

1. What are the most potent cyber security threats in the age of digital economy? Discuss. Also, comment upon India's preparation to avert cyber security threats.

Introduction

Cyber security refers to the body of technologies, processes, and practices designed to protect networks, devices, programs, and data from attack, damage, or unauthorized access. These cyber-attacks are usually aimed at accessing, changing, or destroying sensitive information; extorting money from users; or interrupting normal business processes.

Body

Most potent cyber security threats in the age of digital economy

- **Phishing:** is the fraudulent attempt to obtain sensitive information such as usernames, passwords and credit card details by disguising oneself as a trustworthy entity in an electronic communication. This results in data theft and loss of sensitive information.
- **Vishing/Social engineering:** Vishing works like phishing but does not always occur over the Internet and is carried out using voice technology.
- **Hacking:** Hackers intrude into others financial domains and make financial transactions into their digital accounts.
- **Cyber Ransom:** Ransomware is a form of malware that encrypts a victim's files. The attacker then demands a ransom from the victim to restore access to the data upon payment.
- **Ineffective firewall system:** This can be ineffective in tackling the virus/corrupt files with an intent to collect crucial information.
- **DDoS Attack:** It is a malicious attempt to disrupt normal traffic of a targeted server, service or network by overwhelming the target or its surrounding infrastructure with a flood of internet traffic. This can be done to disrupt essential public services.
- **Unregulated Cryptocurrency:** Any cyber-attack (Crypto-Jacking) on such financial transactions can be a potential threat with no regulations available.
- **Low end use digital financial education:** With limited awareness about digital financial service, person is always vulnerable to external threats.

India's Preparedness

- **National Cyber Security Policy 2013:** It provides for creating a secure cyber ecosystem. With computer emergency response team (CERT-in) as nodal agency for coordination of cyber security, emergency responses and crisis management.
- **CERT-Fin:** Umbrella CERT for the financial sector and reports to Indian Computer Emergency Response Team (Cert-In) at the national level.

- National Cyber Security and Coordination Centre: intended to screen communication metadata and co-ordinate the intelligence gathering activities of other agencies.
- Cyber Surakshit Bharat Initiative 2018: to spread awareness about cybercrime and building capacity for safety measures for Chief Information Security Officers (CISOs) and frontline IT staff across all government departments.
- Cyber Swachhta Kendras: (Botnet Cleaning and Malware Analysis Centre) is a part of the Government of India's Digital India initiative under the Ministry of Electronics and Information Technology (MeitY) to create a secure cyber space by detecting botnet infections in India and to notify, enable cleaning and securing systems of end users so as to prevent further infections.
- India has also had agreements with several other foreign countries like US, Japan etc to tackle the menace of Cybercrime.

Way Forward

- India should become signatory to cybercrime convention (Budapest Convention) which puts a hurdle in dealing with transborder crime particularly.
- Cyber awareness must be spread and there should be multi-stakeholder approach-technological inputs, legal inputs, strengthening law enforcements, systems and then dealing with transborder crime involves lot of international cooperation.
- Effective and efficient role of National cyber security coordinator who heads the National Cyber Coordination Centre which intends to screen communication metadata and co-ordinate the intelligence gathering activities of other agencies.
- Awareness should be at industry, school, college level and law enforcement level and judiciary.

Conclusion

With estimates of India creating \$1 trillion of economic value from the digital economy by 2025. India should not loose on the cyber-attack front. Government and the private sector jointly have to give cyber security some priority in their security and risk management plan.

2. What does FATF stand for? What is its mandate? India has received some success on this forum recently. Can you discuss that?

Introduction:

FATF stands for The Financial Action Task Force. It was established in July 1989 by a Group of Seven (G-7) Summit in Paris, initially to examine and develop measures to

combat money laundering. The FATF Secretariat is housed at the OECD headquarters in Paris.

Body:

FATF mandate:

In October 2001, the FATF expanded its mandate to incorporate efforts to combat terrorist financing, in addition to money laundering. In April 2012, it added efforts to counter the financing of proliferation of weapons of mass destruction.

The Financial Action Task Force (FATF) defines its mandate as to set standards and promote effective implementation of legal, regulatory and operational measures for combating money laundering, terrorist financing and proliferation of weapons of mass destruction and other related threats. They form the basis for a coordinated response to these threats to the integrity of the financial system and help ensure a level playing field.

