

WHAT IS RYTHU BANDHU SCHEME?

The Election Commission recently withdrew the permission given to the Telangana government to disburse financial aid to farmers under the Rythu Bandhu Scheme.



About Rythu Bandhu Scheme:

- The Rythu Bandhu scheme, also known as the **Farmer's Investment Support Scheme (FISS)**, is a welfare programme for farmers started by the **Telangana government** in 2018.
- The **objective** of this scheme is twofold:
 - to provide a timely **cash grant for the initial investment needs of farmers**
 - to **ensure that farmers do not fall into the debt trap.**
- Under the scheme, financial assistance of **Rs 5,000 per acre per farmer each season** is **directly transferred** to each farmer's account.
- This financial support was **distributed biannually**, allocated for **both the kharif and rabi harvests.**
- The assistance can be **used for the purchase of inputs** like seeds, fertilizers, pesticides, labour, and **other investments in the field operations** of the Farmer's choice for the crop season.

Eligibility:

- The scheme is open to **all resident farmers** in the state **who own land.**
- **Farmers cultivating the land in the forest**, a majority of them from Scheduled Tribe communities and **having a Record of Forest Rights (ROFR) document**, are **also eligible** to receive benefits under the scheme.
- It is the **country's first direct farmer investment support scheme** where cash is paid directly to the beneficiary.

WHAT IS ASTROSAT?

India's first multi-wavelength space telescope, AstroSat, has successfully detected its 600th Gamma-ray Burst (GRB), an event named GRB 231122B.



About AstroSat:

- It is India's first dedicated multi-wavelength space observatory aimed at studying celestial sources in X-ray, optical, and UV spectral bands simultaneously.
- AstroSat, with a lift-off mass of 1515 kg, was **launched** by the Indian launch vehicle PSLV from Satish Dhawan Space Centre, Sriharikota, **on September 28, 2015, into a 650 km orbit** inclined at an angle of 6 degrees to the equator.
- The spacecraft control centre at **Mission Operations Complex (MOX) of ISRO Telemetry, Tracking and Command Network (ISTRAC), Bengaluru**, manages the satellite during its entire mission life.
- The **minimum useful life** of the AstroSat mission is around **5 years**.
- It carries a total of **five scientific payloads**, enabling **imaging and studying the** temporal and spectral properties of **galactic and extra-galactic cosmic sources** in a wide range of wavelengths on a common platform.

Scientific Objectives:

- To **understand high energy processes** in binary star systems containing neutron stars and black holes.
 - Estimate **magnetic fields of neutron stars**.
 - **Study star birth regions** and high energy processes in star systems lying beyond our galaxy.
 - **Detect new**, briefly bright **X-ray sources** in the sky.
 - Perform a **limited deep-field survey of the Universe** in the Ultraviolet region.
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ZOJILA PASS

The Indian Army "forged thunderstorms" at 11,500 feet near the Zojila Pass to stay battle-ready as the harsh winter set in Jammu and Kashmir and Ladakh.



About Zojila Pass:

- Zojila Pass, also known as ‘The Mountain Pass of Blizzards’, is a **high mountain pass** located in the **Kargil district of Ladakh**.
- It is located on the **Srinagar-Kargil-Leh highway (NH-1)** at a height of 11,650 feet.
- It lies in the **Greater Himalayan Range**.
- The pass **remains closed for almost half of the year** due to heavy snowfall.
- **History:**
 - It was the **site of the Indo-Pakistan War of 1947-48**.
 - It was **captured by militias aided by the Pakistan Army in 1948**, with the ultimate aim of capturing Ladakh.
 - However, the pass itself was **captured by the Indian Army on 1st November 1948, in an assault codenamed Operation Bison**.

What is Zojila Tunnel?

- **Location:** It is an under-construction tunnel situated at an altitude of 11,578 ft (around 3,500 metres) **on the Srinagar-Leh Highway in Jammu and Kashmir**.
- The tunnel would provide all-weather **connectivity between Srinagar and Leh on NH-1**.
- **Total Length: 14.15 km**.
- It will be **India’s longest road tunnel and Asia’s longest bi-directional tunnel**.
- It would be 9.5-meter wide and 7.57-meter high in the shape of a horseshoe.



