

NEWS TODAY

Telecommunications (Administration of Digital Bharat Nidhi) Rules, 2024 notified

Rules have been notified by **Department of Telecommunication (DoT)** in exercise of powers conferred by the **Telecommunications Act, 2023** to operationalize the **Digital Bharat Nidhi (DBN)**.

About Digital Bharat Nidhi

- DBN was established through the **Telecommunications Act, 2023** for **funding telecom schemes in underserved remote/rural areas at affordable prices**.
- It replaced the **Universal Service Obligation Fund (USOF)** created under the **erstwhile Indian Telegraph Act, 1885**.
 - ⊕ **USOF** was a **non-lapsable pool of funds** generated by a **Universal Access Levy** through the license fee charged on licensee of DoT @ **5% of the Adjusted Gross Revenue**.

Key Highlights of the Notified Rules

- **Criteria for undertaking Schemes and Projects:** To provision telecom services in underserved rural, remote, and urban areas; to introduce next-gen telecom technologies; to encourage startups; to promote sustainable and green technologies; etc.
- **Sharing of telecom networks established under DBN:** DBN implementer shall share and make available such network and services on an **open and non-discriminatory basis**.
- **Process of allocation of funds under DBN**
 - ⊕ **Bidding:** To promote and support Telecommunication services for promoting access to and delivery of established telecommunication services in underserved areas.
 - ⊕ **Selection by Application:** To promote and support R&D of new or emerging telecommunication technologies or products or services, through co-funding, Viability Gap Funding (VGF), etc.

Judiciary is considered as the Guardian of our Democracy, says PM

The PM highlighted the achievements of the Judiciary at the National Conference of District Judiciary, organized as part of the 75th year celebrations of the Supreme Court of India.

Constitutional provisions that empower Judiciary to be guardian of Democracy

- **Article 13** implicitly lays the ground for judicial review for the Supreme Court.
- **Article 32 and 226** empowers the Supreme Court and High Courts to issue writs for enforcement of the Fundamental Rights.

Role played by Indian judiciary as a guardian of Indian Democracy

- **Kesavananda Bharati Sripadagalavaru vs. State of Kerala, 1973:** By formulating the doctrine of “the basic structure of the constitution” placed limitations on the amending powers of the Parliament.
- **Indira Gandhi v. Raj Narain (1975):** Upheld the essence of democracy i.e. free and fair elections.
- **S. R. Bommai v. Union of India case, 1994,** restricted the arbitrary dismissal of state governments under Article 356.
- **ADR vs UOI case 2024:** By declaring electoral bond scheme unconstitutional and upholding the transparency in political funding.

Way Forward (Law commission report 245): Appointment of judges on a priority basis, Special Traffic Courts, Periodic Needs Assessment for the Judiciary, encouraging Alternative Dispute Resolution methods, etc.

Challenges: Low judge-population ratio, Pendency of cases, judicial activism or overreach, threat of contempt of court, corruption in judiciary.

Researchers studied mitochondrial dynamics to treat Parkinson's disease

Parkinson's disease is a neurodegenerative disease caused by the death of brain cells.

