



EVE **RYDAY CURRENT AFFAIRS-july 12,**

TAMIL NADU

- **The giant Airbus Beluga cargo plane (A300-608ST) - made a stopover at Chennai International Airport for refuelling and crew rest on July 11.**
- ✓ This is the first time the aircraft has touched down at the Chennai airport.



- ✓ The aircraft came to Ahmedabad from Abu Dhabi and landed in Chennai on its way to Thailand
- ✓ Known as super transporter, the aircraft is a version of the wide body A300-600 of Airbus
- ✓ It is designed to carry aircraft parts like wings or large machine parts, helicopters and other consignments which will not fit into regular freighters.
- ✓ It is 56.15m long, has a wingspan of 44.84m and has a takeoff weight of 1,55,000kg.
- ✓ Beluga planes are designed in the shape of a whale to carry oversized cargo.
- ✓ Airbus has made only five such planes.
- ✓ The one that has come to Chennai is second in the series and it was in Kolkata in May.
- ✓ Chennai airport receives giant cargo planes like B747400, A330-200, Antonov AN-124 with wider wingspan than the Beluga.

NATIONAL

- On July 11, Prime Minister Narendra Modi - unveiled the national emblem that has been placed on the roof of the new Parliament building in New Delhi



- ✓ Lok Sabha Speaker Om Birla, Rajya Sabha deputy chairman Harivansh, urban development minister Hardeep Singh Puri and parliamentary affairs minister Pralhad Joshi were present at the inauguration ceremony
- ✓ The event marks the first major milestone ahead of the new building's scheduled opening later this year
- ✓ The National Emblem is made of "high-purity bronze" weighing 9500 kg and is 6.5 metre in height.
- ✓ It has been cast at the top of the Central Foyer of the new Parliament building.
- ✓ The central foyer has been renamed the Constitution Hall as it is expected to display the Constitution for public viewing.
- ✓ A supporting structure of steel weighing around 6500 kg has been constructed to support the Emblem
- ✓ The sculpture has been built in Aurangabad, Jaipur and Delhi by artists Sunil Deore and Lakshman Vyas with the participation of over 100 artisans over a period of nine months
- ✓ In its initial plan, the new Parliament was to be crowned with a spire, but it was replaced with the design of the Ashoka emblem in 2020
- ✓ The new Parliament building has an area of 64,500 square metres
- ✓ The pending works on the new Parliament, a ground plus two-storey triangular-shaped building, are expected to be completed before the Winter Parliament session

- ✓ In the new building, the Lok Sabha chamber will have a seating capacity of 888 members, while the Rajya Sabha will have 384 seats for members.
- ✓ PM Modi had laid the foundation stone for the new building in December 2019

INTERNATIONAL

- **Ghana - has reported two suspected cases of Marburg virus disease, announced the World Health Organisation (WHO)**
- ✓ According to WHO, the preliminary analysis of samples taken from two patients from Ghana's southern Ashanti region — both of whom have died — turned positive
- ✓ The samples have now been sent to the Institut Pasteur de Dakar research centre in Senegal for confirmation.
- ✓ The disease belongs to the category of 'very infectious hemorrhagic' fever in the same family as Ebola
- ✓ The disease was first identified in 1967 in Germany's Marburg and Frankfurt and Serbia's Belgrade following two large outbreaks, while Ebola was first identified in 1976
- ✓ The Marburg disease is spread to people by fruit bats and transmitted among people through direct contact with bodily fluids of infected people and surfaces
- ✓ The virus has an incubation period of two to 21 days.
- ✓ High fever, severe headache, nausea and vomiting accompanied by Muscle aches and pains are some of the common symptoms of the disease
- ✓ Guinea had confirmed a single case in an outbreak that was declared over in September 2021
- ✓ Previously, outbreaks and rare cases of Marburg in Africa have been reported in Angola, the Democratic Republic of the Congo, Kenya, South Africa and Uganda.
- ✓ No treatment or vaccine currently exists for Marburg, while the case fatality rates in past outbreaks have ranged from 24% to 88%.

