

India-UK virtual summit strengthens STI cooperation



- The Prime Minister of India, Narendra Modi, and the UK Prime Minister Boris Johnson agreed on a common vision of a new and transformational Comprehensive Strategic Partnership between the UK and India, and adopted an ambitious India-UK Roadmap to 2030 to steer cooperation for the next 10 years
- The new UK-India MoU on Telecommunications/ICT and the Joint Declaration of Intent on Digital and Technology, the establishment of new high-level dialogues on tech, new joint rapid research investment into Covid19, a new partnership to support zoonotic research, new investment to advance understanding of weather and climate science, and the continuation of the UK-India Education and Research Initiative (UKIERI).

Some of the key points to strengthen STI cooperation between two countries are

- ⇒ Enhance cooperation between India and the UK on strengthening the role of women in STEMM at schools, universities, and research institutions and creating an enabling environment for equal participation of women in STEM disciplines through collaboration on new initiatives like Gender Advancement for Transforming Institutions (GATI) project.
- ⇒ Develop collaborations between Industry, Academia and the Government to foster innovation among school students by focusing on teacher training, mentoring and sharing of global best practices through initiatives like the India Innovation Competency Enhancement Program (IICEP).
- ⇒ Build on the two countries' existing bilateral research, science and innovation infrastructure and governmental relationships to continue to support high-quality, high-impact research and innovation through joint processes. Position the UK and India as mutual partners of choice and a force for good in the world in areas of shared priority, including health, the circular economy, climate, clean energy, urban development and engineering healthier environments, waste-to-wealth, manufacturing, cyber physical systems, space and related research.
- ⇒ Forge partnership across the pipeline of research and innovation activity, from basic research to applied and interdisciplinary research and through to translation and commercialisation across government departments to optimise impact, utilize expertise and networks and minimise duplication.

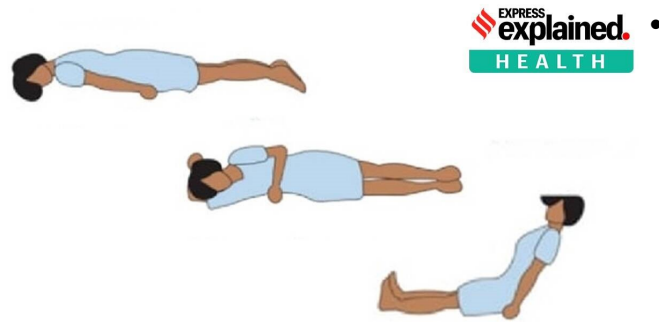
- ⇒ Leverage and build on existing, long-standing bilateral partnerships such as on education, research and innovation, to stimulate a joint pipeline of talent, excellent researchers and early-career innovators and explore new opportunities for student and researchers exchanges by establishing joint centres and facilitating access to state-of-the-art facilities.
- ⇒ Work together to share knowledge and expertise regarding artificial intelligence, scientific support to policies and regulatory aspects including ethics, and promote a dialogue in research and innovation. Through Tech Summits, bring together tech innovators, scientists, entrepreneurs and policy makers to work together on challenges including the norms and governance of future tech under the cross-cutting theme of 'data'.
- ⇒ Grow programmes such as the Fast Track Start-Up Fund to nurture innovation led, sustainable growth and jobs, and tech solutions that benefit both countries. Explore partnerships with joint investment to enable the growth of technology-enabled innovative businesses and increase the number of start-ups and MSMEs growing and scaling-up internationally, for example in relation to climate and the environment, med tech devices, industrial biotech and agriculture, and sustainable development, helping to achieve the Global Goals by 2030

Indian Railways inducts 100th 12000 HP WAG 12 B Locomotive.



