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Zika Virus Disease

- In Telangana, precautionary measures being taken to prevent vector-borne diseases such as dengue and malaria would also help avoid Zika cases too (i.e.) Telangana Seasonal Disease Prevention Plan.
- Zika virus disease is a caused by a mosquito-borne flavivirus transmitted primarily by Aedes mosquitoes, which bite during the day, in tropical and subtropical regions.
- [Aedes mosquito also transmits dengue, chikungunya and yellow fever.]
- **Symptoms** - Symptoms of Zika infection are generally mild and include fever, rash, conjunctivitis, headache and muscle and joint pain. They typically last for 2 to 7 days. Most people do not develop symptoms.
- Except for rare neurological manifestations like Guillian Barre syndrome, neuropathy and myelitis in some adults and children, the disease has little significance for the general population.
- But in pregnant women, especially those in the early trimester, the infection can seriously harm the developing foetus.
- It can also lead to the infant developing microcephaly and other congenital malformations, known as congenital Zika syndrome.
- **Transmission** - Zika virus is transmitted,
    1. By the bite of an infected Aedes mosquito,
    2. From mother to fetus during pregnancy,
    3. Through sexual contact, transfusion of blood and blood products, and organ transplantation.
- **Diagnosis** - A diagnosis of Zika virus infection can only be confirmed by laboratory tests of blood or other body fluids, such as urine or semen.
- **Treatment** - There is no treatment available for Zika virus infection or its associated diseases.
- **Prevention** - As the Aedes mosquitoes breed in stagnant fresh water, these breeding grounds should be prevented from being created.
- The Gambusia fish may be released in stagnant water bodies.

Lightning

- At least 30 people were killed in separate incidents of lightning in Rajasthan, Uttar Pradesh and Madhya Pradesh.

- Lightning is a **very rapid and massive discharge of electricity** in the atmosphere, some of which is directed towards the Earth's surface.
- These discharges are generated in **giant moisture-bearing clouds.**
    - Height of these clouds is 10-12 km and their base lies within 1-2 km of the Earth's surface. Temperature towards the top of these clouds are in the range of (-) 35 to (-) 45 degrees Celsius.
- As water vapour moves upward in the cloud, the falling temperature causes it to condense.
- Heat is generated in the process, which pushes the molecules of water further up. As they move to temperatures below zero degrees celsius, the water droplets change into small ice crystals.
- They continue to move up, gathering mass until they are so heavy that they start to fall to Earth. This leads to a system in which smaller ice crystals move up and bigger crystals come down simultaneously.
- Collisions follow, and trigger the release of electrons - a process similar to the generation of electricity. As the moving free electrons cause more collisions and more electrons, a chain reaction ensues.
- This process results in a situation in which the top layer of the cloud gets positively charged, while the middle layer is negatively charged.
- The electrical potential difference between the two layers is huge. So, in very little time, a massive current starts to flow between the layers.
- An enormous amount of heat is produced, and this leads to the heating of the air column between the two layers of the cloud. As the reddish heated air column expands, it produces thunder.
- **Precautions** - People are most commonly struck by "ground currents" of the lightning. They should move indoors in a storm.
- They shouldn't take shelter under a tree or lay flat on the ground.
- **Frequency** - Lightning is the biggest contributor to accidental deaths due to natural causes. Incidents of lightning are on an increasing trend over the last 20 years, especially near the Himalayan foothills.
- More common than is sometimes realised in the urban areas. On average, India sees 2,000-2,500 lightning deaths every year.
- To know about the types of Lightning strikes, click here.

India's Economic Situation

- Over the past few weeks, Indians have become more and more worried about the inflation rate (or the rate at which prices are rising).
- **Retail inflation** for May 2021 was at 6.3% i.e., 30 basis points above the highest level of inflation that RBI targets. No other Asian country has faced the high levels of inflation that India is becoming used to.

- [Retail inflation is measured by using the Consumer Price Index.]
- The Retail inflation data for June will be crucial in determining RBI's monetary policy stance when it meets in August, 2021.
- In 2022, consumer prices will grow at a rate that is around 2 ½ times more than the rest of Asia's average.
- **Oil prices** have been high and rising for two broad reasons.
    - Rising prices of imported crude oil (India depends on oil imports to meet more than 80% of its domestic requirement) and
    - Taxation of refined fuel within the country.
- For every 10% increase in oil prices, economic growth of India falls by 20 basis points and the inflation rate goes up by 40 basis points.
- Even when crude oil prices went down, retail prices have stayed up due to the way the government taxes petrol and petroleum products.
- Besides the price rise in fuel, the prices of the food and non-food goods have shot up.
- **Unemployment** - India's unemployment rate is so much higher than other Asian countries. India's high unemployment rate is despite a low labour force participation rate.
- Total number of people employed in the Indian economy is over 5% less than the number of people employed before the pandemic. So, instead of creating jobs, the economy has extinguished close to 22 million jobs.

