

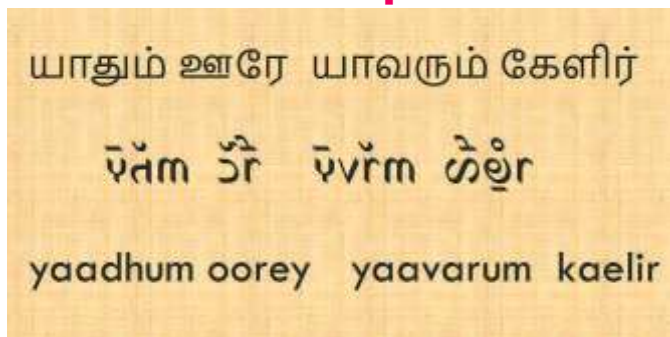
EVERYDAY CURRENT AFFAIRS – APRIL 28, 2019

TAMIL NADU

◆ **Chennai – to get soon its third full-fledged emergency department in the government sector at the Government Kilpauk Medical College (KMC) Hospital.**

- ✓ After Rajiv Gandhi Government General Hospital (RGGGH) and Government Royapettah Hospital, an emergency department as per the Tamil Nadu Accident and Emergency Care Initiative (TAEI) guidelines is being readied at KMC.
- ✓ KMC is recognised as a level II trauma care centre
- ✓ After KMC, the Government Stanley Medical College Hospital will also soon have the facility

◆ **IIT, Madras team – has developed a unified script for nine Indian languages, named the Bharati script**



- ✓ It has also developed a method for reading documents in Bharati script using a multi-lingual optical character recognition (OCR) scheme
- ✓ Dr Srinivasa Chakravathy's team at IIT Madras has also created a finger-spelling method for nine Indian languages, that can be used to generate a sign language for hearing-impaired persons in collaboration with Sunil Kopperappu of Innovation Labs, TCS, Mumbai

- ✓ The scripts that have been integrated include Devnagari, Bengali, Gurmukhi, Gujarati, Oriya, Telugu, Kannada, Malayalam and Tamil, which have same (Roman letter-based) script
- ✓ English and Urdu have not been integrated so far

◆ **Tamil Nadu Government – takes over the administration of the Tamil Film Producers Council**

- ✓ The Government had appointed N Sekar, district registrar (admin) Central Chennai, as special officer to manage the affairs of the council
- ✓ The move comes in the wake of allegations of misappropriation of funds by the existing council, headed by actor and producer Vishal Krishna, among others and a court-directed enquiry by IG Registration finding some of the allegations to be true.

NATIONAL

◆ **The fourth phase of the 17th Lok Sabha election – begins on April 29 in 71 constituencies across nine States**

GENERAL ELECTIONS 2019		
Phase	Poll Date	Total Constituencies under Polling
1	11 April, 2019	91
2	18 April, 2019	97
3	23 April, 2019	115
4	29 April, 2019	71
5	06 May, 2019	51
6	12 May, 2019	59
7	19 May, 2019	59
Result Date - 23 May, 2019		Total 543

- ✓ In the fourth phase, five constituencies in Bihar, three in Jharkhand, six each in Madhya Pradesh and Odisha, eight in West Bengal, 17 in Maharashtra, and 13 each in Rajasthan and Uttar Pradesh will vote
- ✓ With this phase voting, the election will begin in Madhya Pradesh and Rajasthan, and end in Maharashtra and Odisha

COMMITTEES

◆ **The Central Works Public Department (CPWD) - has constituted an expert committee - to formulate a design policy for building construction and infrastructure development**

- ✓ The committee has been set up under the chairmanship of CPWD's Additional Director General M K Sharma.
- ✓ The move is aimed at reviving building construction and infrastructure development at all levels in the CPWD
- ✓ The CPWD comes under the Ministry of Housing and Urban Affairs