INDIA AND OTHER COUNTRIES

- **India - is projected to surpass China as the world's most populous country next year, according to a report released by the United Nations.**
- ✓ The World Population Prospects 2022 by the United Nations Department of Economic and Social Affairs, Population Division was released on July 11
- ✓ India's population stands at 1.412 billion in 2022 compared to China's 1.426 billion
- ✓ India, which will surpass China as most populous nation by 2023, is projected to have a population of 1.668 billion in 2050, way ahead of China's 1.317 billion
- ✓ According to the report, the global population is projected to reach eight billion on November 15, 2022.
- ✓ The global population is growing at its slowest rate since 1950, having fallen under 1% in 2020.

- ✓ The latest projections by the UN suggest that the world's population could grow to around 8.5 billion in 2030 and 9.7 billion in 2050.
- ✓ It is projected to reach a peak of around 10.4 billion people during the 2080s and to remain at that level until 2100.
- ✓ The world's two most populous regions in 2022 were Eastern and South Eastern Asia, with 2.3 billion people, representing 29% of the global population, and Central and Southern Asia, with 2.1 billion, representing 26% of the total world population.
- ✓ China and India accounted for the largest populations in these regions, with more than 1.4 billion each in 2022.
- ✓ More than half of the projected increase in global population up to 2050 will be concentrated in just eight countries of the Democratic Republic of the Congo, Egypt, Ethiopia, India, Nigeria, Pakistan, the Philippines and Tanzania.

ECONOMY

- **Union Bank of India (UBI) - has launched a Metaverse-based Virtual Lounge, 'Uni-verse', to showcase its products to customers virtually**

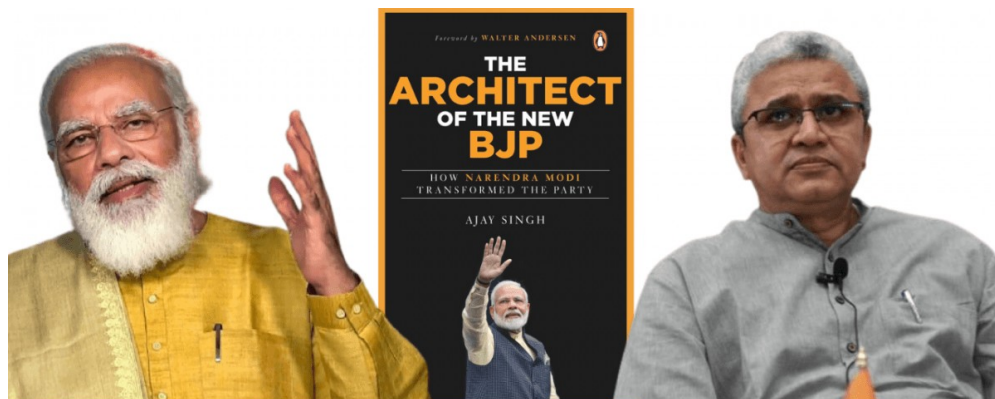


- ✓ The lender is the first Indian bank to open a virtual shop for publicity.
- ✓ Uni-verse will deliver a unique experience of banking to the customers who can roam around the lounge, get information of the bank's deposits, loans, government welfare schemes, and digital initiatives as if they are experiencing the real world
- ✓ This initiative was launched by the bank recently on July 8 in partnership with Tech Mahindra
- ✓ The bank has also launched an Open Banking Sandbox environment through which it will collaborate with fin-techs and start-up partners for developing and launching innovative banking products.
- ✓ A public sector bank, Union Bank of India has a network of 8850+ domestic branches serving over 120 million customers

- ✓ The bank's total business as of 31st March 2022 stood at Rs.17,48,800 crore, comprising Rs. 10,32,392 crore of deposits and Rs. 7,16,408 crore of advances
- ✓ It has a mobile banking app, 'nxt' that provides a host of digital services
- ✓ Globally, US-based JPMorgan Chase & Co was the first lender to open a shop in the Metaverse earlier this year in February.
- ✓ JPMorgan launched its lounge on Decentraland, a Metaverse platform.
- ✓ The Onyx lounge is named after the multinational investment bank's blockchain business that was launched in 2020
- ✓ Visitors to the Onyx lounge can create their avatars by choosing a gender, skin tone, hairstyle, clothes, accessories and are greeted by a tiger avatar and a digital portrait of Jamie Dimon, the bank's CEO.
- ✓ Metaverse is an evolved form of internet that enables real-life experiences and situations with Augmented Reality (AR).
- ✓ Using Metaverse, Users can do nearly every task, visit different stores, enquire and hold conversations with different Metaverse users.

