

GS Paper - 3

Security – Sept'18

New Cyber University

Syllabus: Basics of cyber security

In News

- The Maharashtra Government has taken steps towards setting up a new cyber university
- This university will be dedicated to mitigating cyber threats, which will train 3,000 professionals to fight online space cyber attacks, internet crimes, and conduct cyber forensics.
- It will also impart training in 15 other Internet of Things (IoT) areas such as Data Analytics and Artificial Intelligence (AI).
- The current supply of cyber professionals in the country is about a lakh while the demand hovers around 30 lakh.
- A cyber attack is taking place every 10 minutes as opposed to 12 minutes previously. Against this backdrop, cyber university is being set up as a remedy to these problems.
- Maharashtra is already in the process of setting up its version of the **Indian Computer Emergency Response Team** to ward off external cyber threats.

Data Localisation

Syllabus: Basics of cyber security

In News

- US technology giants and leading Indo-US business advocacy groups plan to intensify lobbying efforts against stringent Indian data localisation requirements.
- According to them, these requirements will undermine their growth ambitions in India.

Background

- Earlier, the RBI had asked all payment companies operating in India to set up data storage facilities within the country in the next six months.
- The central bank in its notification said while the payments ecosystem had grown in India, it needed “unfettered supervisory access” to the transaction data to ensure better monitoring of the network.

What is Data Localisation

- Data localization is the act of storing data on any device that is physically present within the borders of a specific country where the data was generated.
- Free flow of digital data, especially data which could impact government operations or operations in a region, is restricted by some governments.
- Data localization often requires better IT infrastructure and stringent security measures for data related to business operations.

Analysis

- Calls for data localisation are not new. It has been a mainstay of Indian policymakers' demands from foreign technology companies.
- The *Justice Srikrishna Committee* in its report accompanying the draft Personal Data Protection Bill released on July 27 notes that eight of the top 10 most accessed websites in India are owned by U.S. entities. This reality has often hindered Indian law enforcement agencies when investigating routine crimes or crimes with a cyber element.
- Police officials are forced to rely on a long and arduous bilateral process with the U.S. government to obtain electronic evidence from U.S. communication providers. In such scenario, data localization seems to correct this anomaly.
- Post the recent Cambridge Analytica and Facebook data breach controversy, the Indian government is considering asking all global firm to ensure that data of Indians are stored locally.
- Greater use of digital platforms in India for shopping or social networking have made it a lucrative market for technology companies, but a rising number of data breaches have pushed New Delhi to develop strong data protection rules.
- Also, localisation was a global phenomena and India wasn't an outlier. It is in the long term strategic and economic interest of the country
- However, many analysts believe that data localisation is not a perfect solution. According to them, this step is borne of hope that when questions of data access are determined, their storage here will give rise to a strong Indian claim.
- However, this is not true. U.S. law effectively bars these companies from disclosing user data to foreign law enforcement authorities.
- Technology companies are allowed to share data such as content of an email or message only upon receiving a federal warrant from U.S. authorities. This scenario will not change even after technology companies relocate Indian data to India.
- Stricter localisation norms would help India get easier access to data when conducting investigations, but critics say it could lead to increased government demands for data access.
- Technology firms worry the mandate would hurt their planned investments by raising costs related to setting up new local data centres.
- Leading techno giants are claiming that restricting data flowing across borders would risk a country's global competitiveness and economic growth. Also such a move would also not necessarily ensure data protection.
- There is also the risk of a backlash from India's IT export markets, which could result in reciprocal changes that could undermine India as the preferred outsourcing destination.
- The measures are a further move towards breaking up the world into a series of data regimes, a phenomenon sometimes named the "splinternet". This could seriously retard the growth of data-enabled innovation beyond simply the delivery of online services.

e-Sahaj Portal

In News

- The government has launched an online 'e-Sahaj' portal for grant of Security Clearance.

- The aim of this portal is to strike a healthy balance between meeting the imperatives of national security and facilitating ease of doing business and promoting investment in the country.

Key Highlights

- The portal will facilitate an applicant to submit application online and also to view the status of his application from time to time.
- Ministry of Home Affairs (MHA) is nodal Ministry for security clearances in certain sensitive sectors before issue of licence/permit, permission, contract etc, to companies/bidders/individuals by the administrative Ministry.
- The objective of national security clearance is to evaluate potential security threats, including economic threats, and provide risk assessment before clearing investment and project proposals in key sectors.

Background

- Based on the inputs received from the agencies, MHA takes decision to grant or deny security clearance with reference to core national security i.e. unity, integrity and sovereignty of the country.
- There were several projects which were stuck for lack of approval by Intelligence Bureau (IB) or other agencies including the State police. Hence, in order to speed up the process, government had formulated a new policy in 2015.
- The time taken for security clearance for a project was eight-nine months on an average. This has been brought down to 40 days since 2017.

