1. E-waste is a serious threat accompanying the digital revolution in India. Do you agree? What are the current provisions to address the challenge of e-waste in India? Critically review.

Approach

Candidates need to write about the Ewaste pollution in India and it's volume how it is creating the hurdle for clean sustainable digital revolution in India. Do the critical review of provisions of ewaste management and highlight how much they are efficient in addressing the challenges.

Introduction

India is the third-largest producer of e-waste after China and the United States. More than 95% of this waste is handled by informal sector. The unprecedented generation of e-waste is a cause of concern for digital revolution.

Body

Ewaste serious threat:

- The e-waste stream contains diverse materials most prominently hazardous substances such as lead, PCBs PBBs mercury, PBDEs, brominated flame retardants (BFRs).
- E-waste releases harmful chemicals, on burning, which adversely impacts human blood, kidney and the peripheral nervous system.
- When it is thrown in landfills, the chemicals seep in the ground water affecting both land and sea animals.
- COVID-19 caused unnecessary short-term investment in technology, which leave us at risk with data being stored on a wide range of devices.

Provision of to address the challenge of ewaste:

- Laws to manage e-waste have been in place in India since 2011, mandating that only authorised dismantlers and recyclers collect e-waste. E-waste (Management) Rules, 2016 was enacted in 2017.
- Extended Producer Responsibility (EPR), along with targets. Producers have been made responsible for the collection of E-waste and for its exchange.
- Producer Responsibility Organisation (PRO) and Deposit Refund Scheme has been introduced as an additional economic instrument.
- Urban Local Bodies (Municipal Committee/Council/Corporation) have been assigned the duty to collect and channelize the orphan products to authorized dismantlers or recyclers.

Still more need to be done:

- Still as per MoEFCCC to NGT 95% of e-waste in India is recycled by the informal sector and scrap dealers unscientifically dispose of it by burning or dissolving it in acids.
- Gaps in collection targets, as the amount of e-waste collected in 2018-19 was 78,000 tonnes against a target of 1.54 lakh tonnes. Clear governance deficits on the subject.
- E-waste dismantling capacity has not been increased from 7.82 lakh tonnes since 2017-18.

Conclusion

There is need to identify the hotspot zone by constant vigil and to coordinate with the District Administration to prevent any damage local level environment and public health management should be clubbed to tackle and fill the gaps in address the challenges of ewaste.

2. What do you understand by the ecosystem approach to conservation? Explain with the help of suitable examples.

Approach

Students are expected to give basic definition of the ecosystem approach. With suitable example explain how ecosystem approach work for conservation.

Introduction

The Ecosystem Approach puts people and their natural resource use practices squarely at the centre of decision-making. Ecosystem Approach can be used to seek a balance between the conservation and use of biological diversity.

Body

- The ecosystem approach allows a holistic view of how components work together, in other words, it can incorporate human dimensions into biosphere functioning.
- It also helps define the temporal and spatial scale of management, and thus, is a multidisciplinary approach in order to deal with complexities of ecosystem function and usage.

- For example conservation of wetland with help of Ramsar convention like 'Wise use' of wetlands is the maintenance of their ecological character, achieved through the implementation of ecosystem approaches.
- Diversity conservation with Biological Diversity Act, 2002 it secures sharing of benefits with local people as they are conservers of biological resources and enhance the conservation practices.
- Soil conservation with Organic practices such as crop rotations, inter-cropping, symbiotic associations encourage soil fauna and flora, improving soil formation and structure and creating more stable systems.
- Specifically the ecosystem approach to fisheries (EAF) implementing the new strategies gradually with the already existing rules and regulation. It could generate substantial income; as well as, improve the fragile ecosystem of aquarium species.

Conclusion

Ecosystems are an undervalued commodity in the current economic model and process of political decision making. There is need for a more change where human society places the conservation and sustainable management of ecosystems and the services they provide at the heart of decision making.

3. What are the common strategies for mitigating the effects of a pandemic? Explain by taking the ongoing COVID pandemic as a case study.

Approach-

Candidates need to explain the common strategies for mitigating the effects of a pandemic. One should explain by taking the ongoing COVID pandemic as a case study.

Introduction:

Pandemics are large-scale outbreaks of infectious disease that can greatly increase morbidity and mortality over a wide geographic area and cause significant economic, social, and political disruption. Evidence suggests that the likelihood of pandemics has increased over the past century because of increased global travel and integration, urbanization, changes in land use, and greater exploitation of the natural environment.

The Common Strategies for Mitigating the Effects of a Pandemic

- Pathogens with pandemic potential vary widely in the resources, capacities, and strategies required for mitigation. However, there are also common prerequisites for effective preparedness and response.
- The most cost-effective strategies for increasing pandemic preparedness, especially in resource-constrained settings, consist of investing to strengthen core public health infrastructure, including water and sanitation systems; increasing situational awareness; and rapidly extinguishing sparks that could lead to pandemics.
- Once a pandemic has started, a coordinated response should be implemented focusing on maintenance of situational awareness, public health messaging, reduction of transmission, and care for and treatment of the ill.
- Successful contingency planning and response require surge capacity—the ability to scale up the delivery of health interventions proportionately for the severity of the event, the pathogen, and the population at risk.
- For many poorly prepared countries, surge capacity likely will be delivered by foreign aid providers.
- This is a tenable strategy during localized outbreaks, but global surge capacity has limited that likely will be reached during a full-scale global pandemic as higher-capacity states focus on their own populations.
- Risk transfer mechanisms, such as risk pooling and sovereign-level catastrophe insurance, provide a viable option for managing pandemic risk.

THE ONGOING COVID PANDEMIC AS A CASE STUDY

- The coronavirus disease (COVID-19) pandemic has been particularly challenging for nursing home staff and residents.
- Centres for Medicare & Medicaid Services regulation waivers are burdening staff and affecting how care is delivered.
- Residents are experiencing social isolation, which can result in physical and behavioural health issues, particularly for persons with dementia.
- Addressing the impacts of the COVID-19 pandemic and resulting recession on the ECE sector will require that state, local, and tribal decision makers use available COVID-19 relief funds to mitigate those impacts while also laying the foundation for longer-term solutions.
- These challenges can be addressed in part through technology adaptations.
- Full integration of electronic health record systems can improve workflow and care quality.
- Telehealth can improve access to outside providers, provide remote monitoring, and improve social connectedness.
- Electronic and audio-visual programs can be used for end-of-life planning and information sharing between nursing home staff and families.
- Online learning systems and other online resources provide flexible options for staff education and training.

- Investing in and adapting technology can help mitigate workforce stress and improve the quality of nursing home care during and after the COVID-19 crisis.

Conclusion

Preparing for a pandemic is challenging because of a multitude of factors, many of which are unique among natural disasters. Pandemics are rare events, and the risk of occurrence is influenced by anthropogenic changes in the natural environment. Building pandemic situational awareness is complex, requiring coordination across bureaucracies, across the public and private sectors, and across disciplines with different training and different norms (including epidemiology, clinical medicine, logistics, and disaster response). However, an appropriately sized and trained health workforce (encompassing doctors, nurses, epidemiologists, veterinarians, laboratorians, and others) that is supported by adequate coordination systems is a fundamental need.