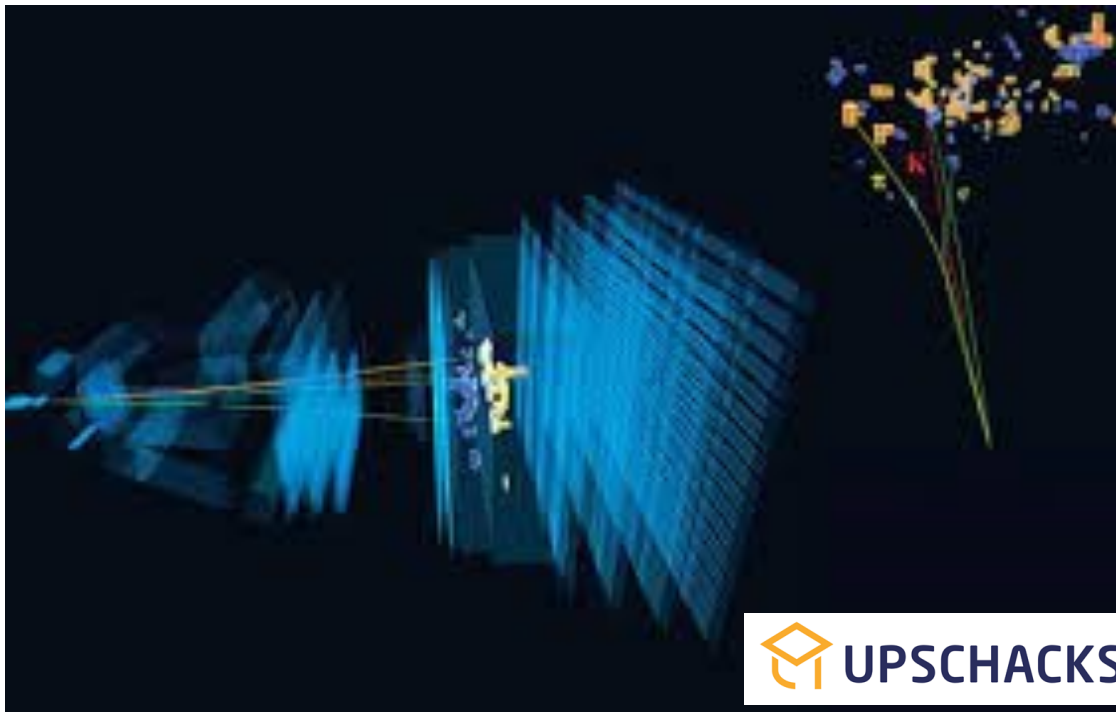


India and US start two-day naval exercise PASSEX in Bay of Bengal



- . Indian Navy deployed its warship Shivalik and long-range maritime patrol aircraft P8I in the 'PASSEX' exercise while the US Navy was represented by the USS Theodore Roosevelt carrier strike group.
- . A carrier battle group or carrier strike group is a mega naval fleet comprising an aircraft carrier, accompanied by a large number of destroyers, frigates and other ships. In a first, enhancing jointmanship, Indian Air Force fighters have also been included in the exercise affording the IAF an opportunity to practice air interception and air defence with the US Navy.
- . The exercise came over a week after US Defence Secretary Lloyd Austin flew into India as part of his three-nation first overseas tour that signalled the Joe Biden administration's strong commitment to its relations with its close allies and partners in the Indo-Pacific region.

Beauty Quarks



- The particles called beauty quarks are third-generation heavy quarks with exceptionally low transition rates to lower-mass quarks.

- The bottom quark is also notable because it is a product in almost all top quark decays and is a frequent decay product of the Higgs boson.
- According to the Standard Model of particle physics, particles such as beauty quarks should decay into either muons or electrons in equal measure.
- Although this may not be happening, it suggests a new study by the LHCb Collaboration at CERN. The results indicate that particles are not behaving in the way they should.
- The beauty quarks (one of the subtypes of quark) decay into leptons known as 'muons'.