- The loco is named WAG 12 B with number 60100.
- The locomotive is manufactured by Madhepura Electric Locomotive Pvt. Ltd. (MELPL).
- These locomotives are state of the art IGBT based, 3 phase drive and 12000 horse power electric locomotive.
- These high horse power locomotives will help to decongest the saturated tracks by improving average speed and loading capacity of freight trains.
- These locomotive are proving to be a game changer for further movement of coal trains for Dedicated Freight Corridor.
- First 12000 HP Made in India Locomotive, manufactured by Madhepura Electric Loco Factory situated in Bihar, was put into operation by Indian Railways from Pt Deen Dayal Upadhyaya Jn Station on 18.05.2020.
- The Electric Locomotive Factory, Madhepura is a joint venture of Alstom SA of France with Indian Railways for the production of 800 high-power locomotives over a period of 11 years designed to run on Indian tracks at 120 km per hour.
- Madhepura district is one of the districts of Bihar and Madhepura town is the administrative headquarters of this district.

PRONING



• As the second wave of Covid-19 sweeps through the country with deadly consequences, doctors across the state have started advocating proning exercises to improve oxygen levels in Covid positive patients — both in home isolation as well as in hospital.

- Proning a medically approved position — which is also being promoted by the Union Ministry of Health and Family Welfare — in which patients are made to lie on their abdomen to boost their oxygen levels.
- Proning as an exercise is being advised to Covid patients in hospitals, so that they may not require additional oxygen support.

What are proning positions?

- While prone, the patient is made to lie on his/her belly using pillows. One can also lie on their right side(right lateral), left side (left lateral) or sit at a 60-90 degree angle in the 'fowler position'.
- Medically, doctors suggest that a patient remain prone for a minimum of 30 minutes to a maximum of 2 hours.
- This helps improve ventilation to the lungs and hence oxygen levels start improving.

SIGNAL



- An attempt by instant messaging app Signal to use Instagram ads to demonstrate how Facebook collects and sells user data resulted in Signal's Instagram account getting blocked.

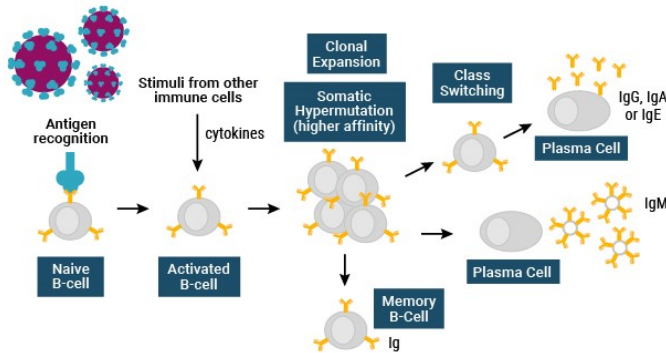
- Signal is a cross-platform centralized encrypted messaging service developed by the Signal Technology Foundation and Signal Messenger LLC.
- It uses the Internet to send one-to-one and group messages, which can include files, voice notes, images and videos. It can also be used to make one-to-one and group voice and video calls.
- Signal, which is owned by a nonprofit corporation, competes with WhatsApp.
- Both WhatsApp and Instagram are owned by social media giant Facebook.
- Signal, which has a specific focus on privacy (its tagline is 'Say hello to privacy'), claims companies like Facebook collect user data from their bouquet of apps "in order to sell visibility into people and their lives".

DAHILA DAM



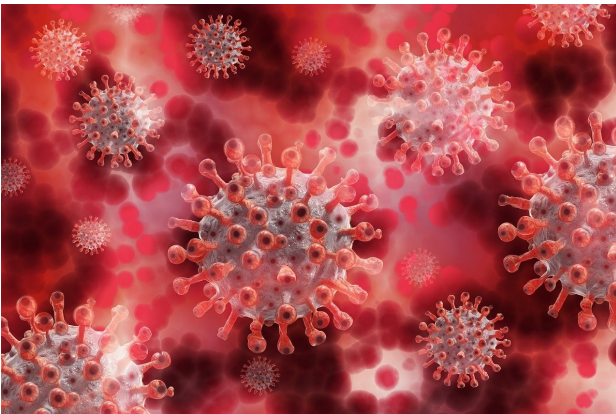
- The Taliban has captured Afghanistan's second-biggest dam after months of fierce fighting in its former bastion of Kandahar.
- Dahla Dam, which provides irrigation to farmers via a network of canals as well as drinking water for the provincial capital, is now under Taliban control.
- The dam's capture comes after clashes erupted in neighbouring Helmand province this week, just days after the U.S. military formally began withdrawing its remaining troops from Afghanistan.
- The Dahla Dam, also known as Arghandab Dam, is located in the Shah Wali Kot District of Kandahar Province in Afghanistan.
- Constructed in 1952, it is said to be the second largest dam in Afghanistan.
- The Dahla Dam is built on the Arghandab River.

