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**The world is hardly wired for cyber
resilience (The Hindu, GS-2, Internal
security)**

Context:- Cyber security means securing cyberspace from attack and economic espionage. Cyberspace is nothing but the interconnectedness of IT infrastructure such as Internet, Telecom networks, computer systems etc.

Types of Cyber crimes

1. Cyber defamation: It is defamation with the help of computers.
2. Corporate smear: It is a false rumour about a company
3. Digital forgery: Making use of digital technology to forge a document such as fakes IDs, cheques, currency, passports, visas, etc.
4. Gambling: The world of online gambling, due to its anonymity, unfortunately has many other hazards like danger of illegal use of credit card or illegal access to bank account.

5. Illegal articles: Articles like drugs, guns, pirated software or music that might not be permitted in a territory
6. E-mail spamming: It is an unsolicited message requiring one's time and effort to get rid off.

Recent History of cyber attack:-

- SolarWinds':- Involved data breaches of several wings and departments such as including defence, energy and state of the U.S. government.
- Chinese group Hafnium:- This group exploited serious flaws in Microsoft's software, thus gaining remote control over affected systems.
- DarkSide:- Ransomware attack by Russia, Colonial Pipeline (which is the main supplier of oil to the U.S. East Coast), compelling the company to temporarily shut down operations.
- Stuxnet attack by USA on Iran's Nuclear facility.
- Nobelium:- Next launched a phishing attack on 3,000 e-mail accounts, targeting USAID and several other organisations.
- Ransomware attacks:- These attacks now a days have skyrocketed these demands and payments going into multi-millions of dollars

Why there is need of cyber security in India:-

1. Government's digital push: Government programmes such as Aadhaar, MyGov, Government e-Market, DigiLocker, Bharat Net etc. are a sitting duck for the hackers

2. Start-ups digital push: India is the third largest hub for technology-driven startups
3. Prevent economic loss: It is expected to reach \$20 billion in the next 10 years.
4. Increasing internet users: India ranks 3rd in terms of number of internet users
5. To protect women and children who are more vulnerable such as cyber bullying, online harassment, Child pornography etc.

What is the current Say, Cyber attack is directed towards civilians:

Earlier attacks on civilians were excluded from cyber security. But now we must refine the orientation of cyber security which must comprehensively include civilian cooperation as well as civilian defence.

What is the need or way forward:-

- aware of the nature of the cyber threat to their businesses
- We must take adequate precautionary measures.
- The current pandemic has also created too much data in the health infrastructure. Our health infra is not having that critical cyber security i.e. being capable of breach of data.
- the cyber landscape is poised to undergo more fundamental changes.
- data becomes the world's most precious commodity
- several billion devices interconnected to billions of end point devices exchanging petabytes of sensitive data.
- cybersecurity professionals are now engaging in building a 'Zero Trust Based Environment'
 - Zero Trust Based Environment means

- zero trust on end point devices
- zero trust on identity
- zero trust on the network to protect all sensitive data
- Building deep technology in cyber is essential for ensure the security of critical infrastructure.
- Machine learning and quantum computing present new opportunities
- regular vulnerability assessments and create necessary awareness of the growing cyber threat.

Swarn Singh

Demand stokes illegal rosewood felling (GS-1, Geography, GS-3, environment and ecology)

Context:- A steep demand in the international market for musical instruments and furniture caused illegal felling of the endangered tropical hardwood tree.

What is Evergreen forest:-

- **Conditions for Evergreen Forest:-**
 - **More than 77% humidity required.**
 - **More than 250 cm rain-fall**
 - **More than 25 degree centigrade temperature.**
- **Properties of evergreen forest:-**
 - **They are thickly forested.**
 - **Canopy density is too high.**
 - **Presence of creepers and epiphytes, sparse undergrowth interspersed with clearings**
 - **They occupy about 7% of the earth's surface.**
 - **mostly near the equator.**

Ebony, Mahogany, Rosewood, Rubber Cinchona are the examples of evergreen forests.

About National forestry policy:-

- **The National Forest Policy 1952**
 - **It was aimed at bringing one-third of the total land area with 65% in hilly and 25% in plains under the forest cover.**
 - **It also suggested the extension of tree lands on river/canal banks, roads, railways, cultivable waste and degraded lands.**
- **forest policy was adopted in 1988:**
 - **it's main emphasis was on the protection, conservation, regeneration, and development of forests.**

Laws regarding forestry:- They basically to regulate the use of forests, ban on cutting of trees and encroachment on forest lands:

- **Forest Conservation Act, 1980 was passed for reserved forest areas.**

- Environmental Protection Act gave the Central Government powers to protect and improve the quality of the environment and preventing pollution.
- The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006,
 - It recognizes the rights of forest-dwelling Scheduled Tribes and other traditional forest dwellers over the forest areas inhabited by them and provides a framework for in case of dispute over the land.