- Subatomic particles called “beauty quarks”, which are not usually found in nature, undergo a process known as decay, where one particle transforms into several, less massive ones.
- The standard model foresees that “beauty quarks should decay into equal numbers of electron and muon particles. Instead, the process yields more electrons than muons.
- One possible explanation is that an as-yet undiscovered particle known as a leptoquark was involved in the decay process and made it easier to produce electrons.




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NV Ramana as Chief Justice of India



- Chief Justice of India Sharad A. Bobde has recommended Justice N.V. Ramana, the senior most judge of the Supreme Court, as the 48th Chief Justice of India
- The Constitution of India grants power to the President of India to nominate, and with the advice and consent of the Parliament of India, appoint a chief justice, who serves until they reach the age of sixty-five or until removed by impeachment.
- Article 124 of the Constitution empowers the President to appoint the Chief Justice of India and the Judges of the Supreme Court.
- Removal: Article 124(4) of Constitution of India lays down the procedure for removal of a judge of the Supreme Court which is applicable to chief justices as well.

Role & responsibilities:

- **As head of the Supreme Court, the chief justice is responsible for the allocation of cases and appointment of constitutional benches which deal with important matters of law.** 
- **In accordance with Article 145 of the Constitution of India and the Supreme Court Rules of Procedure of 1966, the chief justice allocates all work to the other judges who are bound to refer the matter back to him or her (for re-allocation) in any case where they require it to be looked into by a larger bench of more judges.**
- **On the administrative side, the chief justice carries out the following functions: maintenance of the roster; appointment of court officials and general and miscellaneous matters relating to the supervision and functioning of the Supreme Court.**
- **The president (Discharge of Functions) Act, 1969 of India provides that the chief justice of India shall act as the president of India in the event of the offices of both the president and the vice president being vacant.**

Process of Appointment


- Appointment to the office of the Chief Justice of India should be of the senior most Judge of the Supreme Court considered fit to hold the office.
- The Union Minister of Law, Justice and Company Affairs would, at the appropriate time, seek the recommendation of the outgoing Chief Justice of India for the appointment of the next Chief Justice of India.
- Whenever there is any doubt about the fitness of the senior most Judge to hold the office of the Chief Justice of India, consultation with other Judges as envisaged in Article 124 (2) of the Constitution would be made for appointment of the next Chief Justice of India.
- After receipt of the recommendation of the Chief Justice of India, the Union Minister of Law, Justice and Company Affairs will put up the recommendation to the Prime Minister who will advise the President in the matter of appointment.

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Eligibility for Judges of Supreme Court

- According to article 124(clause 2) of the Indian Constitution, Every Judge of the Supreme Court shall be appointed by the President by warrant under his hand and seal after consultation with such of the Judges of the Supreme Court and of the High Courts in the States as the President may deem necessary for the purpose and shall hold office until he attains the age of sixty-five years:

- **Provided that in the case of appointment of a Judge other than the Chief Justice, the Chief Justice of India shall always be consulted:**
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- **Provided further that-**
 - a Judge may, by writing under his hand addressed to the President, resign his office**
 - a Judge may be removed from his office in the manner provided in clause (4).**
 - **The age of a Judge of the Supreme Court shall be determined by such authority and in such manner as Parliament may by law provide.**
 - **A person shall not be qualified for appointment as a Judge of the Supreme Court unless he is a citizen of India and has been for at least five years a Judge of a High Court or of two or more such Courts in succession; or has been for at least ten years an advocate of a High Court or of two or more such Courts in succession; or is, in the opinion of the President, a distinguished jurist.**

Maharaja Chhatrasal Bundela



- Minister of State for Tourism and Culture (Independent Charge) and Chief Minister of Madhya Pradesh inaugurated the 'Maharaja Chhatrasal Convention Centre at Khajuraho' developed under Swadesh Darshan Scheme of Ministry of Tourism in Khajuraho, Madhya Pradesh