Blue Economy

- In the years to come, India aims to target over 100 billion "Blue Economy" through its Deep Ocean Mission (DOM) and ocean resources.
- The Center for the Blue Economy says that the term 'blue economy' has related but distinct meanings-
    1. The overall contribution of the oceans to economies,
    2. The need to address the environmental and ecological sustainability of the oceans, and
    3. The ocean economy as a growth opportunity for both developed and developing countries.
- According to the World Bank, the blue economy is the "sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of ocean ecosystem."

Deep Ocean Mission

- This Mission planned by the Ministry of Earth Sciences will be carried out in collaboration with Indian Space Research Organisation (ISRO).
- It will integrate and bring together the efforts of the different streams of

science operating under different Ministries in the government.
- In addition, the Mission will have benefits for the common man - Providing clean drinking water and explore the avenues of desalination of water as well as extracting minerals from the ocean belt.
- To know more about the Deep Ocean Mission, click here.

International Trade Finance Services Platform

- International Financial Services Centres Authority (IFSCA) has issued a framework for setting up the International Trade Finance Services Platform ('ITFS') for providing TFSs at International Financial Services Centres ('IFSCs').
- ITFS framework will enable Exporters and Importers to avail many types of trade finance facilities at competitive terms, for their international trade transactions through ITFS, a dedicated electronic platform.
- This framework will help in their ability to convert their trade receivables into liquid funds and to obtain short term funding.
- It will provide an opportunity to the participants to avail trade finance facilities for trade transactions on the ITFS platform such as
    1. Export Invoice Trade Financing,
    2. Reverse Trade Financing,
    3. Bill discounting under Letter of Credit,
    4. Supply Chain Finance for Exporters,
    5. Export Credit (Packing Credit),
    6. Insurance/ Credit Guarantee,
    7. Factoring and any other eligible product.

International Financial Services Centres Authority

- The Central Government had set up International Financial Services Centres Authority (IFSCA) vide IFSCA Act, 2019 with headquarters in Gandhinagar (Gujarat).
- IFSCA was set up to develop and regulate all financial products, services and institutions in International Financial Services Centres (IFSCs).
- [These functions have been previously approved by any appropriate regulator such as Reserve Bank of India (RBI), the Securities and Exchange Board of India (SEBI) etc., in an IFSC.]
- It may also recommend to the central government any other financial products, services or institutions, which may be permitted in an IFSC.
- IFSCA's 'FinTech' initiatives include financial products and services across the spectrum of banking, insurance, securities and fund management.
- **Members** - The IFSCA will consist of nine members, appointed by the central government. They will include,

1. Chairperson of the authority,
2. A member each from the RBI, SEBI, the Insurance Regulatory and Development Authority of India (IRDAI), and the Pension Fund Regulatory and Development Authority (PFRDA);
3. Two members from the Ministry of Finance and
4. Two other members appointed on the recommendation of a Selection Committee.

- All members of the IFSC Authority will have a term of 3 years, subject to reappointment.
- Recently, International Financial Services Centres Authority (IFSCA) has become an associate member of the International Organization of Securities Commissions (IOSCO).

International Financial Services Centre

- The first IFSC in India has been set up at the Gujarat International Finance Tec-City (GIFT City) in Gandhinagar.
- IFSCs offer a business and regulatory environment that is comparable to other leading international financial centres in the world like London.
- They are intended to provide Indian corporate with easier access to global financial markets, and to complement and promote further development of financial markets in India.
- It enables bringing back the financial services and transactions that are currently carried out in offshore financial centres by Indian corporate entities and overseas branches/subsidiaries of Financial Institutions (such as banks, insurance companies, etc.) to India.

Bitcoin Hardware Wallet

- Twitter's payments firm Square would soon build a hardware wallet to store bitcoin. The wallet will be a type of plug-in device, much like a USB pendrive that stores, manages and secures a user's crypto assets.
- Each digital asset is linked to a cryptographic password called a 'private key' to allow users to access it. This key safeguards crypto-currencies from theft and unauthorised access.
- The asset owner, with the help of a secure hardware wallet, can access the private key to buy and sell crypto assets from anywhere.
- Most hardware wallets allow users to manage multiple accounts; some even allow users to connect to their Google or Facebook accounts.
- Popular hardware wallets include Trezor, Ledger, KeepKey and Prokey.
- **Different from a software wallet** - Cryptocurrency keys can be stored in two kinds of wallets - software and hardware.
- Software wallets are like apps that digitally store private keys. Most software

wallets don’t charge users to store private keys, but may collect commission for trading via the app.

- Software wallets can be vulnerable to malware. Hardware wallets and physical devices act like cold storage for confidential keys.
- The passwords are protected by a PIN, making it difficult for hackers to extract private keys as the information is not exposed to the Internet.
- **Upsides** - Hardware wallets are said to be convenient as they can be connected to trading exchanges to complete transactions.
- Hardware wallets are often stored in a protected microcontroller and cannot be transferred out of the device, making them secure.
- Their isolation from the Internet mitigates the risk of the assets being compromised. Moreover, it does not rely on any third-party app.
- **Downsides** - Since the wallet is in physical form, the device could be stolen or destroyed.
- There are prominent hardware backdoors that could be used by malicious actors to steal confidential data.
- Some hardware wallets can be expensive and have complex features as compared to software wallets.

Source: PIB, The Hindu, The Indian Express

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