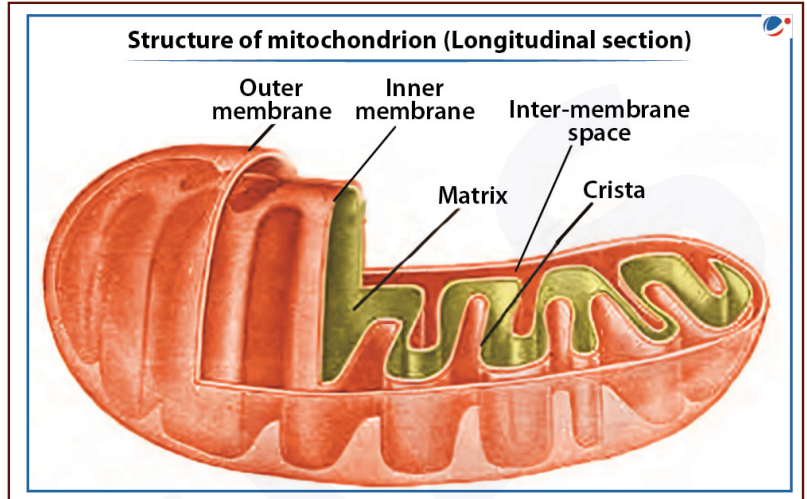
- **Presence of environmental toxins and toxic proteins** causes fragmentations and dysfunctions in mitochondria. E.g. Manganese induced Parkinsonism.
 - ⊕ Researchers have found that **inhibiting Dynamin-related protein (Drp1) activity could restore mitochondrial function** and serve as a potential treatment.
 - ⊕ Naturally abundant in cells, **Drp1 protein travels to mitochondria** when they divide into smaller sizes for **higher mobility and quality control**.
 - ⊕ However, **too much Drp1 activity causes excessive division, leading to fragmented mitochondria** with impaired function.

About Mitochondria

- Mitochondria are **membrane-bound cell organelles** that generate most of the cell's energy in the form of **ATP (adenosine triphosphate)**.

Functions

- ⊕ **Energy Production:** Sites of **aerobic respiration**, producing ATP, hence termed the **power houses of the cell**.
- ⊕ **Genetic Material:** Contains its own **circular DNA (Mitochondrial DNA or mtDNA)**, RNA, ribosomes, and components for protein synthesis.
 - ◆ mtDNA is useful for **tracing genetic lines**.



Mitochondrial Diseases

- ⊕ These are caused by **genetic mutation of mtDNA or nuclear DNA**.
 - ◆ **mtDNA is inherited exclusively from the mother, making these diseases maternally inherited.**
 - ◆ **Mitochondrial Replacement Therapy (MRT)** prevents the transmission of mitochondrial diseases from mother to child.

Recent Study found faster Upward Growth of cities leading to high rise structures

While taller buildings can accommodate **more people in lesser space**, they also tend to negatively impact the **existing infrastructure and the local climate**.

- **Permissible height of buildings** is determined by Floor Area Ratio (FAR).
 - ⊕ It is the ratio of the combined covered area (plinth area) of all floors by the total plot area.
 - ⊕ **Model Building Bye-Laws, 2016** provides regulations for the height.

Reasons for upward growth

- **Economic Growth:** High rise buildings house mix-use structures including residential, office spaces, etc.
- **Urbanization:** Urban population has witnessed an increase of about 2 billion between 1990 -2020.
- **Developments in Construction technology:** use of elevators, innovative and centralized heating/cooling systems, designs to counteract high speed winds, etc.

Challenges associated with Upward Growth

- **Increased Population Density:** Requiring greater need for public resources and greater energy demand, impacting quality of life.
- **Urban Heat Island:** Leading to localized heating impacting temperatures, rainfall and wind speeds of the cities.
- **Economic Viability:** Adhering to building codes and incorporating disaster resilience structures is relatively costly.
- **Social Divide:** Higher cost of construction makes them affordable to higher income groups.
- **Other Challenges:** Impact on disaster relief; solid waste management, etc.

DoT notified Draft Rules for protection of Critical Telecom Infrastructure


Recently, Department of Telecommunication (DoT) notified Telecommunications (Critical Telecommunication Infrastructure) Rules, 2024 and Telecommunications (Telecom Cyber Security) Rules, 2024 under the Telecommunications Act, 2023.

About Critical Telecommunication Infrastructure (CTI)

- ▶ CTI are **any telecommunication network or part thereof**, designated by the Central Government, disruption of which shall have **debilitating impact on national security, economy, public health or safety**.
- ▶ **Threats to CTI**
 - ⊕ **Cyberattacks and espionage:** Targeted malware and ransomware attacks, Distributed Denial of Service attacks, etc.
 - ⊕ **Physical:** Vandalism by terrorist and other miscreant groups, natural disasters, etc.
 - ⊕ **Supply-chain vulnerabilities:** Over-reliance on foreign hardware and software raising concerns of potential **'bakdoors'** in equipment, geopolitical tensions resulting in disruptions in supply chains, etc.
 - ⊕ **Technological evolution and complexity:** 5G roll out, increased interconnectivity through IoT, etc.

