1. What are the key challenges in regulating emerging technologies like cryptocurrencies, AI and drones? Analyse.

Approach-

Candidates need to write about the emerging technologies in the introduction and then simply analyse the key challenges in regulating the emerging technologies like Cryptocurrencies, AI, and Drones.

Introduction

Emerging technologies are technologies whose development, practical applications, or both are still largely unrealized, such that they are figuratively emerging into prominence from a background of nonexistence or obscurity.

Body

Challenges in regulating emerging technologies like Cryptocurrencies, AI, and drones:

Cryptocurrencies:

- The almost hidden nature of cryptocurrency transactions makes them easy to be the focus of illegal activities such as money laundering, tax-evasion and possibly even terror-financing.
- There is concern that cryptocurrencies like Bitcoin are not rooted in any material goods. Some research, however, has identified that the cost of producing a Bitcoin, which requires an increasingly large amount of energy, is directly related to its market price.
- If a large number of investors invest in digital coins rather than rupee-based savings like provident funds, the demand of the latter will fall.
- No Dispute Settlement Mechanisms and control of Securities and Exchange Board of India (SEBI).

AI:

- Massive Data Centres Needed – Achieving the abovementioned objectives, AI requires massive computational capacity, which means more power-hungry data centres and a big carbon footprint.
- Jurisdictional Issues of Data Pooling – Countries are passing stricter legislations on data security (Eg: EUGDPR) that require citizen data to be stored on servers located domestically, picking colder climates beyond their borders is becoming a difficult option.
- Without clear policies on reskilling workers, the promise of new opportunities will in fact create serious new inequalities.
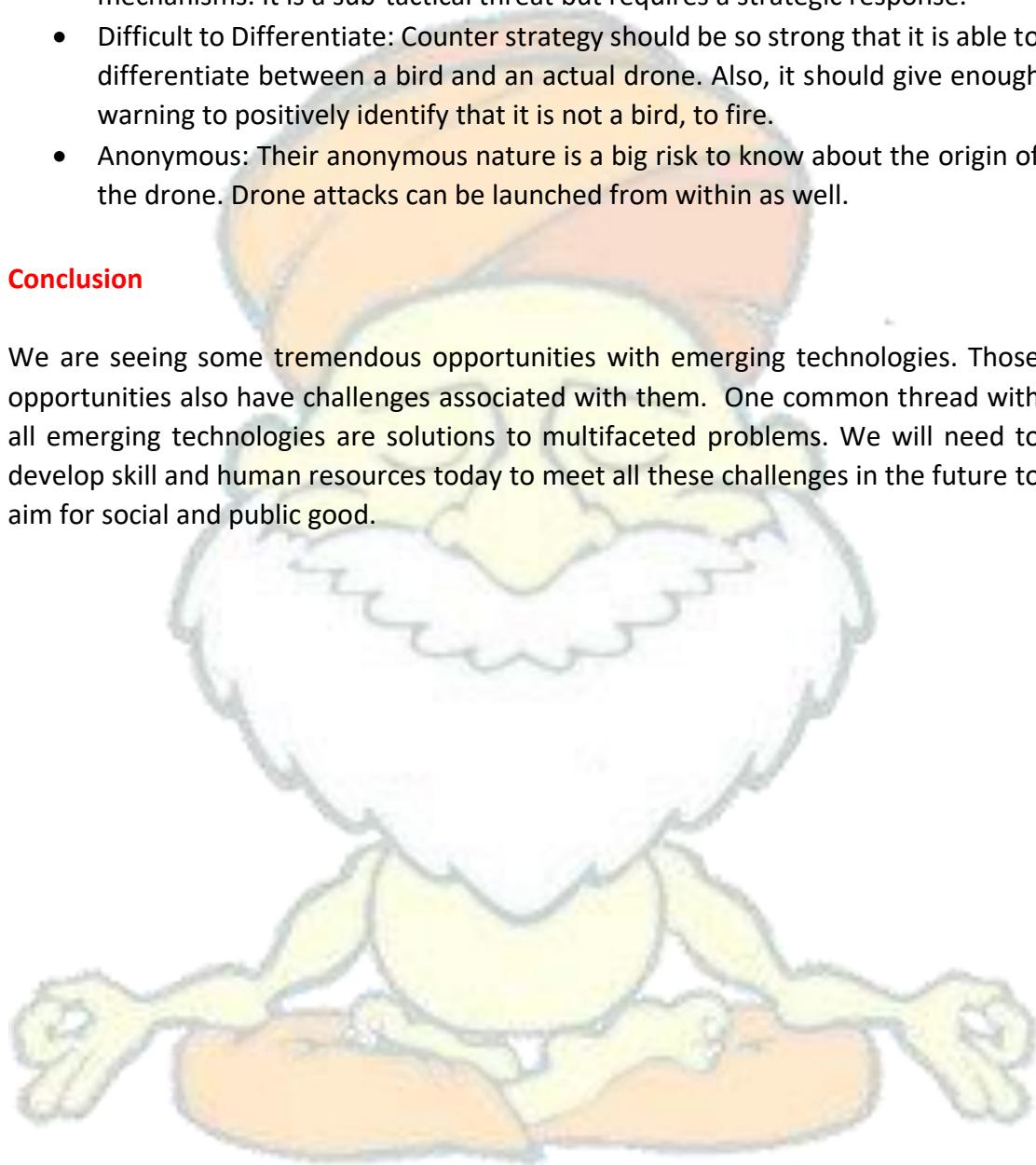
- Privacy Issues – AI uses digital footprints and feeds them in their algorithm to exploit commercially without our consent.

