

WHY IS NATIONAL CIVIL SERVICES DAY CELEBRATED?

Why in News?

To acknowledge and honour the work of civil servants (the backbone of the nation's administration) engaged in public service, the Government of India celebrates National Civil Services Day on **April 21** every year.

What is the History of the National Civil Services Day?

The origin dates back to the **speech by the first Home Minister of Independent India**, Sardar Vallabhbhai Patel. **On April 21st, 1947**, Patel addressed the probationers of Administrative Services Officers at Metcalf House in Delhi and referred to the civil servants and the newly created Indian Administrative Service as **the steel frame of India**. The first celebration was held on **April 21, 2006**, at Vigyan Bhawan in New Delhi and ever since the day has been celebrated.

What is the Significance of the Day?

This day is celebrated to **acknowledge the hard work, dedication, and commitment** of officials to serve the nation. This day is an opportunity to **appreciate the civil workers** in promoting social justice, maintaining law and order, and ensuring good governance.

What is the Role of a Civil Servant (Highlighted by Patel in his Speech)?

A civil servant needs to view it as a proud privilege to be a part of the service, **to defend its integrity, incorruptibility and dignity** throughout their tenure, and to sign the covenants pertaining to it.

What are the Government's Efforts to Further Strengthen the Steel Frame of India?

1. **Towards capacity building and specialisation:** National Programme for Civil Services Capacity Building/Mission Karmayogi and Lateral entry.
2. **Towards transparency and accountability:** CPGRAMS and initiatives like RTI, Citizen charter, etc.



CROSS & CLIMB ROHTAK



HOW CRIME GPT IS USING AI TO HELP POLICE FORCES WITH CRIME DETECTION?

Why in News?

The flagship product of a Gurugram-based tech startup (Staqu Technologies) - **Trinetra 2.0**, is set to revolutionise the way security forces approach criminal investigations, by integrating a powerful language model called **Crime GPT**.

What is the Origin of Crime GPT?

In 2018, the company created **Trinetra 1.0**, a platform that **allows police forces to digitise their criminal records**, including photographs and other key details. Its next phase - **Trinetra 2.0**, is **harnessing AI to unlock the potential of this data** by adding the GPT, which can also analyse the unstructured data in the form of text.

How does Crime GPT Work?

The startup developed a **customised LLM** that has been trained on a massive database of over 9,00,000 criminal records from **Uttar Pradesh**. By integrating **Retrieval-Augmented Generation (RAG) techniques**, the model can provide accurate and factual responses. **To illustrate**, if a police officer is looking for a suspect charged with IPC Section 307 (attempt to murder), the Crime GPT will provide the suspect's history, associated crimes, and even list police stations with his recorded offences.

How is AI-powered Crime GPT Revolutionising Investigative Capabilities?

This advanced technology allows for **custom inputs**, enabling the police force to access detailed information on persons of interest and criminals swiftly and accurately. Crime GPT **efficiently processes both written and audio inputs**, providing prompt retrieval of critical information, thereby **expediting ongoing investigations and streamlining procedural formalities**. That is why, **other Indian states are showing keen interest to adopt this technology**.

HAVE TANKS BECOME OBSOLETE IN MODERN WARFARE?

Why in News?

The staggering numbers of destroyed tanks in Russia-Ukraine war show that tanks are becoming increasingly vulnerable in modern warfare, still countries continue to manufacture or use them at a large scale.

Why have Tanks Become Vulnerable in Warfare?

In Russia-Ukraine war, drones have emerged as most inexpensive yet effective tank killer like the first-person view (FPV) drone costing \$500 or less, equipped with a camera and explosives. It is controlled by on-ground soldiers through a remote control. Soldiers use them to hit tanks in their most vulnerable spots such as engines, an open hatch, or the space between the hull and the turret.

How Can Tanks be Protected?

FPV drone attacks can be deterred by using jammers that disrupt their connection to the remote pilot. Shotguns and even simple fishing nets have been used to destroy or catch some of them. Short-Range Anti-Aircraft Weapons can also be deployed on front lines to defend tanks. These have been used by Ukraine to destroy Russian aircraft and helicopters but not FPV drones.

Have Tanks Become Obsolete?

No. Although born towards the end of World War-I, tanks were used for the first time, by the Nazis in World War II, as a key part of their blitzkrieg strategy. After this war, it seemed like tanks were on their exit due to the invention of superior anti-tank weapons. But soon it was realized that if tanks are used with enough infantry support and upgraded armour, they can prove to be invaluable, especially in urban warfare as they provide a combination of firepower, mobility and shock effect and are required to seize a terrain.