Key highlights of the Draft Rules

- ▶ **Obligations of Telecom entities:** To maintain security measures, keep supply-chain records of equipment used in CTI, undertake periodic vulnerability assessment, etc.
- ▶ **Upgradation of CTI:** Requires certification from the Central Government or an authorized body.
- ▶ **Draft Rules on Telecom Cyber Security** mandates each telecom entity to adopt a telecom cyber security policy which shall include security safeguards, risk management approaches, risk assessment and identification, forensic analysis of security incidents, etc.



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Also in News

Challenges in regulating AYUSH Drugs

Supreme Court criticized the Union Ministry of AYUSH for its notification requesting state licensing authorities **not to take action under Rule 170 of the Drugs and Cosmetics Rules, 1945**.

- ▶ **Rule 170** governs the manufacture, storage, and sale of medicines in the country, "specifically for controlling inappropriate advertisements of Ayurvedic, Siddha, and Unani medicines".
- ▶ Ministry's notification and subsequent observations by the Supreme Court highlights the challenges in regulating AYUSH drugs.

Challenges in regulating AYUSH Drugs

- ▶ **Most AYUSH drugs can be approved simply based on the rationale provided in authoritative texts of that particular stream.**
- ▶ **Safety trials are required only for formulations that use around 60 specific ingredients** listed in the act, such as snake venom, heavy metals such as arsenic and mercury, etc.

Grey Wolf

Recently, man-eating wolf attack in Bagraich (UP) has put around 35 villages on high alert. And **'Operation Bhediya'** has been launched by the forest officials to capture wolves.

About Grey Wolf

- ▶ **Distribution in India:** India has two species of wolves -
 - ⊕ **Indian Wolf (Canis Lupus Pallipes):** In peninsular India including Rajasthan, Gujarat, etc.
 - ⊕ **Himalayan wolf or Tibetan wolf (Canis Lupus Chanco):** In Upper trans-Himalayan ranges.
- ▶ **Behavioral characteristics**
 - ⊕ extremely **social living in a pack of 6-8 individuals**,
 - ⊕ Run at **very high speeds**,
 - ⊕ **monogamous** and follow **male dominance hierarchy**,
 - ⊕ communicate with **different vocalizations and scent-marking**.
- ▶ **Conservation Status**
 - ⊕ **IUCN:** Least Concern (Grey Wolf), Vulnerable (Himalayan Wolf).
 - ⊕ **WPA, 1974:** Schedule I



Special China Problem

Recently, India's External Affairs Minister recently flagged India's **Special China Problem** over the world's general China problem.

- He stressed on the **careful examination of the investments** from China.

India's outstanding issues with China

- **Border Disputes:** Lack of consensus on Line of Actual Control, incursions in Ladakh, etc.
- **Economic:** Disproportionately higher trade deficit (~ USD 85 billion in 2022-23).
- **Security and strategic:** Chinese tactics of 'Salami Slicing' Grey zone warfare, String of Pearls in the Indian Ocean Region, Belt and Road Initiative, etc.
- **Neighborhood presence:** Increasing influence in the Indian Ocean Region, pro-China governments in Sri Lanka, Maldives, Bangladesh, etc.



LGBTQIA+

The government has implemented various interim measures for the LGBTQIA+ community.

Important measures for LGBTQIA+

- The Centre announced that **LGBTQIA+ couples and partners in Queer relationships will now be considered part of the same household for ration cards.**
- The Ministry of Health and Family Welfare has **urged all stakeholders to ensure LGBTQIA+ rights in healthcare**, including prohibiting conversion therapy, etc.
- MoHFW has framed guidelines in respect of **medical intervention required in infants/ children with disorders of sexual differentiation** (intersex) to have medically normal life without complications.