Drones:

- Clear Modus Operandi: Responsibility and division of work should be clear as to Who (the armed forces or the civilian forces) would be responsible for such mechanisms. It is a sub-tactical threat but requires a strategic response.
- Difficult to Differentiate: Counter strategy should be so strong that it is able to differentiate between a bird and an actual drone. Also, it should give enough warning to positively identify that it is not a bird, to fire.
- Anonymous: Their anonymous nature is a big risk to know about the origin of the drone. Drone attacks can be launched from within as well.

Conclusion

We are seeing some tremendous opportunities with emerging technologies. Those opportunities also have challenges associated with them. One common thread with all emerging technologies are solutions to multifaceted problems. We will need to develop skill and human resources today to meet all these challenges in the future to aim for social and public good.

2. **What are the key changes in the design of government policies that have ensured better reach of benefits to the intended populace? Explain with the help of suitable examples.**

Approach

Students are expected to write about recent changes in the public administration policy making how it is working towards the efficient targeting of beneficiaries. Need to give suitable example of initiatives by government.

Introduction

Bureaucracy is often considered to be rigid not lending themselves too well to adaptation but recent changes in public administrations around the world are now under intense pressure to be flexible effective result oriented.

Body

Key changes in government policies recently:

- E-Governance effectively delivers better programming and services in the era of newly emerging information and communication technologies (ICTs), which herald new opportunities for rapid social and economic transformation worldwide.
- Legal RReform: The Central Government has scrapped nearly 1,500 obsolete rules and laws with an aim to bring about transparency and improve efficiency.
- Decentralization: Centralised Planning Commission was abolished, replacing it with the think tank called the National Institution for Transforming India (NITI Aayog), which would usher in an era of "cooperative federalism".
- Aspirational Districts Programme: It was launched in January 2018 to transform the lives of people in the under-developed areas of the county in a time bound manner.
- Participation: A vital cornerstone of good governance is participation by all sections of society. This includes men and women, vulnerable sections of society, backward classes, minorities, etc. For example at PRI and municipal local bodies.
- Responsiveness: Institutions and processes made serve all stakeholders, respond to their grievances. Example: GST council rationalising tax structure and slew of measures keeping in mind MSME sector, PRAGATI Platform.
- UID: The unique identification project was conceived as an initiative that would provide identification for each resident across the country and would be used primarily as the basis for efficient delivery of welfare services.