The FATF monitors the progress of its members in implementing necessary measures, reviews money laundering and terrorist financing techniques and counter-measures, and promotes the adoption and implementation of appropriate measures globally. In collaboration with other international stakeholders, the FATF works to identify national-level vulnerabilities with the aim of protecting the international financial system from misuse. The FATF is, therefore, a 'policy-making body' which works to generate the necessary political will to bring about national legislative and regulatory reforms in these areas.

India and the Financial Action Task Force (FATF):

India became a member of the Financial Action Task Force (FATF) in 2010. FATF membership is very important for India in its quest to become a major player in international finance. It will help India to build the capacity to fight terrorism and trace terrorist money and help to successfully investigate and prosecute money laundering and terrorist financing offences. India will benefit from securing a more transparent and stable financial system by ensuring that financial institutions are not vulnerable to infiltration or abuse by organized crime groups.

In recent past, Pakistan had asked for India's removal from the group, citing bias and motivated action, but that demand was rejected. However, The Asia Pacific Group (APG) of the Financial Action Task Force (FATF) has put Pakistan in Enhanced Expedited Follow Up List (Blacklist) for its failure to meet its standards. This will benefit India in many ways, such as:

- Pakistan will be put under closer scrutiny immediately to curb terror financing.
- Reduced Pakistan funded terrorist attacks and infiltrations such as Pulwama and Mumbai attacks.
- Economic benefits to India as FATF has increased the cost of doing business with Pakistan which will attract less FDI now.

- Enhanced image of India in international forums as Pakistan will face an international boycott.
- Pakistan's already fragile economy will have a powerful blow which will be in India's favour in international trade.

Conclusion:

India also needs to strengthen its policy to curb money laundering and be vigilant about terror financing in lines with FATF. PMLA and FCRA are good steps in this direction.

3. What are the most common avenues for money laundering in India? Enumerate the measures taken by the government to plug in the legal loopholes to address the problem of money laundering.**Introduction:**

Money laundering is the processes by which large amounts that are illegally obtained is given the appearance of having originated from a legitimate source. Some crimes such as illegal arms sales, terror funding, smuggling, corruption, drug trafficking and the activities of organized crime including tax evasion produce huge money which is required to be 'laundered' to make it look clean.

Body:

There are 3 steps that exist individually and at times overlap each other in money laundering:

- **Placement**-criminally derived funds are introduced in the financial system;
- **Layering**-the funds are then 'washed' and its ownership and source are disguised;
- **Integration**-'laundered' property is re-introduced into the legitimate economy;

Common avenues for money laundering in India:

- **Hawala:** Hawala is an alternative or parallel remittance system. In Hawala networks the money is not moved physically. For ex: A typical Hawala transaction would be like a resident in USA of Indian origin doing some business wants to send some money to his relatives in India. The person has option either to send the money through formal channel of banking system or through the Hawala system. The commission in Hawala is less than the bank charges and is without any complications for opening account or visit the bank, etc. The money reaches in to the doorstep of the person's relative and the process is speedier and cheaper.

- **Shell companies:** These are fake companies that exist for no other reason than to launder money. They take in dirty money as "payment" for supposed goods or services but actually provide no goods or services; they simply create the appearance of legitimate transactions through fake invoices and balance sheets.
- **Structuring Deposits:** Also known as smurfing, this method entails breaking up large amounts of money into smaller, less-suspicious amounts. The money is then deposited into one or more bank accounts either by multiple people (smurfs) or by a single person over an extended period of time
- **Third-Party Cheques:** Utilizing counter cheques or banker's drafts drawn on different institutions and clearing them via various third-party accounts. Since these are negotiable in many countries, the nexus with the source money is difficult to establish.
- **Credit Cards:** Clearing credit and charge card balances at the counters of different banks.
- **Insurance Sector:** The internal channels of laundering money are agent/broker premium diversion, reinsurance fraud and rented asset schemes etc. Phony insurance companies, offshore/unlicensed Internet companies, staged auto accidents, vertical and senior settlement fraud are external channels of money laundering.
- **Open Securities Market:** the securities markets, which are known for their liquidity, may also be targeted by criminals seeking to hide and obscure illicit funds.
- **Cyber crimes:** identity theft, illegal access to e-mail, and credit card fraud are coming together with money laundering and terrorist activities. Large amounts of money is now stored in digital form.
- **Illicit stock options:** Example: Consider an investor 'A' who has incurred significant capital gains in a year. In order to offset these gains, they use illiquid stock options to book losses. The counterparty to these contracts, say investor 'B', books profit in these options. B already has an arrangement with A wherein he retains around 10-15 per cent of the profits made and transfers rest of the money to 'A' through non-banking channels.

(Gambling, Real estate, fictional loans etc. are other avenues used.)

