

NEWSPAPER HIGHLIGHT

Indonesia's parliament passed a law approving the relocation of its capital from slowly sinking Jakarta to a site 2,000 kilometres away on the jungle clad Borneo island that will be named "Nusantara". The House of Representatives vote provides the legal framework for the move, which was first tipped by President Joko Widodo in April 2019, citing rising sea levels and severe congestion on densely populated Java island. Home to more than 30 million people in its greater metro area, Jakarta has long been plagued by serious infrastructure problems and flooding exacerbated by climate change.

The accelerating pace of digitalisation, fuelled by the COVID-19 pandemic, has led to a record-breaking year for cybercrime with ransomware attacks rising 151% in 2021, and an average of 270 cyberattacks per organisation being faced, a new study showed. The World Economic Forum's 'Global Cybersecurity Outlook 2022', released during its online Davos Agenda summit, further showed that each successful cyber breach cost a company \$3.6 million (almost ₹27 crore) last year, while the average share price of the hacked company underperformed the NASDAQ index by close to 3% even six months after the event in case of the breach becoming public. The WEF said the global digital economy had surged on the back of the COVID19 pandemic, but so had cybercrime.

N arayan Debnath, legendary cartoonist, noted illustrator and litterateur, passed away in Kolkata. He was 96 and was undergoing treatment in a private hospital for the past few weeks. Mr. Debnath was the creator of some of immortal cartoon characters for Bengali readers such as Bantul the Great, Handa Bhonda and Nonte Fonte that have inspired not only children but generations of Bengalis. His comic strips have attained a cult following for nearly six decades. He was honoured with the Sahitya Akademi award in 2013 and the Padma Shri in 2021.

The Supreme Court's questions on hunger deaths saw the Union government insist on Tuesday that no one died of starvation in recent times across the country, even during the pandemic. "Thanks to the progress made by the nation since Independence and the

MUSCLE DYSFUNCTION AND VITAMIN D

1.A new study has examined the molecular nature of muscle dysfunction in mice, in the absence of vitamin D. Usually, the glucose absorbed from the food is converted into glycogen and stored in the skeletal muscle. This stored energy reserve is used by muscles to produce energy after the food consumed is digested.

2.Without the vitamin D, the skeletal muscles continued to make glycogen, but could not convert them into glucose (usable form of energy). When the glycogen storage does not give energy, particularly in a post-absorb state, the skeletal muscle draws more glucose from the blood. This leads to a systemic energy shortage.

3.**When there is systemic lack of energy, the protein degradation in muscle is triggered leading to muscle wasting.** This shows that vitamin D deficiency starves the skeletal muscles, leading to muscle wasting.

4.Functions of Vitamin D-Vitamin D works more as a hormone than and is involved in a host of biochemical reactions.It is key to maintaining metabolic functions, immune system, bone health and plays a crucial role in depression, mood swings, anxiety and sleep quality. As part of the normal metabolic process, proteins produced in our body degrade, and in due course, new proteins are made to replace them.

5.Usually, when the protein degradation exceeds protein synthesis, skeletal muscle atrophy or simply a decrease in muscle mass occurs. This is what happens during Vitamin D deficiency.

SOCIAL CONSTRUCTIVISM

1.Social constructivism is a school of thought in International Relations (IR) theory. Constructivism's arrival in IR is often associated with the end of the Cold War, an event that the traditional theories such as realism and liberalism failed to account for.

2.**The term 'Social constructivism' was first coined by Nicholas Onuf in 1989 in his book "The World of our making".** In this book, he put forward that nation states much like individuals lived in a reality primarily formed by themselves rather than outside material entities. We are not made but constructed by our social and cultural relations with others.

3.Similarly states by interstate interactions and associations form their identities and interests which in turn inform the structures and institutions they make among themselves. Structures are real, material and relatively stable but it is only by assigning collective meanings on our structures that they will achieve their purpose.

