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CoWIN Data Breach

Context: The government has denied the reports of data leak as a hoax, while experts claim that the leak did happen.

- A data breach occurred in India, involving the leaked data of individuals who were vaccinated against Covid-19.
- The leaked data includes personal details such as name, gender, birth details, as well as sensitive information like Aadhaar numbers, PAN cards, passport numbers, voter IDs, and vaccination center details.
- The data was made available on a Telegram bot offered by a channel called hak4learn, which provides hacking tutorials. The bot has now been taken down.
- The government denies the reports of a data breach and states that the CoWIN portal is safe and has adequate safeguards for data privacy.
- Union Minister Rajeev Chandrasekhar suggests that the data used by the bot may have been previously stolen, indicating a possible past data breach.
- The Indian Computer Emergency Response Team is investigating the incident.
- CloudSek, a digital threat analysis company, states that the hacker did not have access to the entire CoWIN portal or its backend data. Instead, compromised credentials of health workers were used to access the data.

What is CoWIN portal?

- CoWIN (Covid Vaccine Intelligence Network) is an Indian government web portal for COVID-19 vaccination registration, owned and operated by India's Ministry of Health and Family Welfare.
- It displays booking slots of COVID-19 vaccine available in the nearby areas and can be booked on the website.
- The site also provides vaccination certificates to the beneficiaries, which act as Vaccine Passports during the COVID-19 pandemic for the beneficiaries and can be stored in Digilocker.

CERT-In

- CERT-In is the national nodal agency for responding to computer security incidents as and when they occur. The constituency of CERT-In is the Indian Cyber Community.
- CERT-In was established in 2004 as a functional organization of the Ministry of Electronics and Information Technology.
- **Functions:** The Information Technology (Amendment) Act 2008 designated CERT-In to serve as the national agency to perform the following functions in the area of cyber security:
 - Collection, analysis and dissemination of information on cyber incidents.
 - Forecast and alerts of cyber security incidents
 - Emergency measures for handling cyber security incidents
 - Coordination of cyber incident response activities.
 - Issue guidelines, advisories, vulnerability notes and whitepapers relating to information security practices, procedures, prevention, response and reporting of cyber incidents.
 - Such other functions relating to cyber security as may be prescribed.

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Other Conventions and Institutions for cyber security

- **Budapest Convention on Cybercrime:** It is the first international treaty that seeks to address Internet and cybercrime by harmonizing national laws, improving investigative techniques and increasing cooperation among nations. It came into force in 2004. India is not a signatory to this convention.
- **Indian Cyber Crime Coordination Centre(I4C):** It was established in 2018 to combat cybercrime in India in a comprehensive and coordinated manner. It functions under the Ministry of Home Affairs.
- **Cyber Swachhta Kendra (Botnet Cleaning and Malware Analysis Centre):** It provides for the detection of malicious programs and free tools to remove such programs.
- **Cyber Surakshit Bharat Yojana:** It was launched in 2018 by Ministry of Electronics and Information Technology in association with National e-Governance Division (NeGD) and industry players. It includes awareness programs on cyber security; workshops on best practices and enablement of the officials with cyber security health tool kits.

United Nations Peacekeeping Forces (UNPKF)

Context: Raksha Mantri Rajnath Singh emphasized the need for increased investment in training, technology, and resources for the safety and productivity of UN Peacekeepers deployed in conflict-torn regions.

- He called for the meaningful participation of women in peacekeeping operations.
- India is one of the largest contributors of troops to UN Peacekeeping operations, having contributed 2.75 lakh troops so far.
- Currently, around 5,900 Indian troops are deployed in 12 UN missions.
- The Defence Minister highlighted the challenges faced by peacekeepers and stressed the importance of innovative approaches and enhanced cooperation among responsible nations.
- He emphasized the recognition of the unique contribution of women in peacekeeping missions.
- Rajnath Singh expressed the need to make UN decision-making bodies, including the Security Council, more reflective of the world's demographic realities.
- He mentioned that India's absence as a permanent member of the UNSC undermines the moral legitimacy of the UN.
- The Defence Minister called for making UN bodies more democratic and representative of the current realities of the world.

What is UNPKF?