Pic of how immune system fights COVID-19 virus with antibodies released



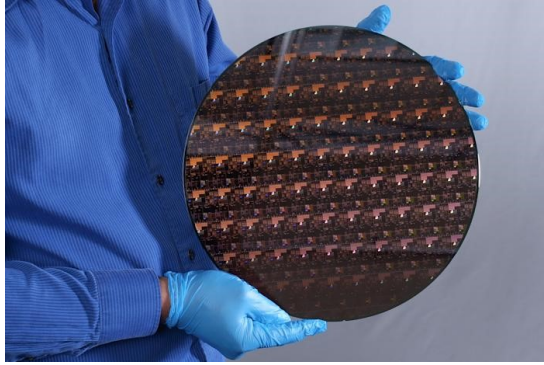
- Researchers at The University of Texas have released a picture showing how antibodies produced in people, who effectively fight off SARS-CoV-2, work to neutralise the part of the virus responsible for causing COVID-19.
- Researchers called it the "most complete picture yet".
- "There's an evolutionary arms race going on between the virus and our immune systems," the researchers added.

Indian SARS-CoV-2 Genomic Consortia (INSACOG)



- Launched in 2020, it comprises 10 labs.
- The overall aim of the Indian SARS-CoV-2 Genomics Consortium is to monitor the genomic variations in the SARS-CoV-2 on a regular basis through a multi-laboratory network.
- This vital research consortium will also assist in developing potential vaccines in the future.

IBM says it has produced world's first 2-nanometre chip technology



- IBM has unveiled what it claims to be world's first 2-nanometre chipmaking technology.
- The technology could be 45% faster than 7-nanometre chips used in many of today's laptops and phones and up to 75% more power efficient, according to the company.
- As many as 50 billion transistors can be fit into a chip the size of a fingernail, IBM added.

Cinco de Mayo festival



- Cinco de Mayo (May the fifth in Spanish) is a joyous celebration every year in Mexico and the United States.
- It is a day that celebrates Mexican national pride, marking Mexico's military victory on its soil over French forces in 1862.
- Mexico was then led by President Benito Juárez (1806-1872), a revered democratic reformer and opponent of foreign intervention in his country.
- It is after him the Benito Juárez Marg in New Delhi is named and where the Embassy of Mexico in India is located.
- In present context, in Puebla, Cinco de Mayo is celebrated annually with speeches, parades, and by reenacting episodes of the 1862 battle.
- The city houses a museum dedicated to the battle, and the actual battlefield is maintained as a park.
- In the US, in the mid-20th century, the celebration became a way for immigrants from Mexico to express pride in their heritage.
- Later, Cinco de Mayo also became popular with other demographics in the country when the festivities were linked with Mexican alcoholic beverages, such as the margarita.

Battle of Puebla-

- In late 1861, a French fleet attacked the Mexican port of Veracruz on the country's eastern coast and landed a large army that drove the Juárez government into retreat.
- As they moved from Veracruz to the capital Mexico City, the French encountered stiff resistance from Mexican forces.

- At Puebla, over 100 km ahead of Mexico City, a poorly equipped Mexican force decisively defeated the advancing French troops on May 5, 1862, killing over a thousand.
- This event marked a significant political victory of Mexican republicans and President Juarez.

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