Issues in the evergreen rainforest:-

- **Shifting cultivation in the north east and in the southern states.**
- **Illegal felling:- Illegal cutting of tree in the southern states by Jungle mafia**
- **Illegal export to the other countries such as Bangladesh and developed countries.**
- **Jungle mafia problem:- Nexus between criminals and government officials.**



Swarn Singh

Sedition Law

(GS PAPER-2, Fundamental Right

Source- Indian Express)

Context-

- Recently, the decision of the Supreme Court has quashed the sedition charges against a senior journalist. Civil society has hailed this as a rootless development, especially in the context of the rapid increment number of sedition cases filed. Continuous Increment in the number of sedition cases shows the repressive approach to dissent and criticism of the government.
- Recently, Freedom House released a report showing that there is a rise in sedition cases against dissenters. Therefore, as the sedition law is seen as being used to stifle democracy, it should be removed from the statutes.

The objective of Sedition Law-

- To put Reasonable Restrictions: The constitution of India puts reasonable restrictions (under Article 19(2)) that can be imposed on the rights to ensure its responsible exercise and ensure that it is equally available to all citizens of India.
- To Maintain Unity & Integrity: It is said that Sedition laws are helping the government in combating anti-national, secessionist, and terrorist elements.
- To Maintain Stability of State: It helps in protecting the elected government from the practice to overthrow the government with violence and illegal means.

Way Forward-

- Scrapping Sedition Law: There are enough laws in our country to curb external and internal threats to India and there is no need to continue with the sedition law. Therefore it is necessary to abolish the sedition law on the ground that it is used to curb freedom of expression and speech.
- Role of Judiciary: Until the sedition law is scrapped by the parliament, the Supreme Court can use its supervisory powers to sensitize the executive to the constitutional provisions protecting free speech. Further, to avoid the misuse of sedition law, the higher judiciary should narrow down the definition of sedition to address only the issues about the territorial integrity of India as well as the sovereignty of the country.
- Raising Civil Society Awareness: Civil society should take the lead to raise awareness about the arbitrary use of Sedition law.

Khyati Khare

National AI Portal

(GS PAPER-3, Government Policies, and Interventions

Source- The Hindu)

Context-

- The 'National AI Portal', has celebrated its first anniversary on 28th May 2021.

Key Points-

- About the National AI Portal: It is a collaboration of the Ministry of Electronics and IT (MeitY), National e-Governance Division (NeGD), and NASSCOM.
- National e-Governance Division (NeGD): In 2009, NeGD came into place as an Independent Business Division under the Digital India Corporation.
- NASSCOM: It is a not-for-profit industry association, It is one of the apex bodies for the IT and IT-enabled products and services sector in India. It is serving as a central hub for Artificial Intelligence (AI) related news, learning, articles, events, and activities, etc., in India and beyond.
- About Artificial Intelligence (AI): It is discussing the action of machines accomplishing tasks that have historically required human intelligence. It encompasses technologies like machine learning, pattern recognition, big data, neural networks, self algorithms, etc. It

also involves complex things such as saving a particular data into the machine and making it react as per the different situations. Nowadays AI is being used in different industries including finance and healthcare.

Recent Examples of Use of AI in India:

- For the Covid-19 Retaliation: There was an AI-enabled chatbot used by MyGov for ensuring communications.
- In Judicial System: An AI-based portal SUPACE was made assisting judges with legal research.
- In Agriculture: ICRISAT has recently developed an AI-power sowing app, which is utilizing weather models and data on local crop yield and probability of rainfall to more accurately predict and advise local farmers on when they should plant their seeds.
- In Disaster Management: An AI-based flood forecasting model developed in Bihar is now being expanded to cover the whole of India for ensuring around 200 million people get alerts and warnings 48 hours earlier about impending floods.
- In Banking & Financial Services Industry: Some banks in India have started adopting AI to increase digitization to improve customer experience and use algorithms in risk management.

Way Forward-

- Global Lessons: Countries like China, the USA, and Israel are currently showing the way in terms of AI adoption. India can consider a few learnings from these countries to further grade up its AI ecosystem while keeping in mind the overall social development and inclusiveness agenda.
- Clear Central Strategy and Policy Framework: AI adoption in India may be accelerated through the formulation of more focused policies

related to innovation, for example, patent control and security.
Fraudulent use of AI should be managed as well.

- Collaboration among Government, Corporates, and Academia: These three stakeholders should work synergistically to undertake actions like nurturing entrepreneurship, promoting re-skilling, encouraging research and development, and driving the policies on the ground.

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