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School of Research Based Learning & Competition

Current Affairs - 21 July 2026

WHAT IS THE E-SHRAM PORTAL?



- It was launched by the **Ministry of Labour and Employment** on 26th August 2021 to support and empower the unorganized workforce.

- It is designed to create a comprehensive **National Database of Unorganised Workers (NDUW)**.
- It is the **first-ever national database of unorganised workers** including migrant workers, construction workers, gig and platform workers, etc.

Objectives:

- Establish a **centralized database of unorganized workers** for effective policy implementation.
- Enhance **access to social security schemes** and benefits for workers in sectors such as agriculture, construction, domestic work, and street vending.
- **Facilitate job matching** and **skill development opportunities**.
- **Strengthen labor market resilience** by integrating unorganized workers into the formal economy.
- Promote **financial inclusion** through **direct benefit transfers** and digital payments.

Eligibility for Registering on e-SHRAM Portal:

- An **unorganised worker (UW)**.
- Age should be between **16-59 years**.
- **Not a member of EPFO/ESIC or NPS** (Govt. funded)
- **Possess an Aadhaar card**, a valid mobile number linked to Aadhaar, and a **bank account**.

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WHITE RABBIT TECHNOLOGY-BASED INDIAN STANDARD TIME (IST)



DISSEMINATION DEMONSTRATION NETWORK

- It was commissioned at the **Regional Reference Standard Laboratory (RRSL)** in Bengaluru.
- It was developed jointly by the **Department of Consumer Affairs, CSIR–National Physical Laboratory (CSIR–NPL)** and the **Indian Space Research Organisation (ISRO)**.
- The system disseminates **IST**, traceable to **national time-keeping authority UTC (NPLI)**, using **Precision Time Protocol (PTP)-based White Rabbit technology**.
- The system is designed to deliver **highly accurate**, secure and resilient time **synchronisation for critical sectors**, including banking, financial markets, telecommunications, power systems, transportation, digital governance and other strategic infrastructure.
- This network has already successfully verified the secure transmission of **IST** between **RRSL Bengaluru** and the **National Stock Exchange (NSE) in Chennai**.

What is White Rabbit Technology?

- White Rabbit is an advanced networking protocol that allows devices connected via optical fibre to synchronise their internal clocks with an accuracy of less than one nanosecond (one-billionth of a second).
- **Originally developed at CERN** (the European Organisation for Nuclear Research), this technology acts as a **high-precision upgrade to standard Ethernet networking**.
- Its primary innovation is its **ability to continuously monitor and compensate for signal delays** across long distances.
- By doing so, it ensures that every node in a network remains perfectly aligned, effectively eliminating the "time drift" that occurs in conventional systems.

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Why is this deployment critical for India?

- Currently, many of India's digital systems—ranging from telecommunications to banking—rely on foreign satellite-based timing services such as the US-operated GPS.
- While these systems are functional, they are **vulnerable to external risks**.
- An **indigenous time dissemination network** will make these services **more secure** and resilient by **reducing dependence on external sources**.

DIGITAL LOCAL PASS SYSTEM



- It enables eligible **commuters to purchase monthly toll passes** digitally through the **RajmargYatra mobile application** without the need to visit a toll plaza.
- It has been rolled out initially at the Mundka-Bakkarwala Toll Plaza on Urban Extension Road-II (UER-II) in Delhi.
- **Features of Digital Local Pass System:**
 - Under the new system, **residents living within a 20-kilometre radius** of an eligible toll plaza can **purchase a Local Pass through the app**, allowing them unlimited travel through the respective toll plaza for one month.
 - It uses **consent-based integration** with government platforms such as **DigiLocker and VAHAN** to automatically retrieve verified information related to a commuter's address, vehicle registration and linked FASTag.
 - Eligibility is further verified using **GIS-based validation**.

Key Facts about Rajmargyatra App

- It is a citizen-centric mobile App developed for smoother and **better experience of citizens on highways**, integrated with a web-based application for updating information and monitoring of complaint redressal.
- It provides information about the **highway, toll plaza, nearby amenities** such as petrol pumps, hospitals, charging stations, weather updates, etc.