- The United Nations Peacekeeping Forces were established in 1948 after receiving approval from the UN Security Council for the deployment of UN military observers to the Middle East.
- These forces are employed by the United Nations to maintain and restore peace in areas affected by armed conflicts.
- Their main objective is to assist nations in transitioning from war to peace through peaceful negotiations and resolution.
- The UN Peacekeeping Forces consist of soldiers, police officers, and civilian peacekeepers from different countries.
- Their deployment is contingent upon the acceptance of both conflicting parties involved in the conflict.
- The presence of peacekeepers can help prevent the escalation of conflicts and facilitate the cessation of hostilities.
- The International Day of UN Peacekeepers is celebrated annually on May 29th.

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- Each year, a specific theme is chosen to highlight the importance of peacekeeping efforts.
- The theme for 2023 was "Peace Begins with Me".
- The UN Peacekeeping Forces play a crucial role in maintaining global peace and security.

Involvement of India in Peacekeeping Missions

- India is one of the nations which contribute the maximum troops to the United Nations Peacekeeping Forces.
- For instance, India is the second highest military and fifth highest police contributing country to the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO).
- More than 2,60,000 Indians have already served in 49 U.N. Peacekeeping missions since its establishment in 1948.
- In 2007, India became the first nation to establish an all-women contingent to a UN Peacekeeping mission.
- In the last six decades, about 179 Indian soldiers have given their lives in UN Peacekeeping operations.
- Among "blue helmets" India has the greatest death toll of any nation.

Indo-Canadian Relations

Context: Dr. S. Jaishankar has strongly condemned the display of pro-Khalistan supporters with a tableau during a public event in Canada and has given a stern warning to Canada.

- A tableau 'celebrating' the assassination of Indira Gandhi by her Sikh bodyguards went around the city of Brampton in Canada on June 4.
- According to reports, the parade was organised by Khalistan supporters in the lead up to the 39th anniversary of Operation Bluestar.
- A tableau in a 5 km-long parade depicted the celebration of the assassination of former Indian Prime Minister Indira Gandhi.
- The tableau featured a female figure in a blood-stained white saree with turbaned men pointing guns at her.
- A poster behind the scene read "Revenge for the attack on Darbar Sahib."
- The tableau received strong reactions in India, with External Affairs Minister S Jaishankar expressing disapproval.

India-Canada Bilateral Relations

- **Historical Background:**
 - India established diplomatic relations with Canada in 1947.
 - The bilateral relationship was elevated to a strategic partnership during the Prime Minister of India's visit to Canada in April 2015.
 - Both countries have been working to enhance bilateral cooperation in various areas.
- **Nuclear Cooperation:**
 - Two small Canadian (CANDU) PHWRs at Rajasthan nuclear power plant started up in 1972 & 1980
 - After India's Smiling Buddha nuclear test in May 1974, Canada severed bilateral nuclear cooperation with both India and Pakistan.
 - In June 2010, a Nuclear Cooperation Agreement (NCA) was signed between India and Canada, which came into force in September 2013.
 - An Appropriate Arrangement (AA) for the NCA was signed in March 2013, establishing a Joint Committee on Civil Nuclear Cooperation.

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➤ **Commercial relations:**

- An annual Trade Ministers dialogue is institutionalized to review trade and economic relations.
- Technical negotiations for a Comprehensive Economic Partnership Agreement (CEPA) are ongoing, covering trade in goods, services, investment, and trade facilitation.

➤ **Science and Technology:**

- Science and technology cooperation between India and Canada primarily focuses on promoting industrial R&D with potential applications in IP, processes, prototypes, or products.
- Canada was a partner country for the Technology Summit 2017.

➤ **Security and Defence:**

- India and Canada collaborate closely in international fora, including the UN, Commonwealth, and G-20.
- Defence ties have expanded with mutual ship visits, and there is robust cooperation on counter-terrorism through the Joint Working Group on Counter-Terrorism.

➤ **Space:**

- India and Canada have successful cooperative and commercial relations in the field of space, including space science, earth observation, satellite launch services, and ground support for space missions.
- ISRO and the Canadian Space Agency (CSA) signed MOUs in 1996 and 2003.
- ANTRIX, the commercial arm of ISRO, has launched several nanosatellites from Canada.