About National Security Clearance Policy

- The national security clearance policy was drawn up by the ministry to fast-track the security clearance process and complete it within 4-6 weeks upon receiving the application as part of Government's ease-of-doing-business mantra under the Make In India initiative.
- The objective of the national security clearance is to evaluate potential threats, visible or embedded, in proposals received by the home ministry and to provide a national risk assessment.
- As per the policy, the promoters, owners and directors of the company are mandated to give self declarations regarding any criminal history on their part, which reduced the period required to give security clearance from 2-3 months earlier to just 4-6 weeks now.
- Security inputs from the Intelligence Bureau, the CBI, the Enforcement Directorate and other agencies are sought only in cases of serious crimes and not in case of minor offences.
- A total of 14-15 parameters have been set out in eight to nine sensitive areas like telecom, ports, civil aviation, uplinking/downlinking of TV channels or FM stations.
- It has also spelt out locations where foreign investment is not welcome such as those close to border and vital installations.
- Strict scrutiny is also proposed to check if the promoters or directors of the company come from China and Pakistan or they are originally from these two countries.

Amendment to DPP-16

In News

- The Defence Acquisition Council (DAC), chaired by Raksha Mantri, has approved several amendment to Defence Procurement Procedures 2016 (DPP – 16).
- This step is taken in an effort to reduce timelines in defence procurements and streamline Defence Procurement Procedures.

Key Highlights

- The new amendment has limited the time period for executing Repeat Order to five years after date of completion of warranty of final delivery in the previous contract.
- Repeat Order provisions have also been extended to procurements by other services like the Central Armed Police Force (CAPF) and Border Roads Organisation (BRO).
- It includes permissions to commence with benchmarking of cost for equipment immediately on receipt of trial report in Service headquarter.
- The amendment has legislating provisions for exchange rate variations when pursuing procurement with 'Option Clause'.

[Also refer the topic DAC Approves Measures to Simplify Defence Procurement Procedure in CA of May 2018]

DPP-2016

- The Ministry of Defence (MoD) had released the revised Defence Procurement Procedure (DPP) in March 2016.
- DPP-2016 draws heavily from the report of the **Committee of Experts under the chairmanship of Dhirendra Singh**, to suggest a policy framework for facilitating 'Make in India' in defence and further streamlining the procurement process.
- The document has aimed to create a new procurement regime with a clear intention to boost the 'Make in India' initiative in the defence sector, and to speed up the procurement process.

Key Provisions:

- **Buy (Indian-IDDM) Procurement Category** - DPP-2016 has introduced a new procurement category, Buy (Indian-Indigenously Designed, Developed and Manufactured), or 'Buy (Indian – IDDM)' to provide a greater thrust to Make in India.
- Outright purchase of equipment and procurements under this scheme are further categorized as Buy (Indian- IDDM), Buy (Indian), and Buy (Global).
- **Priority wise**, the procurement of defence equipment can be arranged as (1) Buy (India-IDDM) (2) Buy (Indian) (3) Buy and Make (Indian) (4) Buy and Make (5) Buy (Global).
- **Higher yet Flexible Indigenous Content Requirement** - the revised DPP has enhanced the indigenous content requirement under the existing 'Buy (Indian)' category from the earlier 30 per cent to 40 per cent. It also provides flexibility to the procurement authorities to stipulate either a higher or lower indigenisation content, depending on the merits of the projects.
- **Revamped 'Make' Procedures** to remove the complexities and thereby efficiency and effectiveness in 'Make' procedures.

- **Institutionalising the RFI Process** - DPP-2016 has institutionalised the request for information (RFI) process, which was followed in not so a disciplined manner under the earlier DPPs. Although the new measure has increased the number of procurement steps involved in 'Buy' and 'Buy and Make' schemes by one more to 12, it has nonetheless brought about much needed clarity in the vital step of procurement.
- **Provision for 'Single OEM, Multiple Bids' and 'Multiple Bids by Single Indian Vendor'** - Accepting the uniqueness of defence procurement, DPP-2016 has incorporated two provisions – 'single OEM, multiple bids' and 'multiple bids by single Indian vendor' – in which although the bids are single-vendor in nature they would not be retracted because of lack of competition.
- **Definition of Indian Vendor** - Providing clarity as to who is an Indian vendor, DPP-2016 defines the same as an Indian entity (which could include incorporation, ownership model, and proprietorship, among others) that is established under the Companies Act or any other applicable regulations.