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KALA SANSKRITI VIKAS YOJANA



- It is an **umbrella scheme** under **Ministry of Culture** for the promotion of art and culture in the country.
- Under this **financial assistance** is provided to eligible cultural organizations/ individuals working in the field of **performing arts**.
- It was launched to promote, preserve, and develop India's rich art and cultural heritage.
- It has the **following sub-schemes**
 - Financial Assistance for Promotion of **Guru-Shishya Parampara** (Repertory Grant)
 - Scheme of Financial Assistance for Promotion of Art and Culture.
 - Scheme of Scholarship and Fellowship for Promotion of Art and Culture.
 - Financial Assistance for Veteran Artists.
 - National Award Scheme
- **Features of Kala Sanskriti Vikas Yojana:**
 - **Financial Assistance:** Provides grants to artists, cultural organizations, NGOs, and institutions for conducting programs and activities.
 - **Support for Cultural Programs:** Encourages organization of festivals, exhibitions, seminars, workshops, and performances at various levels.
 - **Infrastructure Development:** Offers funding for creation and modernization of cultural infrastructure like auditoriums, museums, and cultural centers.
 - **Focus on Intangible Heritage:** Aims to safeguard traditions such as music, dance, crafts, and rituals, including those recognized by UNESCO.
 - **Inclusive Approach:** Promotes participation from rural areas, tribal communities, and underrepresented groups.
 - **Pan-India Coverage:** Ensures cultural development and outreach across all states and regions of India.

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CENTRAL BUREAU OF NARCOTICS



- It is a **central government organization** dealing with the **international trade of Narcotic Drugs, Psychotropic Substances, and Precursor Chemicals.**
- It works under the ambit of various **United Nations Conventions** and the provisions of **Narcotic Drugs and Psychotropic Substances Act, 1985.**
- **Nodal Ministry:** It works under the Department of Revenue (DoR), **Ministry of Finance.**
- **Headquarter:** Gwalior
- **Organization**
 - **Narcotics Commissioner** is the head of Central Bureau of Narcotics.
 - A **Deputy Narcotics Commissioner** is in-charge of each of respective three opium growing States of **Rajasthan, Madhya Pradesh and Uttar Pradesh.**
 - The Deputy Narcotics Commissioner is assisted by the Assistant Narcotics Commissioner and District Opium Officers.
 - The **District Opium Officer** issues **licences for cultivation of opium poppy** as per the General Licencing Conditions notified by the Central Government.
- **Functions of Central Bureau of Narcotics:**
 - **Supervision over licit cultivation** of opium poppy in India
 - **Preventive and enforcement functions** especially in the three poppy growing States.
 - **Investigation of cases** under the NDPS Act, 1985 and filing of complaint in the Court.
 - **Issue of licences** for manufacture of **synthetic narcotic drugs.**
 - **Issuance of Export Authorisations/ Import Certificate** for export/ import of Narcotic Drugs and Psychotropic Substances.
 - Issuance of **No Objection Certificate (NOC)** for import/ export of a select number of Precursor Chemicals.

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REFORMING INDIA'S ANTI-DEFECTION LAW - RESTORING ELECTORAL ACCOUNTABILITY

- With Parliament's Monsoon Session witnessing several Members of Parliament (MPs) switching political parties, the debate over the **effectiveness** of India's anti-defection law has resurfaced.
- The anti-defection framework was introduced through the **52nd** Constitutional Amendment Act, **1985**, which inserted the **Tenth Schedule** into the Constitution.
- **Objectives:**
 - Prevent political defections motivated by personal gain.
 - Ensure stability of elected governments.
 - Preserve the mandate given by voters to political parties.

Why the Law Has Failed?

- **Delayed disqualification decisions:**
 - The authority to decide disqualification petitions lies with the Speaker (Lok Sabha and State Assemblies), and Chairman (Rajya Sabha and Legislative Councils).
 - Speakers are often members of political parties, raising concerns about institutional **neutrality**.
 - Decisions are frequently delayed for months or even the entire tenure of a legislature, rendering the law ineffective.
- **Encouragement of mass defections:**
 - Ironically, stricter provisions have altered rather than eliminated political opportunism. Political parties now engineer large-scale defections to meet the two-thirds merger threshold.
 - This has increased political bargaining, encouraged **organised defections**, and undermined the original objective of the law.
 - Thus, instead of preventing defections, the law has incentivised collective defections.

