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Designation of Senior Advocates

Context: On Wednesday, August 14, the Supreme Court appointed 39 lawyers as senior advocates, including 10 women.

➤ New Guidelines for Senior Advocate Designation (2023)

- **Eligibility:** The Chief Justice of India (CJI) or any Supreme Court judge can recommend an advocate for senior advocate designation.
- **Age Requirement:** The minimum age for designation is 45 years, although this can be relaxed by the Committee for Designation of Senior Advocates, the CJI, or a recommending Supreme Court judge.
- **Evaluation Criteria:** Applicants are evaluated on a 100-point scale. Notably, only 5 marks are reserved for academic publications and teaching experience, down from 15 marks in the 2018 guidelines. The weightage for judgments, both reported and unreported, has been increased from 40 to 50 points.

➤ 2018 Guidelines and Their Origins

- **Purpose:** The 2018 guidelines were introduced to enhance transparency in the senior advocate designation process, replacing the prior system under Section 16 of the Advocates Act, 1961.
- **Committee for Designation:** A 'Committee for Designation of Senior Advocates' was established, chaired by the CJI and including senior judges, the Attorney General, and a member of the Bar.
- **Application Process:** Advocates could apply through a 'permanent secretariat', which would assess applications based on legal experience, among other criteria.
- **Impact of 2017 Judgment:** These guidelines followed a 2017 Supreme Court ruling that called for more transparency in the designation process, responding to criticisms of opaqueness and nepotism.

➤ Reasons for New Guidelines in 2023

- **Centre's Objections:** The Centre challenged the 2018 guidelines, particularly the point-based system, arguing that it was subjective and diluted the dignity of the senior advocate designation.
- **Concerns about Publications:** The Centre criticized the high weightage given to publications, citing the prevalence of low-quality journals.
- **Secret Ballot:** The Centre also sought the reinstatement of the secret ballot for voting on candidates, to allow judges to express views without pressure.

➤ Senior Advocates

- The Advocates Act classifies "senior advocates" as a distinct group of lawyers.
- The Supreme Court and High Courts have the authority to designate senior advocates.

- In the Supreme Court, a permanent committee led by the Chief Justice of India (CJI) includes the two senior-most Supreme Court Judges, the Attorney General, and a Bar member to oversee the designation process.
- The designation is based on merit, experience, legal knowledge, and standing at the Bar.
- To be eligible, an advocate must have a minimum of ten years of experience or a combined ten years as an advocate and judicial officer.
- The minimum age requirement is 45 years, but exceptions can be made by the Committee or upon recommendation by the CJI or a Supreme Court Judge.
- Senior advocates have the right of pre-audience over other lawyers, with their rank determined by seniority.

➤ Types of Advocates

- Advocates can appear and argue any matter on behalf of a party in any court or tribunal.
- Advocates on Record (AoR) have the exclusive authority to file, prepare, and draft legal documents before the Supreme Court. This designation is specific to the Supreme Court.
- Senior Advocates cannot appear in the Supreme Court without an Advocate-on-Record or in any other court or tribunal in India without a junior advocate. They are also not allowed to accept instructions for drawing pleadings or affidavits, advising on evidence, or doing any drafting work.

NEOWISE Project

Context: Launched in 2011, NASA's NEOWISE mission operated until last week, detecting over 3,000 near-Earth objects (NEOs) with potential collision courses with Earth.

➤ Launch and Early Operations

- The Wide-field Infrared Survey Explorer (WISE), launched by NASA in December 2009, was part of the Explorers Program.
- WISE was 1,000 times more sensitive than earlier surveys like IRAS, AKARI, and COBE's DIRBE, and avoided the failure experienced by the Wide Field Infrared Explorer (WIRE) in 1999.

➤ "Cold" Mission

- Official sky survey began on 14 January 2010, covering 99% of the sky with each position imaged at least eight times.
- The spacecraft captured 1.5 million images over ten months, with a resolution of 6 arcseconds and a field of view of 47 arcminutes.
- WISE did not detect Kuiper belt objects due to low temperatures, with Pluto being the only exception. It detected objects warmer than 70–100 K, including

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Neptune-sized objects up to 700 AU and Jupiter-mass objects up to 1 light year away.