- He was a Bundeli warrior who chose to turn against the Mughal Emperor Aurangzeb and seek to establish his own kingdom in Bundelkhand
- He was born in Kachar Kachnai on the 4th of May in 1649, to Champat Rai and Lal Kunwar.
- He was a descendant of Rudra Pratap Singh of Orchha. Chhatrasal was a disciple of Pran Nathji and accepted him as his guru and accepted Pranami Dharma.
- Chhatrasal was a patron of literature, and his court housed several noted poets

- His eulogies written by Kavi Bhushan, Lal Kavi, Bakhshi Hansaraj and other court poets helped him gain lasting fame
- Raja Chhatrasal died on 20th December 1731 at the age of 82.
- In his lifetime, he had seen extraordinary changes in India, He saw the Mughals at their height under Shah Jahan and their fall with Muhammad Shah Rangila



Bundelkhand region

- It is a geographical and cultural region and also a mountain range in central & North India.
- The hilly region is now divided between the states of Uttar Pradesh and Madhya Pradesh, with the larger portion lying in the latter state
- By the state governments of Uttar Pradesh (UP) and Madhya Pradesh (MP), 'Bundelkhand' comprises seven districts of southern UP and six districts of northern MP: Jhansi, Lalitpur, Jalaun, Hamirpur, Mahoba, Banda, Chitrakoot districts (all in UP), and Datia, Tikamgarh, Chhatarpur, Panna, Sagar and Damoh districts (all in MP).
- It lies along the Vindhya mountains and was once the kingdom of the Chandella dynasty, which ruled the territory between the 9th and 13th centuries

NASA releases picture of frosty sand dunes of Mars



- NASA shared an image of frosty sand dunes of Mars taken by the Mars Reconnaissance Orbiter.
- The field of sand dunes occupies a crater that stretches for 5 kilometres, found in the high-latitudes of Mars' northern plains. NASA said the stripes and other features visible in the image are the results of sublimated ice that comes with the "seasonal thaw".

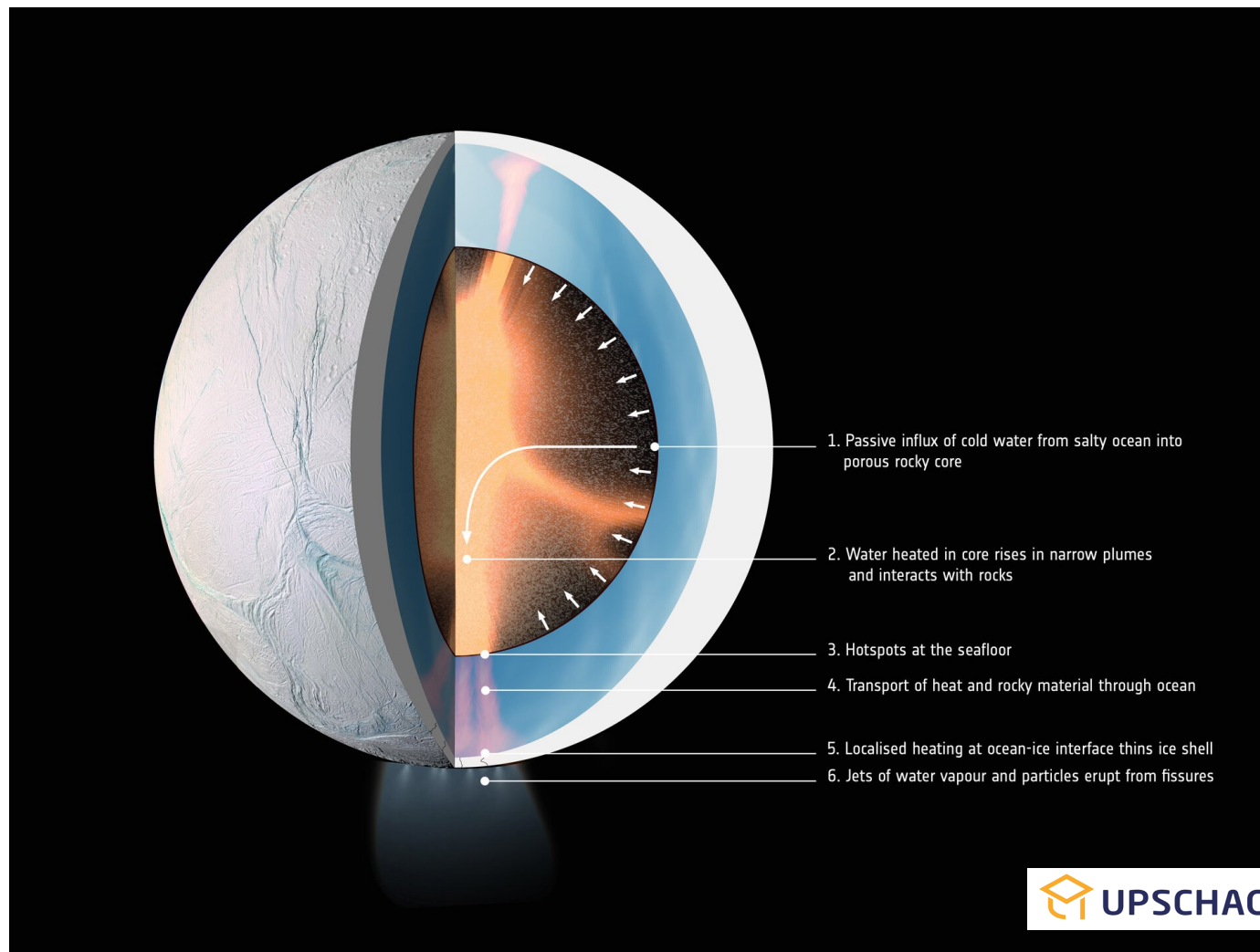
Smog tower to purify air installed at Bengaluru's Hudson Circle