WHAT IS FIBRE OPTIC CABLE?

Along with quantum optics, fibre optic communication stands on the cusp of a new era.

About Fibre Optic Cable:

- Optical fibres are made of **thin, cylindrical strands of glass**.
- The diameter of a typical fibre is close to the diameter of human hair.
- These fibres **can carry information**, such as text, images, voices, videos, telephone calls, and anything that can be encoded as digital information, across large distances almost at the speed of light.
- They are **strong, light, and flexible**, and ideal to be buried underground, drawn underwater, or bent around a spool.

How do optical fibres work?

- These cables work basically on the principle of **total internal reflection**.
- The signals **encoded as electromagnetic waves** can be fed into one end of an optical fibre, and they will reflect and bounce many times between the glass walls as they traverse several kilometres bearing the information in the signals.
- A **fibre optic communication** system consists of three parts.
 - A **transmitter** encodes information into **optical signals** (in the form of rapidly blinking light pulses of zeros and ones).
 - An optical fibre carries the signal to its destination. There, a **receiver** reproduces the information from the encoded signal.
 - Optical waves allow a high data transmission rate of up to **several terabits per second in a single fibre**.
- Unlike radio or copper-cable communication, fibre cables are also insensitive to external perturbations such as lightning and bad weather.

Applications

- Fibre optics technology has since been widely used in **telecommunication, medical science, laser technology, and sensing**.
- Optical fibres are an essential part of this development in communication.

RISING INSTANCES OF ONLINE PAYMENT FRAUDS: 4-HOUR DELAY LIKELY IN FIRST UPI TRANSFER OVER RS 2,000

Why in News?

- To curb rising instances of online payment fraud, the government is planning to introduce a minimum time for a transaction beyond a particular amount happening for the first time between two persons.
- If finalised, the measure could cover a wide range of digital payments through Immediate Payment Service (IMPS), Real Time Gross Settlement (RTGS) and even the Unified Payments Interface (UPI).

Different Types of Digital Payments:

DIFFERENCE BETWEEN NEFT, RTGS AND IMPS			
BASES OF COMPARISON	NEFT	RTGS	IMPS
Minimum transfer value	Re. 1	Rs. 2 lakh	Re. 1
Payment options	Online and offline	Online and offline	Online
Maximum transfer value	No limit	No limit	Rs. 2 lakh
Settlement type	Half hourly basis	Real time	Real time
Inward transaction charges	No charges	No charges	Decided by the individual member banks and IFPs

- **NEFT (National Electronic Funds Transfer):**

- It is an electronic payment system used for transferring funds from one bank account to another.
- It operates on a deferred net settlement basis, which means transactions are processed in batches throughout the day.

- **RTGS (Real-Time Gross Settlement):** It is a payment system that enables large-value transactions to be processed in real-time.
- **IMPS (Immediate Payment Service):** It is an instant payment system that enables customers to transfer funds in real-time, 24/7.
- **Unified Payments Interface (UPI):**
 - UPI is an instant payment system developed in India, by the National Payments Corporation of India (NPCI).
 - The interface facilitates inter-bank peer-to-peer and person-to-merchant transactions. It is used on mobile devices to instantly transfer funds between two bank accounts.

- UPI transactions rose 427% in volume during 2020 and 2022. In May 2023, a total of 9.41 billion UPI transactions amounting to Rs 14.89 trillion were recorded by the NPCI.

What Government is Planning to Curb Online Payment Frauds?

- **The plan likely includes** a possible 4-hour window for the first transaction (to users they have never transacted with before) between two users for digital payments above Rs 2,000.
 - It will be along the lines of **NEFT** where the transaction happens within a few hours.
- The users will have four hours after making a payment to someone for the first time to **reverse or modify the payment**.
- While the process is expected to add **some friction** to digital payments, it is **necessary to mitigate cybersecurity concerns**.
- The plan is not to just delay or limit the first transaction (which already happens in some shape or form) **but to regulate every first transaction between two users**, irrespective of their independent past transaction history.

SAGITTARIUS C (SGR C)



Recently, the James Webb Space Telescope (JWST) captured a stunning image of the dense centre of the Milky Way galaxy with clarity never seen before.

