

August - 08

TNPSC BITS

- ❖ The Appointments Committee of the Cabinet extended the tenure of Cabinet Secretary Rajiv Gauba for a period of one year.
- ❖ The US Senate decisively approved the NATO membership of Sweden and Finland.
- ❖ India has once again stressed the need for early completion of the India-Myanmar-Thailand Trilateral Highway - and its extension to Cambodia - to boost connectivity in the region.

NATIONAL

Target to eliminate Kala-azar by 2023

WHAT IS KALA-AZAR	
<ul style="list-style-type: none"> ▪ A slow progressing indigenous disease ▪ Caused by protozoan parasite of genus <i>Leishmania</i> ▪ In India, <i>Leishmania donovani</i> is the only parasite causing the disease ▪ The parasite primarily infects reticuloendothelial system 	<p>Signs & Symptoms</p> <ul style="list-style-type: none"> ➔ Recurrent fever ➔ Loss of appetite ➔ Weakness ➔ Spleen enlargement ➔ Anaemia
Transmission	
<ul style="list-style-type: none"> ▪ Sandfly of genus <i>Phlebotomus argentipes</i> only known vector of kala-azar in India 	<ul style="list-style-type: none"> ▪ Indian kala-azar has a unique epidemiological feature of being anthroponotic ▪ Female sandflies pick up parasite while feeding on infected human host ▪ Development and multiplication in the gut of sandflies and move to mouthparts
<ul style="list-style-type: none"> ▪ Parasite undergoes morphological change to become flagellate 	<ul style="list-style-type: none"> ▪ Healthy human hosts get infection when an infective sandfly vector bites them

- ❖ India has set the target to eliminate Kala-azar from country by 2023.
- ❖ Out of 633 Kala-azar endemic blocks, 625 blocks have successfully eliminated the kala-azar in 2021.
- ❖ India's target is way ahead than WHO's target of eliminating the disease by 2030.



- ❖ Kala Azar is also called as Leishmaniasis.
- ❖ It is a neglected tropical disease, by which over 100 countries are affected, including India.
- ❖ The disease is caused due to parasite called Leishmania.
- ❖ This parasite is transmitted via bite of sand flies.

Craft Village Initiative

- ❖ Craft Village will promote handicrafts as workable and moneymaking livelihood option for artisans in clusters.
- ❖ Infrastructure and atmosphere in crafts village are designed in village style so as to give a sense of rural life of India.
- ❖ In this regard, 8 Craft Villages has been established in Raghurajpur (Odisha), Tirupati (Andhra Pradesh), Vadaj (Gujarat), Naini (Uttar Pradesh), Anegundi (Karnataka), Mahabalipuram (Tamil Nadu), Taj Ganj (Uttar Pradesh), and Amer (Rajasthan).

Sanskrit-speaking village in each district

- ❖ Uttarakhand government has decided to develop one Sanskrit-speaking village in each of the 13 districts in the state.
- ❖ Citizens of these villages will be trained by experts to use the ancient Indian language as a medium of daily communication.
- ❖ They will also be taught the Vedas and the Puranas to help them acquire proficiency in Sanskrit.
- ❖ These villages to be called “Sanskrit Gram”, each of these villages will be a centre of ancient Indian culture.

Vice Presidential Election 2022

- ❖ The 14th Vice-Presidential Election was held on August 6, 2022.
- ❖ Utpal Kumar Singh, the Secretary-General, Lok Sabha was appointed as the Returning Officer for the election.
- ❖ NDA's candidate Jagdeep Dhankar was elected as the 14th Vice President of India.
- ❖ The Electoral College consists of 245 Rajya Sabha members and 543 elected members of the Lok Sabha.
- ❖ NDA candidate Jagdeep Dhankar won by 346 votes as he bagged 528 of the total 725 votes that were cast.

