

## Current Affairs - 24 February 2025

### EX GRATIA PAYMENT



The Ministry of Railways handed over wads of cash in bundles of notes of Rs 100 and 50 after announcing that it would provide Rs 10 lakh ex-gratia to the kin of the 18 deceased in the stampede at the New Delhi Railway Station recently.

- It is a type of **payment** made by an organization, government, etc., **to an individual for damages or claims without recognizing any legal obligation.**
- “Ex gratia” means “by favor” or “by virtue of grace” in Latin.
  - Thus, an ex gratia payment is a **voluntary payment** that is **not a part of an organization’s legal liability.**

Ex gratia payments are **not common** since companies or other organizations are usually only willing to cover the payments under legal enforcement.

- However, some organizations use ex gratia payments to express their **goodwill** to maintain good long-term relationships with the payment receivers.

For example, a company experienced a bad year and decided to lay off a large number of employees.

- In addition to compensating the employees according to legal terms, the company may also pay extra amounts to show its benevolence.
- It can help the company to lower the negative effect of the job cuts on its public image.

Ex gratia payments are **not taxable in India** unless they are made **in lieu of salary or wages.**

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### EXTENDED REALITY (XR)



- Extended reality (XR) represents a **fusion of immersive technologies** that blend the physical and virtual worlds, **encompassing virtual reality (VR), augmented reality**

**(AR), and mixed reality (MR)**

- All immersive technologies extend the reality we experience by either blending the virtual and “real” worlds or by creating a fully immersive experience.

#### **Augmented Reality (AR):**

- In AR, **virtual information and objects are overlaid on the real world.**
- This experience **enhances the real world with digital details** such as images, text, and animation.
- You can access the experience **through AR glasses or via screens**, tablets, and smart phones.
- This means **users are not isolated from the real world** and can still interact and see what’s going on in front of them.
- Virtual Reality (VR):**
  - In contrast to AR, in a VR experience, **users are fully immersed in a simulated digital environment.**
  - Individuals must put on a **VR headset or head-mounted display** to get a 360 - degree view of an **artificial world** that fools their brain into believing they are, e.g., walking on the moon, swimming under the ocean or stepping into whatever new world the VR developers created.
- Mixed Reality (MR):**
  - In mixed reality, **digital and real-world objects co-exist** and can **interact with one another in real-time.**

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- This is the latest immersive technology and is sometimes referred to as **hybrid reality**.
- It requires an MR headset and a lot more processing power than VR or AR.

### World Audio Visual & Entertainment Summit (WAVES) 2025:

- It is an **initiative of the Ministry of Information and Broadcasting**, Government of India.
- WAVES 2025 is designed as a pivotal **platform for** ideas, collaboration, and innovation within the **media and entertainment (M&E) industry**.
- It will serve as a forum for India to position itself as a global leader in content creation, technology integration, and creative industry growth.

### PALK STRAIT



• It is an **inlet of the Bay of Bengal between southeastern India and northern Sri Lanka**.

- It is **bounded** on the south by **Pamban Island** (India), **Adam's (Ram's) Bridge** (a chain of shoals), the **Gulf of Mannar** and **Mannar Island** (Sri Lanka).
- The **southwestern portion** of the strait is also called **Palk Bay**.
- The strait is **named after Robert Palk**, who was a **governor of Madras Presidency** (1755-1763) during the Company rule.
- The strait is 40 to 85 miles wide, 85 miles long, and less than 330 feet (100 metres) deep.
- It receives **several rivers**, including the **Vaigai (India)**, and it contains many islands on the Sri Lankan side.
- The **port of Jaffna**, the commercial centre for northern Sri Lanka, lies on the strait.
- The **shoals and numerous islands** have **limited transit** through the strait to smaller vessels.

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### NATIONAL COMMISSION FOR INDIAN SYSTEM OF MEDICINE



- It is the statutory body **constituted under NCISM Act, 2020.**
- It provides for a **medical education system** that improves access to **quality and affordable medical education**, ensures availability of adequate and high quality medical professionals of Indian System of Medicine in all parts of the country.
- **Composition of National Commission for Indian System of Medicine:**
  - It consists of **29 members**, appointed by the central government.
  - A search committee recommends names to the central government for the post of **Chairperson, part time members**, and presidents of the **four autonomous boards** set up under the NCISM.
- **Functions:**
  - **Framing policies** for regulating medical institutions and medical professionals of **Indian System of Medicine**
  - Assessing the requirements of healthcare related human resources and infrastructure
  - Ensuring compliance by the State Medical Councils of Indian System of Medicine of the regulations made under the Bill
  - Ensuring coordination among the autonomous boards

### INTERNATIONAL FINANCE CORPORATION



Recently, the International Finance Corporation (IFC) has decided against investing in a proposed \$40 million loan for waste-to-energy (WTE) incineration projects in Gujarat, India.

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- It is the private lending arm of the **World Bank**.
- It was **established in 1956** as a member of the World Bank Group, focused on investing in economic development.
- **Functions of International Finance Corporation:**
  - It provides financing of **private-enterprise investment** in developing countries around the world, through both **loans and direct investments**.
  - It also **provides advisory services** to encourage the development of private enterprises in nations that might lack the necessary infrastructure or liquidity for businesses to secure financing.
  - It mobilizes capital from other lenders and investors through loan participations, parallel loans and other means.
- **Governance:** It is owned and governed by its **member countries**. It is a corporation whose shareholders are member governments that provide paid-in capital and have the right to vote on its matters.
- The President of the World Bank Group is also the President of the IFC.
- **Headquarter:** Washington, D.C

### PAGRI SAMBHAL JATTA MOVEMENT



Recently, farmers protesting at the Punjab and Haryana borders are observed February 23 as Pagri Sambhal Diwas, in honour of Ajit Singh, paternal uncle of freedom fighter Bhagat Singh.