About Sagittarius C (Sgr C):

- It is the **star-forming region known to be** situated approximately 300 light-years from the Milky Way's central supermassive black hole, Sagittarius A*.
- It is revealing a **bustling cluster of protostars** within an infrared-dark cloud.
- These nascent stars are **in the process of accumulating mass**, their outflows glowing intensely in the infrared spectrum, akin to embers in a cosmic bonfire.

- The **cloud that protostars are emerging from** is so dense that the light from stars behind it cannot reach Webb.
- Scattered throughout are smaller infrared-dark clouds, akin to celestial voids against the starry backdrop, signalling the birthplaces of future stars.
- Webb's Near-Infrared Camera (NIRCam) has detected **extensive emissions from ionised hydrogen** on the periphery of the dark cloud, highlighted in a striking cyan hue.

Key facts about the James Webb Space Telescope

- It was built in **collaboration between NASA, the European Space Agency(ESA) and the Canadian Space Agency.**
- It was launched in December 2021.
- It is **presently at** a point in space known as the **Sun-Earth L2 Lagrange point.**
- Lagrange Point 2 is one of the five points in the orbital plane of the Earth-Sun system.
- It's the largest, most powerful infrared space telescope ever built.
- **Objectives:** It will **examine every phase of cosmic history**, from the Big Bang to the formation of galaxies, stars, and planets to the evolution of our Solar System.

SUPREME COURT PANEL ON MANIPUR VIOLENCE

Why in the News?

- Justice Gita Mittal committee has submitted its interim report to the Supreme Court, about the violence that broke out in Manipur in May 2023.

About Justice Gita Mittal Committee:

- In August 2023, the Supreme Court appointed a three-member committee, headed by former Jammu and Kashmir High Court Chief Justice Gita Mittal, to **examine the humanitarian aspects of the ethnic violence in Manipur.**
- The committee of three former women high court judges was authorised to submit their reports directly to the Supreme Court.
- The panel submitted its thirteenth interim report to the Supreme Court recently.

Major Findings of the Committee:

- The panel has suggested that **victims’ relatives should be directed to perform the last rites, failing which the Manipur government should do so instead.**
- The question of claiming and disposing of the bodies has been one of the most sensitive and contentious issues in the ongoing conflict.
- In its report, the panel is learnt to have said that **relatives of the victims are under pressure from civil society organisations not to accept the bodies for last rites.**
- It has been said that these organisations are opposing and obstructing the performance of last rites due to “vested interests” and to compel state authorities to meet “unwarranted” demands.
- The report states that **civil society organisations are insisting on “unsuitable spots” for collective burial**, which would serve as a source of “constant mounting tensions” between the two communities.
- The committee has asked the Supreme Court to direct the next of kin to claim the bodies and perform the last rites.
- Failing this, the committee has also urged the court to “prohibit” civil society organisations from interfering with or obstructing the performance of last rites.

KAMBALA COMES TO BENGALURU

Why in news?

- Recently, Bengaluru held its first Kambala race, with 159 pairs of buffaloes and their jockeys racing through the specially made slush tracks in the city’s Palace Grounds.
- Kambala has in the past been banned by the Supreme Court. But, the Karnataka govt, keeping its popularity in mind, amended legislation to allow the races to go on.

What is Kambala?

- **About**
 - It is a folk sport practised in coastal Karnataka districts, especially in regions where Tulu speakers form a majority.

- In the past, races were hosted by various families and groups in sludgy fields in the days after paddy was harvested.
- Now, various Kambala Samithis or organising bodies have come up.
- These Samithis host weekly events from the end of November till the first half of April across Dakshina Kannada and Udupi districts.

Why was Kambala outlawed by the Supreme Court?

- **Various petitions filed**
 - Several organisations, including People for the Ethical Treatment of Animals (PETA), had filed a petition against all traditional sporting events, complaining about animal abuse.
 - The complaint against Kambala was that the buffaloes' noses were tied with a rope and the animals were whipped continuously during the race, which amounts to cruelty.
- **SC Judgement**
 - The SC, which heard these petitions, ruled to ban Jallikattu, Kambala and bullock cart racing in 2014.
 - **Jallikattu**, also known as **eruthazhuvuthal**, is a bull-taming sport traditionally played in Tamil Nadu as part of the Pongal harvest festival.