- ❖ 15 votes were termed invalid.
- ❖ Opposition candidate Margret Alva received 182 votes in the election.
- ❖ The 80-year-old Alva is a Congress veteran
- ❖ She also has served as governor of Rajasthan.
- ❖ Out of 780 electors comprising elected and nominated members of the RS and elected members of LS, 725 electors cast their votes.
- ❖ Total voter turnout was 92.94%.



'Badhe Chalo' campaign



- ❖ The Ministry of Culture has launched the 'Badhe Chalo Campaign'.
- ❖ It aims to connecting with youth of India and infuse a deep sense of patriotism among them.

- ❖ It seeks to 'create youth centric activation' for sizeable outreach of Azadi ka Amrit Mahotsav.

INTERNATIONAL

Chile's New Constitution



- ❖ The first time in Chile's history a constitution was drafted democratically.
- ❖ The proposed new text was written by a 154-member body elected through a popular vote.
- ❖ The president remains the head of the government.
- ❖ The president could be re-elected consecutively once.
- ❖ Chile's president can currently only be re-elected non-consecutively.
- ❖ Its Congress is a bicameral body with equal powers.

SCIENCE AND TECHNOLOGY

ISRO's Smallest Rocket in Space

- ❖ ISRO launched its smallest commercial rocket 'Small Satellite Launch Vehicle (SSLV)'.
 - ❖ SSLV is the rocket can put a payload of 500 kg up to 500 km in planar orbit.
 - ❖ But unlike bigger rockets, the SSLV can also carry mini, micro, or nanosatellites (10 to 500 kg mass).
 - ❖ The SSLV can be assembled within a fortnight.
 - ❖ This carried two payloads on its maiden flight.

- ❖ The first is the EOS-02, an indigenously developed earth observation satellite.
- ❖ It will offer advanced optical remote sensing operations within the infrared wavelength with high spatial resolution.
- ❖ The second is 'AzaadiSAT', which aims to unfurl the Tricolour in space.
- ❖ It was specifically conceptualised for celebration of 75th Independence Day.
- ❖ AzaadiSAT comprises of 75 payloads.
- ❖ These payloads have been built by 750 young girl students from 75 rural government schools of India.
- ❖ It is an 8-kilogram CubeSat.
- ❖ The mission failed due to a failure in receiving communications.



The infographic features a dark teal background. At the top left, there is a globe icon and the text 'SSLV-D1/EOS-02'. At the top right is the ISRO logo with the motto 'इसरो विश्व' (ISRO Vishva). The main title 'EOS-02' is in large, bold, light blue letters. Below it, a paragraph describes the satellite as an experimental optical remote sensing satellite with high spatial resolution, intended to demonstrate launch on demand capability. The 'Mission Objectives' section lists two points: design of an agile satellite with an imaging payload, and providing inputs on thermal anomalies for various studies. The 'New Technologies' section notes that the satellite uses common fore optics and metallic primary mirrors. On the right side, there is a 3D cutaway illustration of the satellite, showing its internal components and external structure, with labels 'VD 04' and 'RCAL' visible.

EOS-02

EOS-02 is an experimental optical remote sensing satellite with a high spatial resolution. The objective of EOS-02 is to realise and fly an experimental imaging satellite with a short turn-around time and to demonstrate launch on demand capability. EOS-02 belongs to microsatellite series of spacecrafts. The bus configuration is derived from IMS-1 bus.

Mission Objectives

- Design and development of an agile and experimental satellite with an imaging payload.
- Providing inputs on thermal anomalies towards supporting applications in the domains of geo-environmental studies, forestry, hydrology, agriculture, soil, coastal studies, etc.