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- BBMP has installed a smog tower at Bengaluru's Hudson Circle in order to combat air pollution in the city.
- The tower, developed by Nutan Labs, uses nanoparticles to absorb pollutants like PM2.5, PM10, oxides of carbon, sulphur and nitrogen from air.
- According to Nutan Labs CEO HS Nuthan, 90% reduction in ambient air pollutants was observed after using the nanotechnology.

Enceladus



Enceladus is the sixth-largest moon of Saturn. It is about 500 kilometers in diameter, about a tenth of that of Saturn's largest moon, Titan. Enceladus is mostly covered by fresh, clean ice, making it one of the most reflective bodies of the Solar System.

27 migratory birds found dead at wildlife sanctuary in Himachal



As many as 27 migratory birds have been reported dead on account of avian influenza in the Pong Dam Wildlife Sanctuary area of Himachal Pradesh since March 25, setting off alarm bells and forcing authorities to shut down the sanctuary.

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- Assuming that it could be avian influenza — H5N1 or H5N8
- Avian influenza, commonly known as bird flu, is a highly contagious viral disease affecting a variety of birds. The most common strain of the virus that causes severe respiratory disease in birds is H5N1. However, other strains, such as H7N1, H8N1, or H5N8, also cause bird flu.
- Wild birds are considered the natural reservoirs of the bird flu viruses, and it is typical of an outbreak to coincide with the season of arrival of migratory birds
- Migratory birds from faraway countries in the northern hemisphere such as Mongolia and Kazakhstan are said to have brought the virus to India.

Pong Dam Lake Wildlife Sanctuary



- In 1975, Pong dam was built across the Beas River. It is also called the Pong reservoir or the Maharana Pratap Sagar.
- In 1983, the entire reservoir was declared as a Wildlife Sanctuary by the Himachal Pradesh government.
- In 1994, the Government of India declared it a “Wetland of National Importance”.

- **Pong Dam Lake was declared as Ramsar Site in November 2002.**
- **The sanctuary plays host to around 220 species of birds belonging to 54 families. Migratory birds from all over Hindukush Himalayas and also as far as Siberia come here during winter.**
- **The lake is fed by Beas River and its numerous perennial tributaries such as Gaj, Neogal, Binwa, Uhl, Bangana, and Baner.**
- **The lake harbours around 22 species of fish, including rare fish like sal and gad. The adequate water level of the lake makes it an ideal destination to indulge in water sports.**