandemic, of course, made matters considerably worse.
- What makes India's unemployment even more worrisome is the fact that this is happening even when the labor force participation rate – which maps the proportion of people who even look for a job – has been falling.

(4) Inflation rate

- After staying close to the \$110-a-barrel mark throughout 2011 to 2014, oil prices (India basket) fell rapidly to just \$85 in 2015 and further to below (or around) \$50 in 2017 and 2018.
- On the one hand, the sudden and sharp fall in oil prices allowed the government to completely tame the high retail inflation in the country, while on the other, it allowed the government to collect additional taxes on fuel.
- But since the last quarter of 2019, India has been facing persistently high retail inflation.
- Even the demand destruction due to lockdowns induced by Covid-19 in 2020 could not extinguish the inflationary surge.

(5) Fiscal deficit

- The fiscal deficit is essentially a marker of the health of government finances and tracks the amount of money that a government has to borrow from the market to meet its expenses.
- Typically, there are two downsides of excessive borrowing:
 1. One, government borrowings reduce the investible funds available for the private businesses to borrow (this is called “crowding out the private sector”); this also drives up the price (that is, the interest rate) for such loans.
 2. Two, additional borrowings increase the overall debt that the government has to repay. Higher debt levels imply a higher proportion of government taxes going to pay back past loans. For the same reason, higher levels of debt also imply a higher level of taxes.

On paper, India’s fiscal deficit levels were just a tad more than the norms set, but, in reality, even before Covid-19, it was an open secret that the fiscal deficit was far more than what the government publicly stated.

(6) Rupee vs dollar

- The exchange rate of the domestic currency with the US dollar is a robust metric to capture the relative strength of the economy.
- A US dollar was worth Rs 59 when the government took charge in 2014.
- Seven years later, it is closer to Rs 73. The relative weakness of the rupee reflects the reduced purchasing power of the Indian currency.

What’s the outlook on growth?

- The biggest engine for growth in India is the expenditure by common people in their private capacity.
- This “demand” for goods accounts for 55% of all GDP.
- The private consumption expenditure has fallen to levels last seen in 2016-17.

Prelims Practice Questions

1) Golden Visa System, sometimes seen in the news recently, is being implemented by which of the following countries?

- a. France
- b. Australia
- c. Saudi Arabia
- d. United Arab Emirates

Answer : d

Explanation:

- Actor Sanjay Dutt has recently received his golden visa from the UAE government.

Golden Visa

- The Golden Visa system for long-term residence visas (5 and 10 years) was implemented in 2019 by the United Arab Emirates (UAE).
- It enables the foreigners to live, work and study in the UAE without the need of a national sponsor and with 100% ownership of their business.
- **Benefit** - The main benefit will be security as through the issuance of the Golden Visa; the UAE government provides an extra reason to feel secure for those looking to make the UAE their home.
- **Eligibility** - The Golden Visa is offered to investors, entrepreneurs, individuals with outstanding talents and remarkable students.
- **For 10-year visa** - Investors having no less than AED 10 million worth of public investment (as an investment fund or a company) can apply.
- However, at least 60% of the total investment must not be in the form of real estate and the invested amount must not be loaned, or in case of assets, investors must assume full ownership.
- The investor must be able to retain the investment for a minimum of 3 years as well.
- This 10-year long visa may be extended to include business partners, if each partner contributes AED 10 million.
- The long-term visa can also include the holder's spouse and children, as well as one executive director and one advisor.
- Besides entrepreneurs, individuals with specialised talent may be granted a 10-year visa following accreditations given by their respective departments and fields.
- Their visa will also be extended to their spouses and children.

- **For 5-year visa** - The norms for investors for the 5-year visa are largely similar as that of the 10-year visa, but they must invest AED 5 million.
- Exceptional High school students who rank top in the country (a minimum grade of 95%) and students from certain universities with a GPA of 3.75 or higher upon graduation are eligible for a 5-year visa.
- Foreigners who are looking to set up their business in the UAE may also apply for 5-year visa through the Golden Business Visa scheme.

2) 'Camp David Accords' are related to which of the following countries?

- a. Israel and Egypt
- b. Israel and Saudi Arabia
- c. Israel and UAE
- d. Israel and Jordan

Answer: a

Explanation:

The Camp David Accords were a pair of political agreements signed by Egyptian President Anwar Sadat and Israeli Prime Minister Menachem Begin that normalised connections between Israel and Egypt in 1978.

3) Consider the following statements with respect to Begum Sultan Jahan

1. She was the fourth female ruler of Bhopal and last Begum of Bhopal.
2. She was the first female Muslim Chancellor of Banaras Hindu University.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : a

Explanation:

Begum Sultan Jahan

- Born in 1858, Begum Sultan Jahan ascended the throne in 1901.