BITCOIN HALVING



The cryptocurrency community is gearing up for the upcoming Bitcoin halving event, which is likely to be held this weekend.

- The halving refers to an **alteration in the foundational blockchain technology** of Bitcoin, aimed at decreasing the pace of generating new bitcoins.

- Since its creation by the pseudonymous figure **Satoshi Nakamoto**, Bitcoin has been structured to possess a finite supply of **21 million tokens**.
- The process of halving will persist until 2041, by which time all Bitcoins will have been mined.

How does it happen?

- Blockchain technology involves creating records of **information** - called '**blocks**' - which are added to the chain in a process called 'mining'.
- Miners use computing power to solve complex mathematical puzzles to build the blockchain and earn rewards in the form of new bitcoin.
- The blockchain is designed so that a halving occurs **every time 210,000 blocks** are added to the chain, roughly every four years.
- At the halving, the amount of bitcoin available as rewards for miners is cut in half. This makes mining less profitable and slows the production of new bitcoins.

Impact the Crypto market:

- Experts say that the halving event might impact Bitcoin's price as its heightened scarcity could result in upward pressure on prices and attract a wave of new investors to the cryptocurrency market.

WORLD HERITAGE DAY



World Heritage Day is also referred to as International Day for Monuments and it is observed on **April 18**.

- **Objective:** To raise awareness about monuments and other sites which form a part of our history and culture.
- **Background:**
 - In 1982, The **International Council on Monuments and Sites (ICOMOS)** proposed the idea of observing World Heritage Day on April 18 every year. The following year, the proposal was approved at UNESCO's General Conference.

- **Theme of 2024:** The theme for this year's World Heritage Day is - **Discover and experience diversity.**
- **Significance:**
 - It raises awareness among local communities about protecting our cultural heritage. People from various places and backgrounds come together and exchange knowledge about their histories and customs.

What is International Council on Monuments and Sites?

- It is a **non-governmental organization**, was founded in 1965 after the adoption of the Charter of Venice, in order to promote the doctrine and the techniques of conservation.
- It provides the World Heritage Committee with **evaluations of properties with cultural values** proposed for inscription on the World Heritage List, as well as with comparative studies, technical assistance and reports on the state of conservation of inscribed properties.

GLOBAL FINANCIAL STABILITY REPORT

Recently, the International Monetary Fund (IMF) released the latest global financial stability report.



Global Financial Stability Report is a **semiannual report** by the **International Monetary Fund (IMF)** that assesses the stability of global financial markets and emerging-market financing. It is released twice per year, **in April and October.**

- It focuses on current conditions, especially financial and structural imbalances, that could risk an upset in global financial stability and access to financing by emerging-market countries.

Highlights of the report:

- It has warned about the risks to the global financial system from persistent **high inflation**, rising lending in the **unregulated credit market**, and **increasing cyber-attacks** on financial institutions.

- **Geopolitical risks** such as the ongoing war in West Asia and Ukraine could affect aggregate supply and lead to higher prices. This, it believes, might stop central banks from lowering rates anytime soon.
 - In calendar year 2023, India was the **second-largest** recipient of **foreign capital** after the U.S. But things could change quickly if western central banks signal that they could keep interest rates high for a long time.
 - In its report also noted that the growing **unregulated private credit market**, in which non-bank financial institutions lend to corporate borrowers, is a growing concern as troubles in the market might affect the broader financial system in the future.
 - The borrowers in the private credit market may not be financially sound and noted that many of them do not have current earnings that exceed even their interest costs.
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WHY ARE SUGARY PROCESSED FOODS HARMFUL?

Why in the News?

- Over the past week, the spotlight has returned on high sugar content in flavoured malt-based milk powders and baby food.
- Government authorities are warning against branding such items as “healthy” and have called out the allegedly misleading promotion and marketing tactics while loading products with added sugar.

Background:

- A drink like Bournvita has 86.7g of carbohydrates per 100g, with 49.8g being sugar. Out of this sugar, 37.4g is added sugar.
- So, for every 20g serving of Bournvita, you're consuming about 10g of sugar.
- The process used to make Bournvita involves malting, which turns grains into sugar.
- Malting is a technique used to make things like whiskey and malt-based milk drinks.
- When grains germinate, enzymes turn their starch into sugar. Roasting them adds flavour by caramelizing this sugar.