- Expected to find 300,000 main-belt asteroids and 700 NEOs, WISE successfully discovered many new asteroids and comets.

➤ **NEOWISE (Pre-Hibernation)**

- NASA extended WISE as NEOWISE in October 2010 to search for near-Earth objects (NEOs) using its remaining detection capability.
- NEOWISE discovered 20 new comets and 35,000 new minor planets among 158,000 characterized objects.
- WISE entered hibernation on 1 February 2011 after completing its asteroid belt scan, with a status check on 20 September 2012.

➤ **Recommissioning and NEOWISE (Post-Hibernation)**

- NEOWISE was reactivated on 21 August 2013 to search for NEOs, including a response to the Chelyabinsk meteor event.
- By December 2013, it resumed operations at 75 K and made 640,000 detections, discovering 416 new objects, with a quarter being NEOs.
- As of July 2024, NEOWISE had identified 399 NEOs, including 365 near-Earth asteroids (NEAs) and 66 potentially hazardous asteroids (PHAs).

➤ **Mission Goals and Capabilities**

- WISE aimed to image 99% of the sky in infrared wavelengths, with at least eight images per position to improve accuracy.
- The spacecraft captured 1.5 million images during its mission, detecting asteroids, cool stars, luminous infrared galaxies, and proto-planetary discs.
- Science operations and data processing were conducted at the Infrared Processing and Analysis Center at Caltech.
- WISE All-Sky (WISEA) data, including images and source catalogs, was publicly released on 14 March 2012 and is available at the Infrared Science Archive.

➤ **End of Mission**

- On 13 December 2023, JPL announced that NEOWISE would enter a low orbit and become unusable by early 2025 due to increased solar activity.
- On 8 August 2024, JPL confirmed that NEOWISE's science survey ended on 31 July 2024, with reentry expected later in 2024.
- NEOWISE's successor, the NEO Surveyor, is scheduled to launch in 2028 to build on NEOWISE's findings.

Extremophile Bacteria

Context: Scientists have isolated extremophiles—microbes thriving in extreme conditions—from volcanic vents, permafrost, acid mines, deep-sea vents, and ice-covered lakes, as well as from spacecraft exteriors and nuclear waste sites.

➤ **Adaptation to Extreme Environments:**

- Extremophiles thrive in harsh conditions (high temperature, drought, acidity).
- They use multiple sets of proteins tailored to specific niches.

➤ **Scientific and Industrial Applications:**

- Thermus aquaticus*: Produces Taq DNA polymerase used in PCR, vital for DNA detection.
- Other extremophile enzymes are used in molecular biology.

➤ **Current Research Initiatives:**

- Earth Microbiome Project (2010):** Sequences 200,000 samples and assembles 500,000 microbial genomes.
- Earth Biogenome Project:** Sequences genomes of all eukaryotic organisms to map biodiversity.

➤ **Genomic Advances:**

- Sequencing and DNA synthesis enable large-scale biological applications.
- Potential to engineer organisms for disease resistance and synthetic biological systems.

➤ **Space Research:**

- Deinococcus radiodurans*: Survives extreme conditions like high g-forces and space.
- Demonstrates resilience and potential for space exploration.

➤ **Microbial Communities in Everyday Objects:**

- Coffee Machines:** Contain caffeine-degrading microbes; insights for decaffeination and bioremediation.
- Dishwashers:** Host bacterial and fungal species, including opportunistic pathogens.
- Microwave Ovens:** Bacterial communities are similar to kitchen surfaces; no additional health risk noted.

➤ **Health and Safety:**

- No higher disease risk from microbes in microwaves compared to kitchen surfaces.
- Different environments select for specific microbial communities.