- She was the first female Chancellor of Aligarh Muslim University, which she had nurtured during its nascent stage.
- She was a pioneer in the field of education and even authored a book, Dars-e-Hayat, about the education and parenting of young girls.
- To encourage women and promote handicrafts, she organised an exhibition called 'Numaish Masunuaat e Hind' in Bhopal, where she displayed her own creations.
- Queens from other kingdoms, such as Gwalior, Jhanjhar, Sultanpur, Narsinghgarh and Gulburgah also participated and displayed their handiwork.

4) Consider the following statements with respect to Reclining Buddha Statue

- 1. The reclining Buddha statue represents Buddha during his last illness, about to enter Maha Parinirvana.**
- 2. The Reclining Buddha was first depicted in Mathura school of art around 30 BC.**

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : a

Explanation:

Reclining Buddha Statue

- Parinirvana the stage of great salvation after death that can only be attained by enlightened souls.
- Mahaparinirvana of the Buddha is supposed to be a very important event that happened in Kushinagar.
- It is not simply a demise it is the great demise, after which there is no rebirth for him.
- It is a popular iconographic depiction in Buddhism, and is meant to show that all beings have the potential to be awakened and be released from the cycle of death and rebirth.
- The Reclining Buddha was first depicted in Gandhara art, which began in the period between 50 BC and 75 AD, and peaked during the Kushana period from the first to the fifth centuries AD.

5) With respect to Appointments Committee of the Cabinet, consider the following statements:

1. It decides all higher level appointments in the Central Secretariat, Public Enterprises, Banks and Financial Institutions.
2. The committee will be chaired by the Indian Prime Minister.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

Explanation:

- The Department of Personnel and Training (DoPT) under Ministry of Personnel has recently directed that West Bengal Chief Secretary Alapan Bandyopadhyay to report to its office at North Block in Delhi.
- The DoPT order said that the Appointments Committee of the Cabinet (ACC) has approved Mr. Bandyopadhyay's transfer to Delhi under Rule 6(I) of the IAS (cadre) Rules, 1954.
- The said rule pertains to "deputation of cadre officers."
- It says that a cadre officer may, with the concurrence of the State governments concerned and the Central government, be deputed for service under the Central government or another State government. It however adds, "provided that in case of any disagreement, the matter shall be decided by the Central government and the State government or State governments concerned shall give effect to the decision of the Central government."

Current Practice

- Before any officer of All India Services (AIS) is called for deputation to the Centre, his or her concurrence is required.
- The Establishment Officer in DoPT invites nominations from State governments.
- Once the nomination is received, their eligibility is scrutinised by a panel and then an offer list is prepared, traditionally done with the State government on board.
- Central Ministries and offices can then choose from the list of officers on offer.

- AIS officers are recruited by the Centre and they are lent to States.
- The publication of offer list on DoPT's website was discontinued by the government in 2018 amid reports that not many State government officers were willing to come to Centre for deputation.

Cabinet Committees

The following four are the more important cabinet committees:

1. **Political Affairs Committee** - deals with all policy matters pertaining to domestic and foreign affairs
 2. **Economic Affairs Committee** - directs and coordinates the governmental activities in the economic sphere
 3. **Appointments Committee** - decides all higher level appointments in the Central Secretariat, Public Enterprises, Banks and Financial Institutions
 4. **Parliamentary Affairs Committee** - looks after the progress of government business in the Parliament
- The first three committees are chaired by the Prime Minister and the Parliamentary Affairs committee will be chaired by the Union Home Minister.
 - Of all the Cabinet Committees, the most powerful is the Political Affairs Committee, often described as a "Super-Cabinet".

6) Consider the following statements with respect to Tianzhou-2

1. It is a cargo spacecraft of China, which carries supplies, equipment and propellant for the future astronauts.
2. It is the second of 11 missions needed to complete China's first self-developed space station.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

Explanation:

- China has recently docked its cargo spacecraft, **Tianzhou-2**, with its space station's key module Tianhe.
- The **Tianzhou-2**, or **Heavenly Vessel** in Chinese, with a designed life of more than 1 year, carried supplies for future astronauts including food for the Shenzhou-12 crew which will be launched next month for a three-month stay on the station, as well as two tons of propellant.
- Tianzhou-2 is the second of 11 missions needed to complete China's first self-developed space station around 2022, and follows the launch of Tianhe, the first module, in late April.
- The three-module space station will rival the International Space Station (ISS), which is backed by countries including the United States, Russia and Japan.
- China was barred from participating in the ISS by the United States.



Mains Practice Questions

1Q. Examine the objectives and significance of national supercomputing mission in India alongwith the challenges involved. (250 words)

Approach

- Give a brief idea on supercomputing mission
- Mention its objectives
- Enumerate the advantages and challenges

2Q. The present-day food system is one of the main drivers of deforestation and biodiversity loss. Examine. (250 words)

Approach

- Introduce the problem of Deforestation and Biodiversity Loss by giving some facts.
- Examine how food system is related with the above problem.
- Give Conclusion.