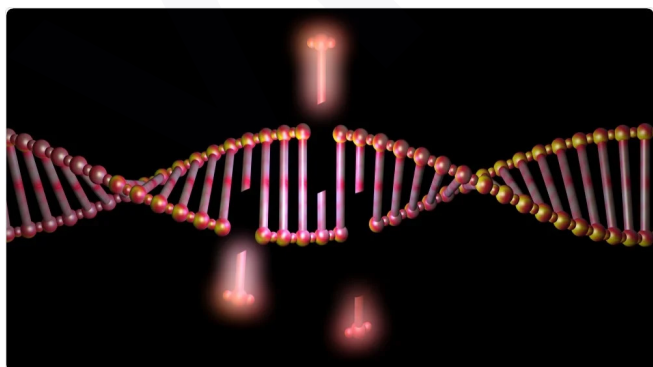
DNA Repair

Recently, scientists have discovered a new target for cancer treatment which is used by cancer cells to regulate DNA repair during Cell division.

- Cancer cells **use the enzyme TDP1 to repair DNA damage** caused by chemotherapy drugs like camptothecin, leading to treatment resistance.

About DNA Repair

- DNA repair is a **mechanism of a cell to maintain the integrity of its genetic code.**
- It exists in both **prokaryotic and eukaryotic organisms.**
- DNA repair **ensures the survival of a species.**
- **3-types of repair mechanisms:** direct reversal of the damage, excision repair, and post-replication repair.



India Post Payment Bank

Recently, India Post Payment Bank (IPPB) marked its 7th Foundation Day.

About IPPB

- Established under the **Department of Posts, Ministry of Communication with 100% equity owned by the Government of India.**
- **Aims to provide every household in India an access to efficient banking services** and enable them to become financially secure and empowered by **leveraging postal network of 1,61,000+ Post Offices.**
- **Services offered:** Saving/ Current account, Direct Benefits Transfers, Bill and Utility Payments, access to 3rd Party products such as loans, insurance, etc.



Windfall Tax

The Centre has reduced the windfall tax on domestically produced crude oil.

About Windfall Tax

- A windfall tax is a tax **imposed by governments on certain industries that experience significantly above-average profits** due to favorable economic conditions.
- The purpose is to **redistribute excess profits in one area to raise funds** for the greater social good.
- Governments **justify** the tax by asserting that these **profits are not solely due to the taxed entity's efforts but also due to external factors.**



Polygraph Test

CBI has recently conducted polygraph tests, in connection with the rape of a resident doctor at the R.G. Kar Medical College in Kolkata.

- It is **one of the deception detection tests**, which also includes Narco-analysis and brain-mapping.

About Polygraph tests

- It operates on the **presumption that specific physiological responses are triggered** when a person is lying.
- Tests measure physiological responses like blood pressure, sweat, breathing, and pulse rate, to determine truthfulness or deception.
- However, the **efficacy of such tests remains contentious** in the medical field.



Mission Poshan 2.0

Ministry of Women and Child Development has launched 7th Rashtriya Poshan Maah 2024

- Focus is on comprehensively addressing malnutrition which is a key component of Mission Poshan 2.0.

About Mission Poshan 2.0

- **Key schemes: POSHAN Abhiyaan, Anganwadi Services, and Scheme for Adolescent Girls** to address malnutrition in children, pregnant women, and lactating mothers.
- **Key Achievements**
 - ⊖ **Reduction in Malnutrition:** NFHS-5 shows **improvements in key child nutrition indicators** (wasting, underweight, stunting) compared to NFHS-4.



AHMEDABAD



BENGALURU



BHOPAL



CHANDIGARH



DELHI



GUWAHATI



HYDERABAD



JAIPUR



JODHPUR



LUCKNOW



PRAYAGRAJ



PUNE



RANCHI