IAF Test Fires Astra

Indigenization of technology

In News

- The Indian Air Force (IAF) successfully test fired the indigenously developed **Beyond Visual Range Air-to-Air Missile (BVRAAM)** Astra from a Su-30 aircraft.
- The flight test assumes significance as it was part of the series of final pre-induction trials. Astra, deemed to be the best in class weapon system, has undergone more than 20 developmental trials.
- Only a handful of missile builders — in the United States, Russia, Europe and China — have mastered the technologies that go into air-to-air missiles. India is now joining that elite group.
- With air-to-air missiles costing in the region of \$2 million each, the Astra will provide major business opportunities to Indian firms.

Astra

- Astra is an all weather, state of the art missile developed by DRDO.
- It is the first air-to-air missile developed by India.
- Astra is designed to be capable of engaging targets at varying range and altitudes allowing for engagement of both short-range targets at a distance of 20 km and long-range targets up to a distance of 80 km.

India's First Missile Tracking Ship

In News

- Hindustan Shipyard Limited (HSL) is gearing up to undertake sea trials of India's first missile tracking ship by the first week of October.
- Once ready, it will be India's first, a force multiplier and cruise the country into a global elite club.

Key Highlights

- It is being built for National Technical Research Organisation, the technical intelligence agency working directly under supervision of the Prime Minister's Office and the National Security Adviser.
- It is one of the top most secret project of India. It will be named after its induction into the Indian Navy. For now, it is simply referred as VC 11184.
- This will be the first of its kind ocean surveillance ship being built as part of the efforts to strengthen the country's strategic weapons programme.
- The objectives of the VC11184 are two-fold. One, track missiles using the two sensors on-board, the X-Band AESA primary radar and S-Band AESA secondary radar. And, two, gather electronic intelligence.
- There are only four other countries - the US, Russia, China, and France - that have have similar vessels in their arsenal.

India's First Indigenous Anti-nuclear Medical Kit

In News

- Scientists at Institute of Nuclear Medicine and Allied Sciences (INMAS) have developed India's first indigenous medical kit that may ensure protection from serious injuries and faster healing of wounds resulting from nuclear warfare or radioactive leakage.
- This development is being seen as a major shot in the arm for paramilitary and police forces.

Key Highlights

- Developed in India for the first time, it's a potent alternative to similar kits that were till now being procured from strategically advanced nations such as the US and Russia at much higher prices.
- The kit has been developed for the armed, paramilitary and police forces only as they are the first ones likely to get exposed to radiation -- be it during nuclear, chemical and biomedical (NCB) warfare or a rescue operation after a nuclear accident.
- The kit has over 25 items, including radio-protectors that provide 80-90 per cent protection against radiation and nerve gas agents, bandages that absorb radiation as well as tablets and ointments.
- The contents include an advanced form of *Prussian blue tablets*, highly effective in incorporating Radio Cesium (Cs-137) and Radio Thallium, among the most feared radioisotopes in nuclear bombs that destroy human body cells.
- It also has an *Ethylenediaminetetraacetic acid (EDTA)* injection that traps uranium in the guts and blood of victims during a nuclear accident or warfare.
- The kit also has *Ca-EDTA Respiratory Fluid*, which is the inhalation formula for chelation, or grabbing, of heavy metals and radioactive elements deposited in lungs through inhalation at nuclear accident sites.
- The kit has *Radioactive Blood Mopping Dressing* -- a special kind of bandage that absorbs radiation.
- The kit also has a *radioactive urine/biofluid collector* which is cost-effective, easy to store and can safely dispose of the urine of a person affected by radiation.

- The kit has *anti-gamma ray skin ointment* that protects and heals the radiation damage on the skin.
- Also part of the kit is the *amifostine injection*, a US Food and Drug Administration (FDA) approved conventional radiopharmaceutical that limits damage from gamma radiation.
- Another medicine in the form of a tablet is *Indranil 150 mg*. It is being introduced as a reserve emergency drug for services, rescue workers and places where high acute exposures are expected and lives will be at stake.
- Preliminary tests have shown the efficacy of the therapeutic dose and the result shows 80-85 per cent animals may survive at 100 per cent lethal gamma radiation if given as a prophylactic.
- The drugs in the medical kit are 'Made in India', without any foreign counterpart and come with the tag of cost-effective and industrial networking.

Institute of Nuclear Medicine and Allied Sciences (INMAS)

- The Institute of Nuclear Medicine and Allied Sciences (INMAS) is a mandated multidisciplinary laboratory of DRDO engaged in R&D activities in the field of Radiation, Imaging Sciences and CBRN technologies.
- It is located in New Delhi.
- It is involved in Nuclear medicine research and responding to nuclear accidents and explosions.
- Core Competence of INMAS include:
 - Area I: Biological Radioprotection (Radiation countermeasures)
 - Area II: Management of Thyroid Disorders
 - Area III: Nuclear and Medical Imaging