➤ **Potential for Bioremediation:**

- Extremophiles' resilience suggests applications in bioremediation of toxic waste.
- Some Examples of Extremophiles

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Term	Description	Examples
Acidophile	Organism with optimal growth at pH levels of 3.0 or below.	<u>Acidithiobacillus ferrooxidans</u>
Alkaliphile	Organism with optimal growth at pH levels of 9.0 or above.	<u>Natronomonas pharaonis</u>
Capnophile	Organism with optimal growth in high concentrations of carbon dioxide.	<u>Mannheimia succiniciproducens</u>
Halophile	Organism with optimal growth in high salt concentrations.	<u>Halobacterium salinarum</u>
Hyperpiezophile	Organism with optimal growth at hydrostatic pressures above 50 MPa.	<u>Thermococcus barophilus</u>
Hyperthermophile	Organism with optimal growth at temperatures above 80°C (176°F).	<u>Pyrolobus fumarii</u>
Metallotolerant	Organism capable of tolerating high levels of dissolved heavy metals.	<u>Ferroplasma sp.</u> , <u>Cupriavidus metallidurans</u> , GFAJ-1
Oligotroph	Organism with optimal growth in nutritionally limited environments.	<u>Pelagibacter ubique</u>
Osmophile	Organism with optimal growth in environments with high sugar concentration.	<u>Saccharomyces rouxii</u>
Piezophile	Organism with optimal growth in hydrostatic pressures above 10 MPa.	<u>Marinitoga piezophila</u>
Polyextremophile	Organism that qualifies as an extremophile under more than one category.	<u>Deinococcus radiodurans</u>
Psychrophile/Cryophile	Organism with optimal growth at temperatures of 15°C (59°F) or lower.	<u>Pseudomonas syringae</u>
Radioresistant	Organisms resistant to high levels of ionizing radiation.	<u>Deinococcus radiodurans</u>
Sulphophile	Organism with optimal growth in high concentrations of sulfur.	<u>Sulfurovum epsilonproteobacteria</u>
Thermophile	Organism with optimal growth at temperatures above 45°C (113°F).	<u>Thermus aquaticus</u>
Xerophile	Organism with optimal growth at water activity below 0.8.	<u>Aspergillus niger</u>

NEWS IN BETWEEN THE LINES

Recently, the World Health Organization (WHO) declared mpox a global health emergency again after an outbreak in the Democratic Republic of Congo spread to Burundi, Kenya, Rwanda, and Uganda.

About Mpox:

- Mpox, previously known as monkeypox, is a rare viral infection caused by the monkeypox virus.
- It can spread from person to person and from the environment to people.
- It's a zoonosis, which means it can be transmitted from infected animals to humans.
- It is endemic in densely forested regions of west, central and east Africa.
- Symptoms of MPox include fever, headache, muscle aches, backache, exhaustion, swollen lymph nodes, rash starting on the face and spreading and chills.
- Mpox genomes can be categorized into two broad clades: I and II, each with distinct sub-clades or lineages.
- Clade IIb was implicated in the 2022 outbreak and demonstrated high human-to-human transmission, indicating adaptability.
- This virus experienced a global outbreak in 2022-2023, leading to a public health emergency declaration by the WHO.
- The outbreak affected over 118 countries and infected nearly 100,000 people, with mortality rates ranging from 1-10%.

Mpox



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Marginal Cost of Lending Rate

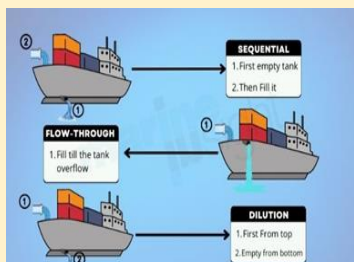


Recently, the State Bank of India (SBI) increased the marginal cost of lending rate (MCLR) by 10 basis points across all tenors, effective from 15th of August.

About Marginal Cost of Lending Rate:

- The Marginal Cost of Funds based Lending Rate (MCLR) is the **minimum interest rate** that banks can charge borrowers in India.
- The Reserve Bank of India (RBI) **implemented MCLR in 2016** to **replace the base rate system**, which was used to determine lending rates for commercial banks.
- It is an **internal reference rate** that banks use to calculate the interest they can charge on loans.
- It is based on the bank's marginal cost of funds, which is the cost of borrowing money.
- It is calculated based on the **marginal cost of funds, negative carry-on cash reserve ratio, operating costs and tenor premium**.
- Banks calculate MCLR by considering the additional cost of arranging funds for a potential buyer.
- Banks **review MCLR every month** and any changes to the rate will affect the interest rates on loans that are linked to it.
- It **helps to improve transparency** in how banks determine interest rates and how policy rates are transmitted to lending rates. It's also used as a benchmark for setting interest rates on loans, including home loans.