REPORT ON SOLAR WASTE

1.According to a report prepared by the National Solar Energy Federation of India, India could generate over 34,600 tonnes of cumulative solar waste by 2030. Solar waste is the electronic waste generated by discarded solar panels. It is sold as scrap in India. It can increase by at least four-five-fold by the next decade.

2.Issues - **Manufacturing solar panels often requires the use of several noxious chemicals. Solar panels have an operating lifespan of around 20 to 30 years.** Since they were first introduced in the 2000s, literal tons of solar panels are reaching the end of their lifespan. Because it's not easy to properly dispose of the toxic metals inside the solar cells, it is often cheaper to discard them in landfills or send them to developing countries.

3.**As solar panels sit in dumps, the toxic metals they contain can leech out into the environment and possibly pose a public health hazard if they get into the groundwater supply.** Technologies in India - Two most popular module technologies in India are crystallised silicon (C-Si) and thin-film (mainly cadmium telluride), with 93 and 7% market shares respectively. Both the technologies have a recovery rate of 85-90%.

4.But the large cost gap between recycling and discarding panels in landfills is the reason why it is not recycled enough. Solution -

comprehensive policies and steps taken by both State and Central governments, there have been no starvation deaths in the country during recent times, even during adverse situations like the pandemic,” the Ministry of Consumer Affairs told the court. But the court’s insistence on specific data to back the claim of zero deaths saw a scattered response from the government.

The Supreme Court asked the Union government to explain the admission of merely 19 women in the prestigious National Defence Academy (NDA) for 2022. A Bench led by Justice Sanjay Kishan Kaul made it clear to Additional Solicitor General Aishwarya Bhati, representing the Union, to come clear why the UPSC (Union Public Service Commission) had restricted women’s admissions to just 19 for the year. The court also asked the Centre to place the figures on record the total number of candidates, including women, who appeared in the NDA, Rashtriya Indian Military College (RIMC) and Rashtriya Military School (RMS) entrance tests.

At a consultation organised by the National Commission for Women on amendments to criminal law, there was unanimity among speakers that marital rape should be criminalised. The meeting also discussed rising instances of cybercrime against women and the need for gender neutral rape laws. The NCW is expected to have another round of discussion on this issue, following which it will send the recommendations to the Ministry of Home Affairs, which is looking at a review of the criminal laws, including the Indian Penal Code, 1860, the Code of Criminal Procedure, 1973 and the Indian Evidence Act, 1872.

An air strike killed about 14 persons in a building in the Yemeni capital of Sana’a, residents said on Tuesday, during strikes across the city launched by the Saudi-led coalition fighting the Houthi group. The alliance’ strikes on Houthi held Sana’a followed an attack claimed by the Iran aligned Houthis on Monday on coalition partner the United Arab Emirates, in Abu Dhabi, in which three persons were killed.

Germany is ready to discuss halting the Nord Stream 2 pipeline should Russia attack Ukraine, Chancellor Olaf Scholz said, responding to increasing domestic and international pressure amid a Russian military buildup on Ukraine’s borders. NATO allies and Russia doing a series of meetings at the NATO-Russia Council to discuss ways to improve the security

The issue of the solar waste was not addressed in the last electronic waste management regulations in 2016. So, India should focus on drafting comprehensive rules to deal with solar waste.

5. Ban on Landfills that accept solar panel waste. New business models, incentives or issues of green certificates to be provided to encourage the recycling industry to participate more. R&D: Innovation in design may have an impact on the type of waste they generate; technology advancements will be significant in reducing the impact of renewable energy waste.

MILLIMETRE WAVE BAND IN 5G AUCTIONS

1. Telecom Regulatory Authority of India (TRAI) has asked for views on band plan, block size, and conditions for auction of spectrum in 5G bands, which includes Millimetre (mm) Wave band of 24.25-28.5 GHz.