SCIENCE, TECHNOLOGY & ENVIRONMENT

- ◆ **Researchers at Jamia Millia Islamia, New Delhi - have developed an ultrasensitive quantum thermometer using graphene quantum dots**



- ✓ The thermometer can precisely measure a wide range of temperature - 27 degree C to -196 degree C in an extremely quick response time of just about 300 milliseconds
- ✓ The thermometer has high sensitivity when measuring different temperatures and can measure very minute (micro Kelvin) changes in temperature.
- ✓ The thermometer was developed by a team led by Saikh S. Islam, Director of the Centre for Nanoscience and Nanotechnology
- ✓ The sensor can also be used for measuring high temperatures up to 100 degree C

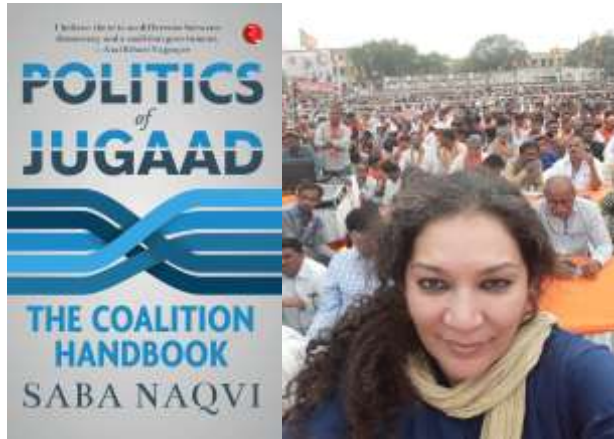
DEFENCE

- ◆ **Indian Army - signed a Memorandum of Understanding (MOU) with National Hydroelectric Power Corporation (NHPC) Limited to build four underground tunnels**

- ✓ The underground tunnels will be built along China and Pakistan borders for storage of ammunition and other war-related equipment.
- ✓ Three tunnels will be built along the Chinese border and one tunnel will be built along the Pakistan border.
- ✓ The tunnel can store 175-200 metric tonnes of ammunition and the cost of this pilot project is around Rs 15 crore.

BOOKS & AUTHORS

- ◆ **The “Politics of Jugaad: The Coalition Handbook” - authored by journalist Saba Naqvi**



- ✓ It examines coalition government history in India to project possibility at the end of 2019 Lok Sabha election
- ✓ It also analyses possibilities of coalition formation in different states and their chances of success and failure
- ✓ Saba Naqvi is one of India's renowned journalists, best known author and political analyst.
- ✓ Other books written by her include In Good Faith (2012), Capital Conquest (2015), and Shades of Saffron (2018)

SPORTS

- ◆ **India's Greco-Roman wrestlers, Sunil Kumar (87kg) and Gurpreet Singh (77kg) - have clinched the silver medal in the ongoing Asian Wrestling Championship 2019 in Xi'an, China**



- ✓ Kumar, who was just one step away from the gold medal, lost to Iran's mighty Hossein Ahmad Nouri
- ✓ Korea's Hyeonwoo Kim vanquished Singh 0-8 to win the gold medal.
- ✓ The Greco-Roman wrestling competition will continue on the final day of this prestigious tournament.
- ✓ On April 28, Gyanender (60kg), Ravinder (67kg), Yogesh (72kg), Harpreet Singh (82kg), and Hardeep Singh (97kg) will be in action.

- ◆ **Chess' world governing body FIDE - has increased the number of classical games from 12 to 14 and reduced one rest day - in the next year's World Championship match**



- ✓ The match is expected to be played in November 2020 with the venue yet to be announced
- ✓ The prize fund is likely to be in the region of \$2m euros, almost double than last year's
- ✓ The challenger for the reigning champion Magnus Carlsen is expected to be spotted next year at the Candidates tournament in March 2020

- ◆ **The BCCI - had recommended India pacers Mohammad Shami and Jasprit Bumrah, all-rounder Ravindra Jadeja and women's team player Poonam Yadav for the Arjuna award**



- ✓ The decision was taken during the CoA meeting in New Delhi

- ◆ **Australia's Claire Polosak - will create history as the first woman umpire ever to stand in a men's ODI when she takes the field in the final of the ICC World Cricket League Division 2 at Windhoek, Namibia**



- ✓ The 31-year-old, who is breaking new ground for women cricket officials has previously stood in 15 women's ODIs, the first one in November 2016 between Australia and South Africa.

