EXPLANATION

1. Ans) (c)

   Explanation:

   Parts of Canada and USA are reeling under severe heat wave caused due to a heat dome. What Is A Heat Dome? A heat dome occurs when the atmosphere traps hot ocean air like a lid or cap. The scorching heat is ensnared in what is called a heat dome. High-pressure circulation in the atmosphere acts like a dome or cap, trapping heat at the surface and favoring the formation of a heat wave.

   Causes:

   This happens when strong, high-pressure atmospheric conditions combine with influences from La Niña.

   This creates vast areas of sweltering heat that gets trapped under the high-pressure "dome". The main cause is a strong change (or gradient) in ocean temperatures from west to east in the tropical Pacific Ocean. How is it created?

   In a process known as convection, the gradient causes more warm air, heated by the ocean surface. This rises over the western Pacific, and decreases convection over the central and eastern Pacific. As prevailing winds move the hot air east, the northern shifts of the jet stream trap the air. Thus winds move it toward land, where it sinks, resulting in heat waves.

2. Ans) (b)

   Explanation:

   The Supreme Court has agreed to hear a plea seeking directions to the Centre to impose President's Rule in West Bengal over alleged incidents of post-poll violence in the state.

   What is President's Rule in the Indian context?

   Article 356 of the Constitution of India gives the President of India power to suspend state government and impose President's rule of any state in the country "if he is satisfied that a situation has arisen in which the government of the state cannot be carried on in accordance with the provisions of the Constitution". It is also known as 'State Emergency' or 'Constitutional Emergency'. Upon the imposition of this rule, there would be no Council of Ministers. The state will fall under the direct control of the Union government, and the Governor will continue to head the proceedings, representing the President of India.

3. Ans) (c)

   Explanation:

India has moved up three spots to be ranked at the 20th spot among the top 100 countries in the Global Startup Ecosystem Index 2021 by Startup Blink.India was at 23rd spot in 2020.

4. Ans) (a)

    Explanation:

    The US has once again retained its position as the top country while, the UK, Israel, Canada and Germany continue to be the top five countries respectively like previous year.

5. Ans) (d)

    Explanation:

    Israeli defence major Rafael Advanced Defense Systems unveiled Sea Breaker, a 5th generation long range, autonomous, precision-guided missile system meant to hit high-value maritime and land targets.

6. Ans) (a)

    Explanation:

    LEAF (Lowering Emissions by Accelerating Forest Finance) Coalition was announced at the Leaders Summit on Climate, 2021. It will be one of the largest ever public-private efforts to protect tropical forests It intends to mobilize at least USD 1 billion in financing to countries committed to protecting their tropical forests. About LEAF Coalition It is a collective of the governments of the USA, UK and Norway. A country willing to participate would need to fulfil certain predetermined conditions laid down by the Coalition. The results-based financing model will be used in LEAF.

    Significance

    The goal of net zero emissions cannot be reached without bold leadership from the private sector Tropical forests are massive carbon sinks and by investing in their protection will help in achieving Nationally Determined Contributions (NDCs) It is a step towards achieving the aims and objectives of the Reducing Emissions from Deforestation and Forest Degradation (REDD+) mechanism. Solve Development versus Ecological Commitment.

7. Ans) (c)

    Explanation:

    Zydus Cadila has applied to the Central Drugs Standard Control Organisation (CDSCO), the national drugs regulator, seeking emergency use authorization (EUA) for ZyCov-D, its Covid-19 vaccine. If approved, ZyCov-D will be the world's first DNA vaccine against infection with SARS-CoV-2.

    About ZyCov-D

    It is a "plasmid DNA" vaccine. It is a vaccine that uses a genetically engineered, non-replicating version of a type of DNA molecule known as a 'plasmid'. A plasmid is a small, often circular DNA molecule

found in bacteria and other cells. They generally carry only a small number of genes, notably some associated with antibiotic resistance. The plasmids in this case are coded with the instructions to make the spike protein of SARS-CoV-2 Vaccination gives the code to cells in the recipient's body, so they can begin making the spiky outer layer of the virus. The immune system is expected to recognize this as a threat and develop antibodies in response. The other unique thing about the vaccine is the way it is given. No needle is used — instead, a spring-powered device delivers the shot as a narrow, precise stream of fluid that penetrates the skin. ZyCov-D has been developed by Zydus Cadila with the support of Department of Biotechnology and the Indian Council of Medical Research (ICMR).

8. Ans) (a)

    Explanation:

    Recently, Indian Railway (IR) has opened the first movable freshwater tunnel aquarium of India at Bengaluru Railway Station. It has been opened by the Indian Railway Stations Development Corporation Limited (IRSDC) in collaboration with the HNi Aquatic Kingdom. The aquarium is a one-of-its-kind aquatic park based on the Amazon River (of South America) concept. It is home to various aquatic animals such as alligator gar ranging, stingrays, sharks, lobsters, snails and shrimps.

    Aim: Enhancing the passenger experience at the station. Improving revenue earning for IR.

9. Ans) (d)

    Explanation:

    Recently, the Indian Prime Minister of India addressed a virtual event to mark the completion of six years of Digital India programme. About Digital India Programme It was launched in 2015. The programme has been enabled for several important Government schemes, such as BharatNet, Make in India, Startup India, industrial corridors, etc. Vision Areas: Digital infrastructure as Utility to Every Citizen. Governance and services on demand. Digital empowerment of citizens.

    Objectives:

    To prepare India for a knowledge future. To realize IT (Indian Talent) + IT (Information Technology) = IT (India Tomorrow). Making technology central to enabling change. Significant Achievements The introduction of Unified Payments Interface (UPI) Introduction of the e-KYC, DigiLocker and eSign were introduced to help businesses Introduction of JAM Trinity – Jan Dhan, Aadhar and Mobile to weed out leakages in the system India's rise in UN eGovernance Index SWAYAM free online courses

10. Ans) (a)

    Explanation:

China has been awarded a malaria-free certification from WHO – a notable feat for a country that eported 30 million cases of the disease annually in the 1940s.China is the first country in the WHO Western Pacific Region to be awarded a malaria-free certification in more than 3 decades.