FSSAI's Stand on Sugar Content:

- The Food Standards and Safety Authority of India (FSSAI)
- According to the Food Safety and Standards Authority of India (FSSAI) regulations (2018), **a product can only claim to be 'low on sugar' if it has less than 5g of sugar per 100g.** If a product meets this criteria, it can be considered 'healthy.'
- However, if products don't meet this standard but still market themselves as 'health drinks' then it's a concern.
- For example, if a child drinks four servings of such a product, they would consume 40 grams of sugar.
- This is more than the **World Health Organization's recommended daily limit of 25 grams or six teaspoons of sugar.**
- Additionally, many households in India add extra sugar to chocolate-powder drinks, making the sugar intake even higher.

How Processed Sugar is Harmful for Body?

- Sugar can be harmful to the body for several reasons:
- **Weight Gain:** Consuming too much sugar can lead to weight gain. Sugary foods and drinks are often **high in calories but low in nutrients**, leading to excess calorie intake.
- **Increased Risk of Chronic Diseases:** High sugar intake has been linked to an increased risk of chronic diseases such as type 2 diabetes, heart disease, and certain cancers.
- **Tooth Decay:** Sugar promotes the growth of harmful bacteria in the mouth, which can lead to tooth decay and cavities.
- **Insulin Resistance:** Overconsumption of sugar can lead to insulin resistance, where the body's cells become less responsive to insulin, increasing the risk of developing type 2 diabetes.
- **Elevated Blood Sugar Levels:** Consuming large amounts of sugar can cause rapid spikes in blood sugar levels, followed by sharp drops, leading to fluctuations in energy levels and mood swings.
- **Liver Overload:** When consumed in excess, fructose, a type of sugar, can overload the liver, leading to fatty liver disease and other liver-related problems.

- **Addictive Nature:** Sugar can be addictive, leading to cravings and overconsumption, making it difficult for individuals to control their intake.
- **Nutrient Imbalance:** Foods high in sugar often displace nutrient-dense foods in the diet, leading to nutrient imbalances and deficiencies.
- **Inflammation:** Excessive sugar intake can contribute to inflammation in the body, which is associated with various health problems, including inflammatory conditions and autoimmune diseases.
- **Mental Health:** Some studies suggest that high sugar intake may be linked to an increased risk of depression, anxiety, and other mental health disorders.
- Overall, while sugar can be enjoyed in moderation as part of a balanced diet, excessive consumption can have detrimental effects on health. It's essential to be mindful of sugar intake and opt for healthier alternatives whenever possible.

Way Forward:

- FSSAI's regulations allow sugar in milk cereal-based foods for infants, but only certain types like lactose and glucose polymers are preferred.
- Sucrose and fructose can only be added if needed, and their total should not exceed 20% of the total carbohydrate content.
 - **These regulations need to be reviewed because they allow sugar in infant foods.**
- There should be clear regulations defining what is considered 'healthy' and 'unhealthy' for all food and beverage products.

HOW TO DEAL WITH THE PLASTIC WASTE MENACE?

India's Effort to Regulate Single-Use Plastic - The Plastic Waste Management Amendment Rules (2021):

- **In 2022**, India brought into effect the Plastic Waste Management Amendment Rules (2021) that **banned 19 categories of 'single-use plastics.'**

- **These are defined** as disposable goods that are **made with plastic but are generally use-and-throw** after a single use and include:
 - Plastic cups, spoons, earbuds, decorative thermocol,
 - Wrapping or packaging film used to cover sweet boxes and cigarette packets, and
 - Plastic cutlery.
- It, however, **doesn't include plastic bottles** - even those less than 200ml - and multi-layered packaging boxes (like in milk cartons).
 - The rationale behind banning certain kinds of plastic and leaving others out derives from a report by an expert committee on single-use plastics constituted by the **Department of Chemicals and Petrochemicals**.
 - **They scored different plastic goods** on the basis of their utility and environmental impact. The current ban only addresses about 11% of single-use plastic in India.
 - Moreover, even the single-use plastic items that are banned are **not uniformly enforced nationally** with several outlets continuing to retail these goods.

Global Efforts to Eliminate Plastic Pollution:

- According to the United Nations, **99% of plastics are made from polymers** derived from non-renewable hydrocarbons (crude oil and natural gas).
- **Plastic production has doubled in the last 20 years** and contributes about 3.4% of the total greenhouse gas (GHG) emissions globally.
- **The United Nations Environment Assembly (UNEA)** passed a resolution to “end plastic pollution” in 2022.
 - **An Intergovernmental Negotiating Committee (INC)** was set up and tasked to develop a legally binding instrument - a global treaty - to govern plastic production and use across all nations.
 - However, after 3 rounds of extensive discussions and negotiations, and the 4th round about to kick off in Canada, **the world seems to be nowhere near an agreement on how to deal with the plastic waste menace.**