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A Fundamental Restructuring of the Anti-Defection Framework:

- **Automatic vacation of seat:** A legislator's membership should automatically cease on the date he or she resigns from the political party on whose ticket the election was won.
- **Fresh electoral mandate:**
 - The defecting legislator should be free to contest as an independent, or join another political party and seek re-election.
 - The ultimate decision should rest with the electorate, not with party leadership or presiding officers.
- **Rationale:** This approach -
 - Restores the sanctity of the voters' mandate, eliminates incentives for opportunistic defections.
 - Reduces dependence on politically influenced decisions by presiding officers.
 - Strengthens democratic accountability.

Concerns and Counter arguments:

- **Possible criticism:** Critics argue that automatic disqualification may suppress genuine dissent, encourage excessive party discipline, and discourage legislators from independently expressing their views.
- **Counter augment:**
 - The proposal does not restrict dissent. Legislators would remain free to disagree with party policies, resign from the party, and contest elections again on a different political platform.
 - The reform merely prevents legislators from retaining an elected office obtained on one party's mandate after abandoning that party.
- **Key governance issues:** Political ethics, electoral accountability, legislative stability, institutional impartiality, constitutional reforms, and internal democracy within political parties.

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THE WORKING OF MAGLEV TRAINS

- Maglev is a portmanteau of "magnetic levitation." Instead of running on wheels like conventional trains, maglev technology uses strong magnetic fields to lift the train and move it forward. Since the train floats above the track:
 - No rolling friction during normal operations
 - Not affected by weather conditions like rain or snow
 - Extremely high speeds possible, topping 400 km/hr
 - Smooth ride for passengers with minimal vibration



How Maglev Trains Are Lifted?

Electromagnetic Suspension (EMS) The most common maglev technology uses EMS:

- The train has two "arms" that wrap around the guideway.
- Strong electromagnets on these arms point magnetic fields upward toward protruding parts of the guideway. When electromagnets are turned on, they attract the train toward the guideway, pushing it upward.
- Sensors ensure the train floats at around 10 mm above the guideway at all times.

Downsides of Maglev Technology

- **Infrastructure Requirements**
 - Dedicated guideways are required; they cannot reuse existing rail infrastructure.
 - Precision engineering is needed for magnets and coils in the guideway.
 - Very expensive infrastructure, the Shanghai Maglev (completed in 2004) cost Rs. 580 crore to Rs. 720 crore per kilometre (inflation-adjusted).
- **Economic Viability**
 - Requires very high and consistent passenger demand to justify costs.
 - High maintenance and operational expenses.
- **Engineering Challenges**
 - Trains moving over 300 km/hr experience significant aerodynamic resistance.
 - This requires aerodynamic designs, including bird-beak-shaped front portions.

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Future Prospects

- Several countries are exploring maglev for high-speed intercity travel, though the high infrastructure costs remain a significant barrier to widespread adoption.

Significance of Maglev Technology

- **Transportation Revolution**
 - Faster travel times for intercity connectivity
 - Reduced dependence on air travel for short-to-medium distance journeys
 - Environmentally friendly as it can run on renewable electricity
 - Reduced noise pollution compared to conventional trains
- **Technological Innovation**
 - Demonstrates advanced applications of electromagnetism
 - Contributes to precision engineering capabilities
- **Economic Considerations**
 - High initial investment but potential long-term benefits
 - Creates specialised manufacturing and engineering jobs
 - Requires skilled workforce development
 - Can spur regional economic development along corridors

Relevance for India

- While India currently does not have operational maglev systems, the technology has been discussed in the context of:
 - High-speed rail projects like the Mumbai-Ahmedabad bullet train (which uses conventional Shinkansen technology);
 - Future connectivity between major metropolitan areas;
 - Semiconductor manufacturing benefiting from maglev-based automation;
 - Research and development in advanced transportation technologies;
- The technology's high cost remains a significant consideration for a country balancing multiple infrastructure priorities.