

KSG:NEWSPAPER CRUX

4TH APRIL, 2021

NEWSPAPER HIGHLIGHTS

- About ten years ago, researchers produced a state of light called an optical Bose-Einstein condensate, which effectively is one large 'super photon' made up of many light particles. Now, University of Bonn scientists have reported a hitherto unknown phase transition in an optical Bose-Einstein condensate called the overdamped phase. The study which has been published in Science may be relevant for encrypted quantum communication.
- Researchers from India, the U.K. and Russia have analysed a large collection of 502 genomes sourced from over 16 countries and collected from over a period of 122 years of the bacterium that causes diphtheria – *Corynebacterium diphtheriae*. The results of this massive and collaborative study hint that we need to anticipate increase in incidence of diphtheria which may be fomented by the diversity of the species, emergence of variant toxin genes and progression of antimicrobial resistance.
- The minds of mice may be closer to human minds than we think, according to a new study by Washington University researchers who studied how hallucinations take place in the brains of mice. They were helped in this study by a computer game which both mice and people can play. After establishing the similarity of mice and human brains in this aspect, the researchers studied the biology of hallucinations. The study may help in developing therapies for schizophrenia.
- Two researchers from IIT Kanpur have developed a touch-sensitive, tactile, haptic watch that can help visually impaired people learn what time it is by touching the face.
- President Joe Biden lifted sanctions that Donald Trump had imposed on two top officials of the International Criminal Court (ICC), undoing one of the past administration's moves.

TREASURY BILLS(T-BILLS) AND ZERO-COUPON BOND

- 1.T-bills, which are money market instruments, are short term debt instruments issued by the Government of India and are presently **issued in three tenors, namely, 91 day, 182 day, and 364 day.**
- 2.**Treasury bills are zero coupon securities and pay no interest. Instead,** they are issued at a discount and redeemed at the face value at maturity.
- 3.Zero Coupon Bonds are bonds with no coupon(interest) payments.
- 4.However, like T-Bills, they are issued at a discount and redeemed at face value.

WORLD CITIES CULTURE FORUM

- 1.The Chief Minister of Delhi will represent Delhi and India at the World Cities Culture Forum (WCCF).
- 2.Establishment: WCCF was established in London in 2012 with eight cities. Member Cities: It has 43 participating member cities. Participating member cities include London, Hong Kong, Amsterdam, Edinburgh, Lisbon, San Francisco, Shanghai, etc. Delhi is invited this year but it is not a part of member cities.
- 3.Role: **It enables the policy makers of member cities to share research and intelligence, and explores the vital role of culture in their future prosperity.**
- 4.World Cities Culture Report: Delhi will also be part of the World Cities Culture Report - the most comprehensive global dataset on culture in cities.

PM-KUSUM

- 1.The first farm-based solar power plant under the Prime Minister's Kisan Urja Suraksha Evam Utthan Mahabhiyan (PM-KUSUM) scheme **has come up in Jaipur (Rajasthan)** district's Kotputli tehsil with a provision for production of 17 lakh units of electricity every year.
- 2.The PM-KUSUM scheme was launched by the Ministry of New and Renewable Energy (MNRE) **to support installation of off-grid solar pumps in rural areas and reduce dependence on grid, in grid-connected areas.**
- 3.Intended Benefits of the Scheme: Helping Discoms: Supports the financial health of electricity distribution companies (discoms) by reducing the burden of subsidy to the agriculture sector.
- 4.Helping States: **Promotes decentralised solar power production, and reduces transmission losses.** Helping Farmers: If farmers are able to sell surplus powers, they will be incentivised to save power and, in turn, it will mean the reasonable and efficient use of groundwater. This will also increase their income.

EXPANSION OF EMERGENCY CREDIT LINE GUARANTEE SCHEME 3.0

- 1.The government has extended the Rs. 3-lakh-crore Emergency Credit Line Guarantee Scheme (ECLGS) until 30th June 2021, and also widened its scope to new sectors, including hospitality, travel and tourism.
- 2.ECLGS was rolled out in May 2020 as part of the Centre's Atmanirbhar package in response to the Covid-19 crisis.**The objective was to support small businesses struggling to meet their operational liabilities due to the imposition of a nationwide lockdown.**
- 3.It involves extending credit of up to 40% of total credit outstanding across all lending institutions as on 29th February 2020. The tenor of loans granted under ECLGS 3.0 would be 6 years, including a moratorium period of 2 years.
- 4.**National Credit Guarantee Trustee Company (NCGTC)** is the guarantee provider under the ECLGS scheme.