➤ **Agricultural cooperation:**

- A bilateral MoU on agriculture cooperation was signed in 2009.
- Joint Working Groups and sub-groups were formed to promote knowledge exchange in emerging technologies, animal development, agricultural marketing, and pulses.

➤ **Indian diaspora:**

- Canada is home to one of the largest Indian diasporas, comprising 1.6 million PIOs (Persons of Indian Origin) and NRIs (Non-Resident Indians).
- The Indian diaspora has made significant contributions in various sectors, including politics, with 22 Members of Parliament of Indian origin.

➤ **Cultural Exchanges:**

- Canada was the Country of Focus at the 48th International Film Festival of India in November 2017.
- An India-Canada Co-production Agreement exists in the film industry.
- Diwali has been celebrated on Parliament Hill for the past 18 years.

NEWS IN BETWEEN THE LINES

Colours on a Soap Bubble



Context:

The phenomenon of coloured bands on soap bubbles and oil layers is attributed to the interference of light waves with themselves.

Interference of Light Waves:

Coloured bands on soap bubbles and oil layers are caused by the interference of light waves with themselves. Sunlight, consisting of seven distinct colours, interacts with thin films, resulting in constructive and destructive interference.

Composite Nature of Sunlight:

Sunlight is composed of seven colours i.e. violet, indigo, blue, green, yellow, orange and red. Each colour has its specific wavelength range. Violet light has the shortest wavelength at around 380 nanometres, while red light has the longest wavelength above 600 nm.

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Path Difference and Phase:

When light waves fall on a thin film, they are partially reflected from the top and bottom surfaces of the film. The path difference, determined by the thickness of the film and the angle of viewing, leads to a phase difference between the reflected waves. This phase difference influences whether the waves interfere constructively or destructively.

Constructive and Destructive Interference:

When two waves are in phase, they add up, resulting in constructive interference. This constructive interference enhances certain colours and makes them visible. On the other hand, if the waves are out of phase, they can cancel each other out, leading to destructive interference and the absence of certain colours.

Variation in Film Thickness:

Even slight variations in the thickness of the film can cause it to exhibit different colours. This explains why soap bubbles can display a spectrum of hues, as the thickness of the film changes across its surface.

**Anti-Submarine
Shallow Water Craft
ships**



Context: Recently, two warships namely Anjadip (the third Anti-Submarine Shallow Water Craft) and Sanshodhak (the fourth Survey Vessel Large), belonging to different classes were successfully launched into the water, while the keel laying ceremony for a third vessel took place at Larsen & Toubro (L&T) shipyard in Kattupalli, Chennai.

Anti-Submarine Shallow Water Craft ships: Anti-Submarine Shallow Water Craft (ASWSWC) ships are specialized naval vessels designed to operate in shallow waters and primarily engage in anti-submarine warfare (ASW) operations.

Its Role: They play a crucial role in detecting, tracking, and neutralizing underwater threats, including submarines and mines, in coastal regions and shallow waters.

Importance: Anti-Submarine Shallow Water Craft (ASWSWC) ships are designed to operate in shallow waters and perform anti-submarine warfare operations. They play a critical role in detecting and neutralizing underwater threats, including midget submarines and mines, thereby bolstering India's coastal defense capabilities.

Responsible Authority:

The construction of the warships is constructed by Garden Reach Shipbuilders and Engineers Ltd (GRSE), a defense shipyard based in Kolkata, India. GRSE is responsible for building the warships as per the contracts signed with the Ministry of Defense (MoD).

The construction strategy for Survey Vessel Large (SVL) ships and Anti-Submarine Shallow Water Craft (ASWSWC) ships differs in terms of the shipyard responsible for construction and the allocation of subcontracting work.

Construction strategy differs for these two types of ships:

SVL Ships:

Construction Responsibility: The initial ship in the series of SVL ships is built directly by Garden Reach Shipbuilders and Engineers Ltd (GRSE), the defense shipyard based in Kolkata, India. GRSE takes full responsibility for the construction of the first SVL ship.