2. Millimetre Wave band or mmWave is a segment of radio frequency spectrum that range between 24 GHz and 100 GHz. This spectrum, as the name suggests, has a short wavelength. This spectrum is apt to deliver greater speeds and lower latencies.

3. This makes data transfer efficient and seamless as the current available networks work optimally only on lower frequency bandwidths. 5G services can be deployed using lower frequency bands.

4. They can cover greater distances and are proven to work efficiently even in urban environments, which are prone to interference. But, when it comes to data speeds, these bands fail to hit peak potential needed for a true 5G experience. So, mmWave is that quintessential piece in the 5G jigsaw puzzle for mobile service providers.

THIRUVALLUVAR

1. The Prime Minister of India has paid tributes to the great Thiruvalluvar on Thiruvalluvar Day (January 15). Thiruvalluvar or Valluvar is a Tamil poet-saint and philosopher. He is regarded as a cultural icon. His most popular work is a collection of couplets on politics, ethics, economy, and love, called “Thirukkural” (Sacred Couplets).

2. Tiruvalluvar is believed to have lived in Chennai (formerly Madras), Tamil Nadu with his wife, Vasuki. Period - Though the period in which he existed is also debatable, some people claim that he lived between the 8th and 9th centuries. Tamil orator, and father of the Pure Tamil movement, Maraimalai Adigal had stated 31 BC as the birth year of Thiruvalluvar.

3. The Czech scholar in Indian literature and linguistics, Kamil Zvelebil, had noted that Valluvar lived around 500 AD. Religion - Thiruvalluvar was probably a Jain ascetic of humble origins who worked as a weaver. Both Buddhists and Shaivites, however, claim him as their own, and he is especially revered by those of low caste.

4. Statue - A 133-foot statue of Thiruvalluvar that stands at Kanyakumari was inaugurated in 2000. It was sculpted and designed by renowned architect and sculptor V Ganapati Sthapati. 5. In 2009, another statue was unveiled in Ulsoor, near Bengaluru. Outside the School of Oriental and African Studies in Russell Square, London, a statue of Valluvar was also erected. Inside the Ekambareswarar temple complex in Chennai, a temple dedicated to Thiruvalluvar. In 1976, a temple-memorial called Valluvar Kotam was built in Chennai.

WORLD ECONOMIC FORUM’S DAVOS AGENDA 22

1. The World Economic Forum is holding its annual meeting in Davos. Importance of WEF- The WEF summit is attended by people from across the political and corporate world, including heads of state, policy makers, top executives, industrialists, media personalities and technocrats.

2. Deliberations at the WEF influence public sector and corporate decision-making, particularly on issues of global importance such as poverty, social challenges, climate change and global economic recovery. The key mix of economic, corporate and political leadership at Swiss ski resorts provides the perfect opportunity to find solutions to the global challenges that emerge from time to time.

3. Main initiatives- The Agenda 2022 will see the launch of other WEF initiatives on the economic opportunity of nature-positive solutions, and the Mission on Cyber Resilience to accelerate net-zero emissions. Bridging the vaccine gap, strengthening the resilience of global value chains, besides building economies in

situation, after a first round of talks was held last week in Brussels.

Assam CM Himanta Biswa Sarma said a roadmap had been prepared for resolving the 50 yearold boundary dispute with Meghalaya. "Our efforts to resolve the border row have started bearing fruits as six of the 12 areas of difference[s] have been identified. "A roadmap has been prepared based on the recommendations of three Regional Committees with representatives from both the States.

fragile markets through human investment will also be among the topics of discussion over the next few days. How to use data solutions to prepare for the next pandemic will also be included in the discussion.

4.About the World Economic Forum: It is a Swiss nonprofit foundation established in 1971, based in Geneva, Switzerland. Founder and Executive Chairman: Klaus Schwab. Some major reports published by WEF are: Energy Transition Index. Global Competitiveness Report. Global IT Report. Global Gender Gap Report. Global Risk Report. Global Travel and Tourism Report.