New Technologies

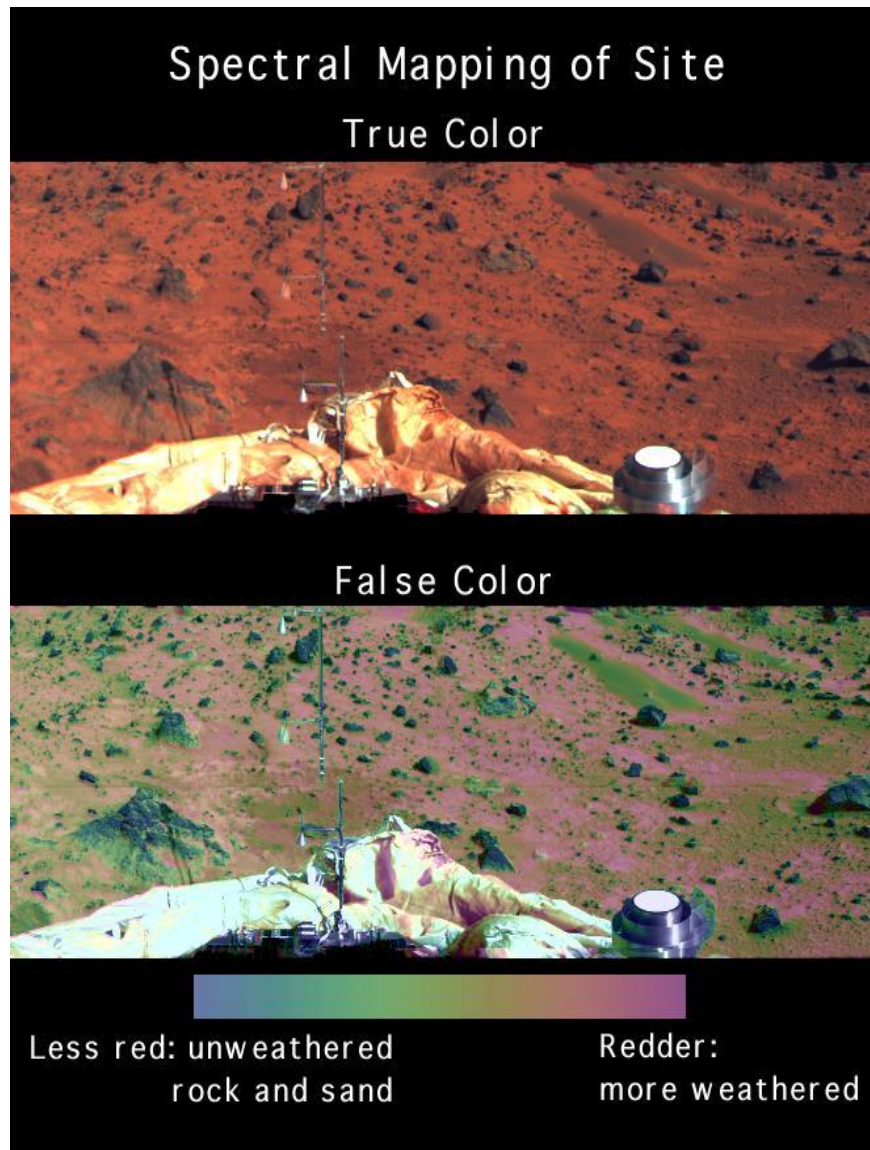
New technologies realised for the Microsat series of spacecrafts include:

- Payloads with a common fore optics and metallic primary mirror realised with the limited mass and volume of Microsat Bus

Multispectral maps of Mars

- ❖ NASA made the first multispectral maps of Mars' surface public.
- ❖ The 5.6 GB multicoloured map covers 86% of the area of the Red Planet.
- ❖ It will gradually distribute the whole map over the next six months.
- ❖ The data for the maps was captured by NASA's Mars Reconnaissance Orbiter.