Subcontracting: For the remaining three SVL ships, the construction process is subcontracted to Larsen & Toubro (L&T) Shipbuilding. L&T Shipbuilding supports GRSE by undertaking the construction work up to the outfitting stage.

ASWSWC Ships:

Construction Responsibility: The construction responsibility for ASWSWC ships is shared between GRSE and L&T Shipbuilding.

GRSE's Role: GRSE, the defense shipyard based in Kolkata, is responsible for building four ASWSWC ships directly. They handle the construction of these vessels from start to finish.

L&T Shipbuilding's Role: The remaining four ASWSWC ships are subcontracted to Larsen & Toubro (L&T) Shipbuilding.

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Menhir and Megalithic Burial Sites



Context:

Recently, the Tamil Nadu Department of Archaeology has declared five 'Menhir' (single stone) and Megalithic burial sites at Kodumanal in Erode district as protected monuments.

Kodumanal and its Archaeological Importance:

Kodumanal is located on the northern banks of the Noyyal River. The village gained recognition in 1961 when the Archaeological Survey of India (ASI) conducted its first excavation. The excavation was prompted by the discovery of scattered antiquities in the village. The findings in this region have contributed significantly to the understanding of the ancient civilization that once thrived here.

Discoveries at the Site:

The excavations at Kodumanal unearthed various artifacts, including potsherds inscribed with names in the Tamil-Brahmi script, Roman silver coins, precious stones and quartz. Additionally, items such as semi-precious stone beads, bangles, copper, silver, iron and terracotta have been discovered, providing insights into the material culture of the people who inhabited the area.

Significance of Megaliths:

Megaliths are structures that were constructed either as burial sites or commemorative memorials. Burial megaliths include dolmenoid cists (box-shaped stone burial chambers), cairn circles (stone circles with defined peripheries), and capstones (mushroom-shaped burial chambers found mainly in Kerala). Non-sepulchral megaliths, such as menhirs, serve as memorial sites.

Chronology of Megaliths in India:

Archaeologists trace the majority of megaliths in India to the Iron Age, specifically from 1500 BC to 500 BC. These remarkable structures are concentrated in states such as Maharashtra (particularly in Vidarbha), Karnataka, Tamil Nadu, Kerala, Andhra Pradesh and Telangana.

Megaliths served various purposes in ancient times, including:

- **Burial Sites:** Used as tombs or funerary monuments.
- **Commemorative Memorials:** Erected to commemorate individuals or events.
- **Religious or Ritualistic Sites:** Used for religious ceremonies or observances.
- **Markers of Land or Territory:** Used to demarcate boundaries or indicate territorial claims.
- **Cultural and Social Significance:** Represented architectural and engineering capabilities and acted as focal points for community gatherings and activities.

'Eat Right Station' Certification



Context:

Recently, the Guwahati Railway Station, located in Assam under the North East Frontier Railway, has been awarded the 'Eat Right Station' certification by the Food Safety and Standards Authority of India (FSSAI).

What is 'Eat Right Station' Certification?

The 'Eat Right Station' certification is a recognition awarded by the Food Safety and Standards Authority of India (FSSAI) to railway stations that meet certain criteria related to food safety, hygiene and nutrition.

Mumbai Central Railway Station has been certified as the country's first 'Eat Right Station' by FSSAI. The Mumbai Central Railway Station, operated by Western Railways, has been certified with a 4-star rating while Varanasi Cantt R railway Station had been awarded a 5- star 'Eat Right Station' certification for providing high-quality, nutritious food to passengers.

Aim:

It aims to ensure that railway stations provide safe and wholesome food options to passengers.

To receive the 'Eat Right Station' certification, railway stations need to meet the following guidelines:

- Adherence to food safety and hygiene standards during the preparation, storage, and serving of food.
- Implementation of proper waste management practices.
- Availability of a variety of healthy and balanced food options for passengers.
- Promotion of food safety awareness among staff and vendors.

Why is the certification important?

The 'Eat Right Station' certification holds significant importance in the context of food safety and passenger well-being for the following reasons:

- Ensuring Food Safety
- Promoting Healthy Food Choices
- Hygiene and Sanitation Standards
- Awareness and Education
- Passenger Confidence and Satisfaction

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