Measures taken by the government to plug in the legal loopholes:

- The Income Tax Act, 1961
- The Conservation of Foreign Exchange and Prevention of Smuggling Activities Act, 1974 (COFEPOSA)
- The smugglers and Foreign Exchange Manipulators Act, 1976 (SAFEMA)
- The Narcotic Drugs and Psychotropic Substances Act, 1985 (NDPSA)

- The Benami Transactions (Prohibition) Act, 1988
- The Prevention of Illicit Traffic in Narcotic Drugs and Psychotropic Substances Act, 1988.
- The Foreign Exchange Management Act, 2000, (FEMA): to consolidate and amend the law relating to foreign exchange with the objective of facilitating external trade and payments and for promoting the orderly development and maintenance of foreign exchange market in India.
- Prevention of Money Laundering Act (PMLA), 2002: Recently union government has issued a notification on certain changes. The amendment seeks to treat money laundering as a stand-alone crime, and clarifies that all PMLA offences will be cognisable and non-bail able. Therefore, ED will be empowered to arrest an accused without a warrant, subject to certain conditions.
- The Financial Intelligence Unit - India (FIUIND) is the nodal agency in India for managing the AML ecosystem and has significantly helped in coordinating and strengthening efforts of national and international intelligence, investigation and enforcement agencies in pursuing the global efforts against money laundering and related crimes.
- India is also a full time member of the Financial Action Task Force (FATF) which is responsible for setting global standards on anti-money laundering and combating the financing of illegal activities.
- The KYC policies followed by banks.

Conclusion:

Inadequate technology, lack of awareness of problems, non-enforcing KYC norms, inadequate enforcement agencies etc are some challenges that need to be addressed in India. Combating the offence of money laundering is a dynamic process since the criminals involved in it are continuously looking for new ways to do it and achieve their illicit motives. Thus, to have an effective anti-money laundering regime, one has to think regionally, nationally and globally.

4. How critical is border infrastructure development for the internal security of India? Discuss in the light of India's unique geo-strategic location and domestic politics of bordering states.

Introduction

India is bordering 17 states having the international borders with Pakistan, China, Nepal, Bhutan, Myanmar and Bangladesh. India shares borders with Pakistan (3,323 km), China (3,488 km), Nepal (1,751 km), Bhutan (699 km), Myanmar (1,643 km) and Bangladesh (4,096 km).

Body**Significance of border infrastructure:**

- **The major border security challenges:** cross-border terrorism, infiltration and exfiltration of armed militants and insurgents, narcotics and arms smuggling; illegal migration; left-wing extremism and separatist movements aided by external powers.
- **Various strategies:** India has actively pursued the strategy of strengthening of border policing and guarding, creation of border infrastructure like roads, fencing and flood lighting on the borders, implementation of the Coastal Security Scheme to strengthen coastal security infrastructure, implementation of Border Area Development Programme and development of Integrated Check Posts (ICPs) on the land borders of the country including setting up of Land Ports Authority of India (LPAI).
- **To strengthen our infrastructure:** Border areas in Punjab and J&K are suffering from poor infrastructure and lack of connectivity and transportation, in the name border infrastructure we are developing states infrastructure.

India in geostrategic location:

- **Strategic location of the region:** Countries of this region share borders with China, Afghanistan, Russia and Iran. Tajikistan is located in proximity to the Pakistan-occupied Kashmir. This region is seen as a Eurasian bridge, connecting countries of Asia to Europe.
- **India-Pakistan:** Pakistan has a geostrategic location in South Asia where it will use Gwadar Port as a major trade route and a future trade hub. The importance of the China-Pakistan Economic Corridor (CPEC) and with it the Belt and Road Initiative, also known as the One Belt One Road or the Silk Road Economic Belt
- **India- China:** One is Aksai Chin, a virtually uninhabited high-altitude desert expanse of about 37,000 square kilometres. Aksai Chin lies between the Indian state of Jammu and Kashmir, and China's Xinjiang province, both regions that are also riven by separatist conflicts. On the other side, Arunachal Pradesh, a diversely populated hill region with a population of around 1.4 million people spread out over 84,000 square kilometres is also a geostrategic location.
- **India- Nepal:** holds a significant geopolitical position in the Himalayan region of the South Asia due to its geostrategic location acting as a buffer state between the two Asian giants- India and the China.
- **India- Bhutan:** It is a sandwiched between two powerful nations, India and China. Because of its proximity to both the countries. India, is a close neighbour, has traditionally played a significant role in Bhutan. On the other hand Doklam plateau is an area with a plateau and a valley which lies on the Bhutan-China border, near India.