- It was started by Ajit Singh in 1907, to protest against three **agricultural laws** imposed by the British.
- 'Pagri Sambhal Jatta' literally translates to **'take care of your turban, o farmer'**, and invokes self respect and honour.



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- The slogan “Pagri Sambhal Jatta” was coined by **Banke Dayal**, a nationalist poet, and it became a symbol of resistance.

The three laws were: **The Punjab Land Alienation Act, 1900; The Punjab Land Colonisation Act, 1906; and The Doab Bari Act, 1907.**

- The **Punjab Land Alienation Act** restricted the rights of farmers to sell or mortgage their land freely. It favored moneylenders and landlords, making it difficult for peasants to escape debt.
- The **Punjab Land Colonisation Act** gave the **British control over land ownership** in the newly developed Chenab Colony (now in Pakistan). Farmers had to transfer their land to the British government upon death instead of passing it to their heirs.
- The **Doab Bari Act, 1907**, too, took away farmers’ **ownership rights over their lands**, effectively reducing them to contract workers.
- Along with this, the British raised taxes on agricultural land and water for irrigation, increasing the financial burden on farmers. Many small farmers and peasants were forced into debt.
- Ajit Singh and Kishan Singh (Bhagat Singh’s father) formed the **Bharat Mata Society**, a revolutionary group for farmers.
- Lala Lajpat Rai and other leaders also supported the movement.

### Impact of the movement:

- Pagri Sambhal Jatta was one of the first major farmer movements against British rule, laying the foundation for future resistance in Punjab.
- The agitation led to mass protests and civil disobedience. Due to intense pressure, the British **government withdrew some of the oppressive clauses of the laws.**
- The movement inspired future protests, including the **Ghadar Movement** and Bhagat Singh’s revolutionary activities.

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### MICROSOFT'S QUANTUM COMPUTING BREAKTHROUGH

#### Microsoft's Unique Approach to Quantum Computing

- For the past 20 years, Microsoft has focused on developing topological qubits, which are more stable and require less error correction than traditional qubits.
  - Topological qubits are a more stable type of quantum bit, the basic unit of quantum computers.
  - They store information in the way specially engineered particles called **anyons** are arranged and braided, not in the particles themselves, making them less prone to errors.
    - Anyons are two-dimensional systems. They are neither fermions nor bosons, but have statistical properties in between the two.

#### Majorana 1

- Microsoft's Majorana 1 is an **eight-qubit chip**, which is modest compared to rivals like Google's Willow (106 qubits) and IBM's R2 Heron (156 qubits).
- However, its Topological Core architecture could allow scaling up to a million qubits, a necessary threshold for solving real-world problems.
- **Majorana 1's Design**
  - Microsoft's Majorana 1 chip features aluminum nanowires arranged in an "H" shape.
  - Each "H" structure has four controllable Majorana particles, forming a single qubit.
- **Potential Applications of Quantum Computing**
  - Microsoft envisions Majorana 1 helping to develop breakthroughs such as:
    - Breaking down microplastics into harmless byproducts.
    - Inventing self-healing materials for construction, manufacturing, and healthcare.

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- Microsoft envisions using quantum computing with generative AI to design new materials or molecules through natural language input.
- Quantum computing could generate synthetic data to improve AI model training.
- **Challenges**
  - Quantum systems are highly sensitive to environmental interference, causing errors.

### Quantum Computers vs Supercomputers vs Classical Computers

- **Classical Computers**
    - Classical computers process information using binary code (bits) with values of either 0 or 1.
    - They rely on logic gates (AND, OR, XOR, NOT) to manipulate data.
  - **Quantum Computers**
    - Quantum computers use qubits, which can exist in multiple states simultaneously (superposition).
    - A qubit can have probabilities assigned to both 0 and 1, allowing it to store and process more information than a classical bit.
    - Quantum gates (H-gate, Pauli gates) enable the processing of qubits and are reversible in nature.
  - **Supercomputers**
    - Supercomputers use advanced architectures with GPUs and multi-core processing to perform calculations faster than regular computers.
    - Despite their power, they still follow classical computing principles and logic gates.
  - **Quantum vs. Supercomputers**
    - While supercomputers enhance classical processing speed, quantum computers can solve complex problems that classical and supercomputers cannot.
    - Quantum gates enable unique computational abilities beyond traditional logic gates.
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### SUPREME COURT'S VIEW ON GAG ORDERS

- The Supreme Court of India has repeatedly ruled on **gag orders**, which prevent individuals from making public statements or publishing content.
- The recent case of influencer **Ranveer Allahbadia**, who was granted **interim relief** from arrest but banned from posting on social media, highlights the **judicial approach** toward speech restrictions.

#### Legal Basis for Gag Orders in India:

- A **gag order** refers to **judicial or executive action that prohibits individuals from making public statements**. Such orders usually fall under:
  - **Section 144 of CrPC** – Allows the government to restrict public statements in cases of **law and order concerns**.
  - **Contempt of Court Act, 1971** – Prohibits public discussion on **ongoing legal cases** to prevent judicial influence.
  - **Article 19(2) of the Indian Constitution** – Allows **reasonable restrictions** on free speech for security, public order, and morality.
- However, courts have **consistently ruled that speech restrictions must be proportionate and justified**.

#### Conclusion:

- The Supreme Court's interim order in the Ranveer Allahbadia case raises critical questions on free speech, prior restraint, and judicial overreach.
  - Past rulings have consistently cautioned against excessive speech restrictions, making the social media ban controversial.
  - Going forward, a well-defined legal framework is necessary to ensure gag orders are applied only in exceptional circumstances and do not unjustly infringe upon fundamental rights.
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