BOOKS & AUTHORS

- **A new book focusing on PM Modi's organizational skills titled "The Architect of the New BJP: How Narendra Modi Transformed The Party" - was released on July 11**



- ✓ The book was written by senior journalist Ajay Singh -- currently serving as the press secretary to President Ram Nath Kovind

SPORTS

- **Arjun Babuta - won the men's 10m air rifle gold medal at the ISSF World Cup in Changwon, South Korea, on July 11**
- ✓ It was the first senior international medal for the 23-year old Arjun
- ✓ Arjun defeated USA's Lucas Kozeniesky in the gold medal round.
- ✓ He topped the ranking round to make the cut for the gold medal match.
- ✓ Lucas had won the 10m air rifle mixed event silver in Tokyo last year.
- ✓ Arjun had won the gold medal at the 2016 Junior World Cup in Gabala, Azerbaijan.



- **Bhagwani Devi, a 94-year-old sprinter from India - won the gold medal in the 100m sprint with a timing of 24.74 seconds at the World Masters Athletics Championships held in Tampere.**



- ✓ Apart from this, Bhagwani also bagged a bronze medal in shot put.
- ✓ World Masters Athletics Championships was held in Tampere from June 29 to July 10.
- ✓ The event is a world championship calibre event for the sport of athletics (track and field) for male and female athletes aged 35 years and over.

INTERNATIONAL DAY

- **National Fish Farmers Day - July 10**
- ✓ The Ministry of Fisheries, Animal Husbandry and Dairying celebrated the 65th National Fish Farmers Day on July 10
- ✓ The National Fisheries Development Board (NFDB), under the Ministry, virtually organised events on the day at its Hyderabad premises
- ✓ According to the Ministry, more than 100 fish farmers, aquapreneurs, fisher folks, professionals, officials and scientists from across the nation participated in the event.



NATIONAL FISH FARMER'S DAY

DAY

10th July



- ✓ During the programme, interaction with progressive fish farmers under the Pradhan Mantri Matsya Sampada Yojana was conducted
- ✓ Dr. Sanjeev Kumar Balyan, Union Minister of State for Fisheries, Animal Husbandry, and Dairying, and Dr. L. Murugan, Union Minister of State for Fisheries, Animal Husbandry, and Dairying, were present during the event
- ✓ The Day is celebrated to demonstrate solidarity with all fisher folk, fish farmers and concerned stakeholders throughout the country.
- ✓ The Day is observed every year to commemorate Professor Dr. Hiralal Chaudhury and his colleague Dr. Alikunhi for their contribution in achieving the successful induced breeding of major carps on 10th July, 1957 at Angul in Odisha for the first time in the country.
- ✓ The day was also celebrated as NFDB Foundation Day, which was set up in 2006
- ✓ The first Fish Farmers Day was observed in the year 2001 by the Indian Council of Agriculture Research – Central Institute of Fisheries Education, Mumbai
- ✓ To develop the sector, the Centrally sponsored scheme “Blue Revolution” – Integrated Development and Management of Fisheries - was launched in 2016 as a means of transforming and bringing out an economic revolution
- ✓ During 2020, Prime Minister Narendra Modi launched the “Pradhan Mantri Matsya Sampada Yojana” (PMMSY) with a budget of over Rs 20,050 crore for a period of five years.
- ✓ PMMSY aims to achieve fish production of 22 MMT (Million Metric Tonne) from the current 13.76 MMT by 2024-25 and create an additional employment opportunity to about 55 lakh people through this sector
- ✓ To promote the sector, the Fisheries and Aquaculture Infrastructure Development Fund (FIDF) scheme was started in 2018-19 with a budget of Rs. 7,522.48 crore, which is also continuing presently