- **India-Myanmar:** The Kaladan Multi-Modal Transit Transport Project will connect the eastern Indian seaport of Kolkata with Sittwe seaport in Myanmar by sea. Major strategic and commercial transport route connecting North-East India, and South Asia as a whole, to Southeast Asia
- **India- Bangladesh:** Lying between the Himalayas in the north and the Bay of Bengal in the south, it offers the only land route connecting the two regions. Any invasion into South Asia from the East must pass through Bangladesh. Bangladesh's close proximity to both India and China adds further to its geographic importance.

Border development program and domestic politics of bordering states:

- **Lack of implementation:** Even after about 10 years of implementation of BADP, the border blocks are yet to be opened up and are in utter backwardness due to their isolation and inaccessibility.
- **Limited sources:** The State Government, though handicapped by its limited resources, is committed to accelerate the pace of development and is trying its best for development of the border areas.
- **Irrational funding:** Presently, 10% of BADP fund allotted to the State Government is earmarked for security related schemes to be implemented by the state police and paramilitary forces and the balance 90% fund is equally distributed amongst the bordering blocks.
- **Other issues:** National credit registry politics in Arunachal Pradesh, Sinhalese prosecution in Sri Lanka are some of the other domestic politics

Conclusion

BRO has been frequently in news due to delays and other lacunae with regard to border road infrastructure. Proper and defined autonomy with respect to 3F: Funds, Functions and Functionaries will help to boost the rapid development of border road infra, ultimately leading to economically integrated and strategically amiable South Asia.

5. The increasing geo-strategic and economic significance of the Indian Ocean realm has necessitated the development of a robust coastal security ecosystem. Do you agree? Substantiate your response.

Introduction

The Indian Ocean is the third-largest of the world's oceanic divisions, covering 70,560,000 km² (27,240,000 sq mi) (19.8% of the water on the Earth's surface). It is bounded by Asia on the north, on the west by Africa, on the east by Australia, and on the south by the Southern Ocean or, depending on definition, by Antarctica.

Body

Geo-strategic significance of Indian Ocean:

- **Huge resources:** The Indo-Asia-Pacific region is the greatest maritime-littoral space that has the largest concentration of population, resources, developing economies, congested sea lanes, and contested territorial spaces.
- **Choke points:** The Indian Ocean is home to many choke points, such as the Straits of Hormuz, Straits of Malacca, Lombok and the Sunda Straits. Any disruption in traffic flow through these points can have disastrous consequences.
- **Muslim population:** The region is home to most of the world's Muslim population as well as India, one of the world's likely "rising powers."
- **Nuclear weapon states:** The Indian Ocean also is home to the world's two newest nuclear weapons states, India and Pakistan, as well as Iran, which most observers believe has a robust program to acquire nuclear weapon.
- **Communication:** The Indian Ocean is home to important SLOCs and maritime choke points. A large volume of international long haul maritime cargo from the Persian Gulf, Africa and Europe transits through this ocean.

Economic significance of Indian Ocean:

- **Fisheries:** The people of Bangladesh, Comoros, Indonesia, Maldives, and Sri Lanka get more than half of the animal protein in their diets from fish.
- **Mineral resources:** Indian Ocean is rising and strengthening because its littoral states possess more than 2/3 of world's oil reserves and roughly 35% of world's gas reserves, 60% of Uranium, 40% of gold and 80% of all diamond deposits. Indian Ocean is also important because of the industrial raw materials it possesses including lithium, nickel, cobalt, tin, manganese, phosphate etc
- **Offshore oil:** Forty per cent of the world's offshore oil production takes place in the Indian Ocean basin

Coastal security:

- **IORA:** Excellence for Maritime Safety and Security; and explore a regional surveillance network, including sharing of data and exchange of information on maritime transportation systems.
- **National Committee for Strengthening Maritime and Coastal Security:** It is headed by Cabinet Secretary Coordinates all matters related to Maritime and Coastal Security.
- **Electronic Surveillance:** National Command Control Communication and Intelligence Network (NC3I) has been launched to provide near gapless surveillance of the entire coastline and prevent the intrusion of undetected vessels, the coastal surveillance network projects consists of radar and automatic identification system.

Conclusion

China's aggressive soft power diplomacy has widely been seen as arguably the most important element in shaping the Indian Ocean strategic environment, transforming the entire region's dynamics. By providing large loans on generous repayment terms, investing in major infrastructure projects such as the building of roads, dams, ports,

power plants, and railways, and offering military assistance and political support in the UN Security Council through its veto powers.