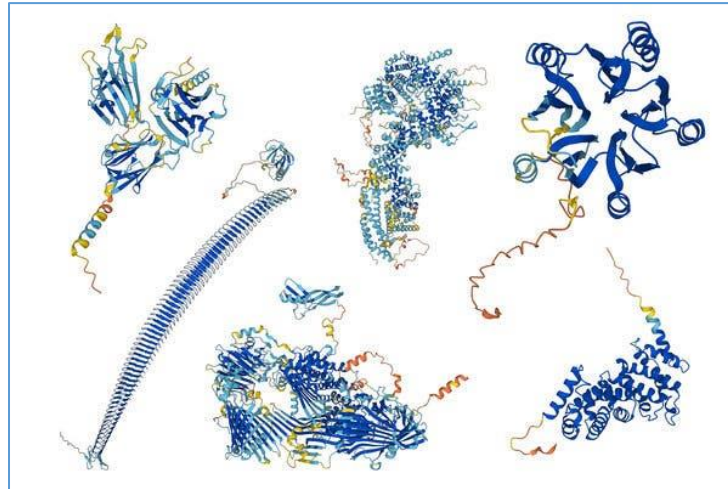
- ❖ It is the longest orbiting satellite around the planet.



Shape of Proteins

- ❖ In 2020, an artificial intelligence lab called DeepMind unveiled technology that could predict the shape of proteins.
- ❖ Now, the lab shared the tool called AlphaFold.
- ❖ Using this tool, the lab released predicted shapes for more than 350,000 proteins.
- ❖ It includes all proteins expressed by the human genome.
- ❖ The technology is not perfect.

- ❖ But it can predict the shape of a protein with an accuracy that rivals physical experiments about 63% of the time



Indigenous laser-guided ATGM

DRDO SUCCESSFULLY TEST
FIRES INDIGENOUS LASER-GUIDED ANTI TANK MISSILES

DETAILS INSIDE

The indigenously developed missiles hit with precision and successfully destroyed the targets at two different ranges. Further, telemetry systems recorded the satisfactory flight performance of the missiles.

Appreciating the efforts of DRDO and Indian Army for the successful trial of the Laser Guided ATGM, Defence Minister Rajnath Singh said the development of this system is an important step towards realising Prime Minister Narendra Modi's vision of 'Aatmanirbhar Bharat'.

Notably, India conducted the successful test of the Anti-Tank Guided Missiles in June this year from Main Battle Tank (MBT) Arjun at KK Ranges with support of Armoured Corps Centre & School (ACC&S).

It is noteworthy that the made-in-India Laser Guided missile hit the bull's eye with textbook precision. The trial has established the ATGMs capability to engage targets from minimum to maximum ranges.

Bolstering the firepower of the Indian defence ecosystem, Defence Research and Development Organisation (DRDO) and Indian Army have successfully test-fired laser-guided Anti-Tank Guided Missiles (ATGM) from Main Battle Tank (MBT) Arjun at KK Ranges with support of Armoured Corps Centre & School (ACC&S) Ahmednagar in Maharashtra.

[View original](#)

UNDERSTANDING ATGM

Indigenously-developed Laser-Guided Anti-Tank Guided Missile (ATGM) employs a tandem High Explosive Anti-Tank (HEAT) warhead to defeat Explosive Reactive Armour (ERA) protected armoured vehicles.

Importantly, the laser-guided missile has been designed & developed with multi-platform launch capability and is presently undergoing technical evaluation trials from the 120 mm rifled gun of MBT Arjun.

- ❖ DRDO and Indian Army successfully test-fired the Indigenously developed Laser-Guided Anti-Tank Guided Missiles.
- ❖ The Missiles were test-fired from Main Battle Tank- Arjun.



- ❖ ATGMs precisely and successfully hit the target and destroyed them at two different ranges.
- ❖ The developed ATGM has the capability of multi-platform launch.

IMPORTANT DAYS

Hiroshima Day - Aug 6



- ❖ This day commemorate the atomic bombing of Hiroshima, Japan, in 1945, at the end of World War II.
- ❖ The U.S. B-29 Superfortress Enola Gay dropped an atomic bomb code-named "Little Boy" on Hiroshima.
- ❖ Three days later, the United States, exploded a nuclear device over Nagasaki.