CRISPR-CAS, GENE EDITING TOOL - A REPORT

10 Yrs Of Magic Scissors That Could Cut Out Most Diseases

Crispr-Cas, a genetic tool that brings the ease of the “find and replace” function in text files to the complex task of altering DNA, was announced to the world 10 years ago. Scientists were quick to notice its potential for tackling everything from congenital diseases to climate change, though it has also thrown up a range of technical and ethical issues

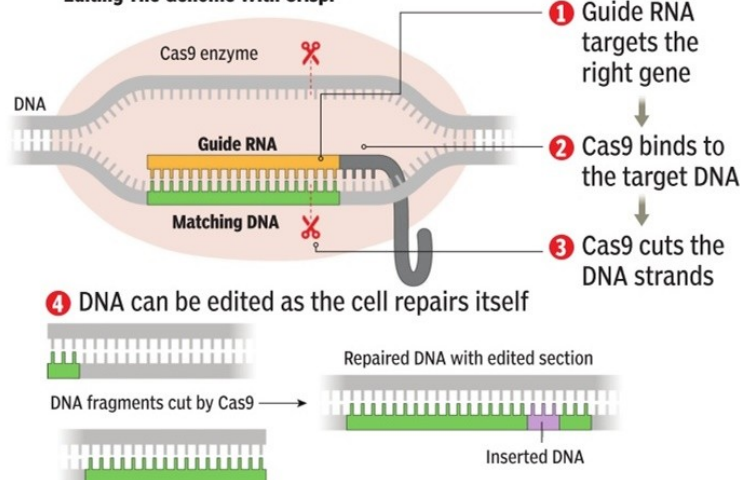
TIMES *Special*

How Crispr Works

Crispr, or Clustered Regularly Interspaced Short Palindromic Repeats, is part of the immune system of bacteria. It is like a “gallery” in the bacteria’s DNA where it stores away some of the genetic code of any virus that attacks it. In case of a subsequent invasion, the bacteria checks this “gallery” and, upon finding a match, activates a Crispr-associated enzyme (Cas) to chop up and disable the virus.

It was found that this bacterial defence system could be tricked into making any alteration in DNA by inserting the desired target into the Crispr-Cas system. Once fed with the target DNA, the Cas enzymes (like Cas9) do their bit by snipping it up. And, when the cell attempts to repair the broken DNA, scientists can insert replacement DNA into the cell, using its repair mechanism to stitch the broken pieces together.

Editing The Genome With Crispr



From Cancer To Covid, How Crispr's Come In Handy

August 2012
US-based scientist **Jennifer Doudna** (top) and her European collaborator **Emmanuelle Charpentier** publish the first paper on Crispr-Cas9



January 2013
Researchers at MIT and Harvard adapt Crispr-Cas9 to edit genes in human and mouse cells

August 2013
Crispr is used to engineer plant genomes, including rice, wheat and tobacco

March 2015 | Scientists in the US and China begin exploring Crispr on stem cells to potentially engineer human organs from genetically altered pigs

February 2016 | UK allows scientists to genetically alter human embryos using Crispr

June 2016 | US allows first clinical trial using Crispr to treat patients. It also approves trials to alter T cells from cancer patients for their treatment

September 2020
Scientists at the **CSIR-Institute of Genomics and Integrative Biology in Delhi** create a Covid-19 test called FELUDA using Crispr technology

October 2020 | Doudna and Charpentier win the Nobel Prize in chemistry for their work on Crispr

March 2020 | In the US, the first patient receives gene editing therapy with Crispr to cure inherited childhood blindness by altering defective photoreceptor genes



November 2018 | Chinese scientist He Jiankui announces he **edited the genes of two human embryos** to disable a gene that allows HIV to enter cells. However, both children were born with an active version of the gene in question and were still vulnerable to HIV. The experiment sparks a furore over ethics with many scientists calling for a moratorium on gene editing in human embryos

October 2021 | Trials for Crispr-based cancer treatment in the US show that **edited T cells from healthy donors can attack cancer cells** without being targeted by the immune system



May 2017 | Researchers in the US and China publish a study on eliminating HIV in mice using Crispr. Also in 2017, a study shows how inherited heart disease can be prevented by editing genetic defects in human embryos