Ballast Water



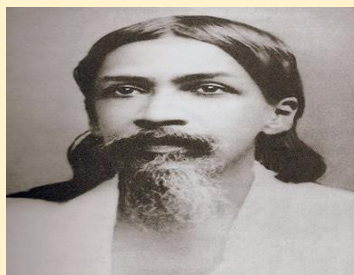
Recently, the Tamil Nadu Water Resources Department (WRD) sought ₹160 crore from Kamarajar Port to combat the invasive charru mussel, blaming the port's ballast water practices for the spread.

About Ballast Water:

- Ballast water is **fresh or saltwater** that ships carry in their ballast tanks and cargo holds to **help them maneuver** and remain stable during a voyage.
- It is used **when a ship is not carrying cargo**, is **carrying an uneven load**, or is in rough seas.
- Ships take on ballast water in coastal regions to **fill 10–50% of their tonnage** and then drain it when the load changes.
- Ballast water can **contain thousands of aquatic organisms**, including **microbes, plants and animals**.
- When ships release untreated ballast water at their destination, these organisms can be carried around the world and potentially introduce invasive species to new environments. For example, the Chinese mitten crab was introduced to Western Europe, the Baltic Sea, and the North American West Coast in **1912**.
- The Ballast Water Management (BWM) Convention of the International Maritime Organization (IMO) **came into force on September 8, 2017**.
- Countries like **Australia** and **New Zealand** enforce strict regulations due to their ecologically sensitive areas, such as the Great Barrier Reef.
- India is not a signatory to the Ballast Water Management Convention**, meaning there are no specific regulations for ballast water discharge in Indian ports.
- As a result, **Indian ports do not enforce ballast water management standards**, leaving a gap in the regulation of invasive species through ballast water.

Personality in News

Sri Aurobindo



Yesterday on 15th of August, the Prime Minister of India paid homage to Sri Aurobindo on his birth anniversary.

Sri Aurobindo (15 August 1872 – 5 December 1950)

Sri Aurobindo/ Aurobindo Ghose, a revered Indian philosopher, thinker, spiritual leader, poet and Indian nationalist was born in Calcutta (now Kolkata), Bengal Presidency.

Contributions:

- Sri Aurobindo cracked the Indian Civil Service Examination in **1890** but could not join due to failing the horsemanship test.
- He became a **leading figure in the Indian freedom movement** and **wrote fearless articles** for the English newspaper **Bande Mataram** and the **Bengali weekly Yugantar**.
- He started the weekly English journal Dharma to promote **Swaraj** (freedom) from British rule.
- He was an **active protester** against the **1905 Partition of Bengal**, advocating for a boycott of British institutions and goods.
- His major works include Essays on the **Gita** (1922), **The Life Divine** (1939), Collected Poems and Plays (1942), **The Synthesis of Yoga** (1948), **The Human Cycle** (1949), **The Ideal of Human Unity** (1949), **Savitri: A Legend and a Symbol** (1950) and **On the Veda** (1956).

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POINTS TO PONDER

- As of the latest update, which new Ramsar sites have been added to the list in India, increasing the total number to 85?
– **Nanjarayan Bird Sanctuary, Kazhuveli Bird Sanctuary, Tawa Reservoir**
- Who was appointed as the new Director of the Enforcement Directorate (ED) for a period of two years? – **Rahul Navin**
- What is the term used to describe the disruption in gut bacteria caused by antibiotics, especially broad-spectrum ones? – **Dysbiosis**
- Which Union Minister recently launched Version 2.0 of the 'FloodWatch India' mobile application developed by the Central Water Commission (CWC)? – **Minister of Jal Shakti**
- What advanced technology does the Man-Portable Anti-Tank Guided Missile (MPATGM) utilize to operate effectively in both day and night conditions? – **Infrared homing sensors and integrated avionics**

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