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E-Waste

- E-Waste is short for Electronic-Waste and the term used to describe old, end-of-life or discarded electronic appliances.
- It is categorized into 21 types under two broad categories:

1. Information technology and communication equipment.
2. Consumer electrical and electronics.

- E-waste includes their components, consumables, parts and spares.
- It consists of toxic elements such as Lead, Mercury, Cadmium, Chromium, Polybrominated biphenyls and Polybrominated diphenyl.
- E-waste consisting of gold, silver, copper, platinum and other high-value, recoverable materials was mostly dumped or burned rather than being collected for treatment and reuse.
- It can cause some of the major health effects including serious illnesses such as *lung cancer, respiratory problems, bronchitis, brain damages*, etc. due to inhalation of toxic fumes, exposure to heavy metals and alike.
- It is an environmental hazard causing groundwater pollution, acidification of soil and contamination of groundwater and air pollution due to the burning of plastic and other remnants.
- ***Recent Developments -*** According to a recent United Nations University (UNU) report, global e-waste will *increase by 38%* in the decade between 2020 and 2030.
- *Asia generated the greatest volume (around 24.9 MT) followed by the Americas (13.1 MT*) and Europe (12 MT). Africa and Oceania generated 2.9 MT and 0.7 MT respectively.
- UNU is a global think tank and postgraduate teaching organization headquartered in Japan.
- UNU's mission is to resolve the pressing global problems of human survival, development and welfare that are the concern of the United Nations, its peoples and the member states.

E-Waste (Management) Rules, 2016

- The Ministry of Environment, Forest and Climate Change notified the E-

Waste Management Rules, 2016 in supersession of the e-waste (Management & Handling) Rules, 2011.

- For the first time, the rules brought the producers under Extended Producer Responsibility (EPR), along with targets.
- *Producers have been made responsible for collection of E-waste and for its exchange.*
- Urban Local Bodies (Municipal Committee/Council/Corporation) has been assign the *duty to collect and channelized the orphan products to authorized dismantler or recycler.*
- Producer Responsibility Organizations (PROs) shall apply to the Central Pollution Control board (CPCB) for registration to undertake activities prescribed in the Rules.

AatmaNirbhar Bharat App Innovation Challenge

- Ministry of Electronics and Information Technology in partnership with Atal Innovation Mission and NITI Aayog has launched Digital India Aatma Nirbhar Bharat App Innovation Challenge.
- Its objective is to support and build a strong ecosystem for Indian Apps by Indian tech entrepreneurs and Startups.
- This shall run in 2 tracks - Promotion of Existing Apps and Development of New Apps.
- The Mantra is to Make in India for India and the World.
- The Track 1 of the challenge is being launched in the following 8 broad categories:

1. Office Productivity & Work from Home
2. Social Networking
3. E-Learning
4. Entertainment
5. Health & Wellness
6. Business including Agritech and Fin-tech
7. News
8. Games.

Ophicordyceps nutans Fungus

- Researchers have found a fungi Ophicordyceps nutans for the *first time in central India* and show how it infects a stink bug.
- The fungus was found on its specific host insect Halyomorpha halys.
- The stink bug is known to damage the flower and fruits of soybean, green beans, apple, pear and etc.

- Also called the stink bug, this insect is a pest to forest trees and agricultural crops.
- The modus operandi of the fungi involves infecting the insect when alive, developing fungal mycelium inside its thorax, and when it is time for the spores to come out, kill the bug.
- Morphological studies showed that it was Ophicordyceps nutans which has been *reported in India only from the Western Ghats.*
- Thus *these fungi can be used as a pesticide will help reduce the harmful effect of chemicals in our fields.*

Infant Mortality Rate (IMR)

- Infant mortality is the death of young children under the age of 1 per 1000 live births.
- The under-five mortality rate, which is referred to as the child mortality rate whereas the infant mortality rate focuses only on children under one year of age.
- *Premature birth is the biggest contributor to the IMR.*
- Leading causes - birth asphyxia, pneumonia, term birth complications such as abnormal presentation of the fetus umbilical cord prolapse, or prolonged labor, neonatal infection and etc.
- Many factors contribute to infant mortality, such as the mother's level of education, environmental conditions, and political and medical infrastructure.
- *The infant mortality rate (IMR) in Madhya Pradesh, recording the country's worst rate for years now.*
- IMR in MP has surged by a single point over the previous year to 48 in 2018.
- In rural MP, 52 died per 1,000 live births (Infant mortality rate) and 36 in urban area.
- *The country's average stands at 36 deaths for rural and 23 for urban areas.*

Climate Assessment Report

- Assessment of Climate Change over the Indian Region Report has been released by the Ministry of Earth Sciences for the first time.
- According to the report, West Bengal is one of the most climatically vulnerable states of India.
- It has a history of a high number of severe cyclones in the Bay of Bengal coast, severe thunderstorms, a high sea-level rise and projected flood risk.

- The Bay of Bengal region was struck by the *highest number of cyclones in May and November* according to the long-term analysis between 1891 and 2018, revealed the report.
- The report also mentioned a *significant eastward shift in tropical cyclone genesis locations in the Bay of Bengal region* during post-monsoon seasons, which may enhance the risk for the coastal regions of West Bengal.
- The report mentioned that the *flood risk increased over the east coast of India*, with West Bengal being one the vulnerable states.

Source: PIB, the Hindu, Down to Earth