- Public Distribution System: Computerization of the PDS is envisaged as an end-to-end project covering key functional areas such as supply chain management including allocation and utilization reporting, storage and movement of food grains, grievance redressal and transparency portal, digitization of beneficiary database, Fair Price Shop automation, etc.
- JAM Trinity: DBT by leveraging the JAM (Jan Dhan, Aadhaar and Mobiles) trinity and the technological prowess offers to drastically improve the benefit delivery system in the country.

Conclusion

In current times, the last mile delivery of services is being taken up in a vigorous manner through tools like E governance, DBT, Social Audit etc. Need is to further strengthen the existing measures to ensure a smooth delivery of benefits and improve governance in the country.

3. What are India's key priorities towards creating blue water navy capabilities? What have been the recent achievements on this front? Examine.

Approach-

Candidates need to mention India's key priorities towards creating blue water navy capabilities and then examine the recent achievements on this front.

Introduction

A blue-water navy allows a country to project power far from the home country and usually includes one or more aircraft carriers. Indian Navy has the designation of "leading power projection capability" in the region" and is, therefore, a blue water navy. India initially outlined its intentions of developing blue-water capabilities under the 2007 Maritime Capabilities Perspective Plan, with the navy's priority being the projection of "power in India's area of strategic interest", the Indian Ocean Region.

India's key priorities towards creating blue water navy capabilities

- Supremacy of Navy stands true even in the 21st Century. If India has to become a super power again in 21st Century, it will have to build a blue water Navy capable of dominating the Indo-Pacific Region.
- India needs a modern Navy to protect its maritime interests and shoulder additional responsibilities, particularly in the current geo-political and security situation that prevails in the Indo-Pacific Ocean Region.
- The aim of the expansion plan of Indian Navy is to govern the two oceans, The Indian Ocean as well as the Pacific.
- Navies are not built in a day, they require consistent efforts and thus, the Indian Navy now needs to transform from a 'Buyer's navy into a Builders Navy'.
- One of the major challenges for Indian forces, of course, remains the budgetary support.
- The reasons for this build up are several and could be summarised as under-
    - First, national prestige has become an important lever for the Indian Navy. The need to have a powerful three-dimensional long-range navy to reflect a Great Power status.
    - Second, the ability of the indigenous shipbuilding industry to not only provide more but also "push" for more (orders).
    - Third, to have a credible "second strike" nuclear deterrent, as a naval retaliatory action is considered least vulnerable and most effective.
    - An Indian ambition to establish a strong presence in the Indian Ocean region amidst the changing geopolitical maritime environment has led to a wish list of procurement by the Indian Navy.

The recent achievements on this front

- Some baby steps have been taken by Indian Navy towards Blue Waters, however, the national focus on blue waters has to go beyond rhetoric and start action on ground.
- As part of modernization, induction of maritime missile technology further enhances the Indian Navy's potency.
- The 300 km BrahMos medium range cruise missile and the 350 km Dhanush (Prithvi II adapted) ballistic missile are noteworthy additions to India's armoury.
- The Dhanush ballistic missile is capable of being launched from both 'on water' as well as 'under water' assets.
- Also equally important is the successful testing and impending installation of 1500 km range Sagarika 'Oceanic' missile on the INS Arihant.
- Add to this India's successful testing of the 3500 km range Agni III ballistic missile (with work underway for a submarine launched version) and it puts both Pakistan and China even more firmly within India's nuclear sites.
- Recently, India has quietly commissioned its secretive nuclear missile tracking vessel called the VC 11184, entering a select league of nations with the capability to monitor missile launches at long distances, enhancing the testing programme and adding a crucial part to a national missile defence system.
- The underwater capabilities of India need greater focus as the submarine fleet is aging (1980 vintage).
- Acquiring of third Russian Akula class nuclear powered attack submarine will enhance the underwater capability to some extent.

Conclusion

Indian Navy is the key instrument of power for India as emerging Super Power. A strong and professional blue water Navy can contribute to power projection, within the Indo-Pacific Region and the world. The Indian Navy with its current professionalism and future plans has the potential to enhance Indian image as a super power, in the future. The Indian Navy has created a niche for itself by exhibiting its professionalism and contributions towards nation building.