- ◆ **Legendary Indian tennis player Vijay Amritraj, former India leg-spinner V.V. Kumar and 1978 Asian Games gold medallist (200m) R. Gnanasekaran - were felicitated with the lifetime achievement awards at the India Cements-sponsored Tamil Nadu Sports Journalists' Association (TNSJA) annual awards and scholarships function in Chennai**



- ✓ Table tennis star, Sharath Kamal was named the sports person of the year for 2018-19 and R.B. Ramesh, who has trained many prodigious talents in the field of chess, won the coach of the year award
- ✓ Among emerging talent, chess prodigy D. Gukesh and athlete P.M. Thabitha were presented the young achiever awards
- ✓ Tamil Nadu women's football team won the Team of the year award
- ✓ Ten emerging sports persons were also given scholarships of ₹30,000 each.

INTERNATIONAL DAY

- ◆ **World Veterinary Day - 28th April, 2019**



- ✓ The day intends to celebrate the contributions of veterinarians to the health of animals and society
- ✓ The World Veterinary Association (WVA) will co-host the 2019 World Veterinary Day Award with HealthforAnimals, the global animal medicines association
- ✓ The theme for the day is the 'Value of Vaccination'
- ✓ World Veterinary Day is celebrated on the last Saturday of April

COLD SPRAY TECHNOLOGY IN PLANES – IIT (M) PROJECT – A REPORT

- ◆ **IIT Madras (IITM) - in collaboration with the Central Government and General Electric (GE) has set up the Cold Spray equipment in its lab to research on its application to increase life expectancy of an aircraft and make flying safer**

- ✓ Cold spray technology is used in the aviation industry for fixing damages in aircraft engines and gas turbines without distorting or oxidizing the base material
- ✓ The equipment, set up in a Cold Spray Smart (Surface Modification and Additive Research Technologies) Laboratory, is the first-of-its-kind in an academic institution in the country

- ✓ The equipment can spray powdered metal particles in high pressure and low temperatures at supersonic speeds to fix damages in the aircraft
- ✓ It can spray hard metals like nickel-based alloys at a maximum speed of 1,200m per second and soft metals like aluminium as low as 300m per second.
- ✓ The higher the pressure, the higher the velocity of spray and better the powdered particles bond with the base material
- ✓ IIT-M plans to have thermal spray coating techniques like high velocity oxygen fuel coating, used in repairing hydro turbine components in dam



NEW TECH: The equipment at the Cold Spray Smart (Surface Modification and Additive Research Technologies) Laboratory at IIT-M

What is cold spray technology?

A high-energy coating process that works with electrically heated high pressure carrier gas like nitrogen or helium to accelerate hard metal powders at a supersonic speed

Where it's used

- > It is seen as the future of coating methodology for maintenance, repair and overhaul in the aviation and other transport sector
- > Cold spray works best for hard metals and has shown good properties post the coating process
- > Metals like copper, titanium, aluminium and nickel-based super alloys can be used as coating material



Advantages of cold spray

- > No alloy decomposition, oxide formation and combustion product entrapment
- > High coating strength, deposit efficiency and bond strength
- > Porosity below 1%
- > Powder microstructure and properties are preserved

How it works

- > The equipment uses nitrogen or helium gas, which is heated inside the gun of the equipment
- > As the heated gas expands, the powdered metal particles are fed into it at high pressure
- > The nozzle sprays the powdered particles at supersonic speed (from 200m to 1,200m per second) for particle adhesion
- > Since the particles are sprayed at low temperatures, the base material does not distort or oxidize

