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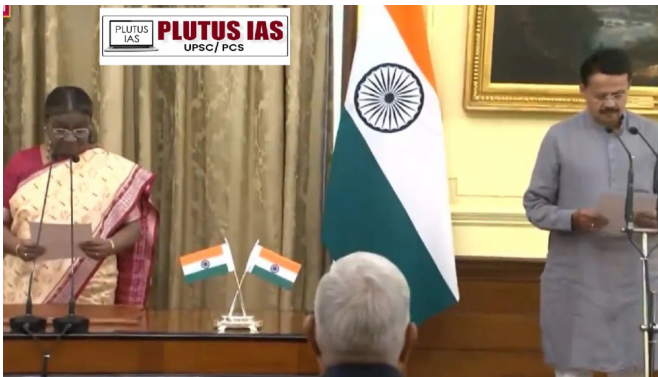
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POLITY AND GOVERNANCE

PROTEM SPEAKER IN INDIA : RIGHTS AND DUTIES

(This article is related to the section ' Indian Constitution and Governance, Parliament, Role and Powers of Speaker of Lok Sabha, Role of Governor ' of General Studies Paper – 2 of UPSC Civil Services Mains Exam and ' Protem Speaker, Speaker and Deputy Speaker of Lok Sabha, Money Bill, Joint Sitting, Tenth Schedule, 52nd Constitutional Amendment, Judicial Review ' of UPSC Preliminary Exam. It also includes suggestions from the PLUTUS IAS Team . This article is related to ' Pro tem Speaker in India : Rights and Duties ' of ' Daily Current Affairs ' .)

WHY IN THE NEWS ?



- Recently, the President of India, Smt. Draupadi Murmu has appointed Bhartrihari Mahtab, a seven-time MP from Cuttack, as the Pro-Tem Speaker of the 18th Lok Sabha and administered the oath of office.
- The Speaker Pro-Tem in India is appointed by the President under Article 95(1) of the Constitution and performs his duties until the election of a permanent Speaker of the Lok Sabha of India.

MEANING AND ROLE OF PROTEM SPEAKER IN INDIA :

- Protem is a Latin phrase which in English means **“For the time being”** or **“For the time being”**.
- Thus, the Pro Tem Speaker is a temporary Speaker who is appointed for a limited period to conduct business in the Lok Sabha or State Legislative Assemblies.
- When the elections to the Lok Sabha or the Legislative Assembly have been held and voting has not taken place for the permanent Speaker and Deputy Speaker, the Protem Speaker is selected to administer the House.

- The term ‘Protem Speaker’ is not explicitly mentioned in the Constitution of India, but the post plays an important role in the parliamentary system of India.
- When the new Speaker is elected by the House, the tenure of the Protem Speaker automatically ends.
- When the Speaker of the previous Lok Sabha leaves his office immediately before the first meeting of the newly elected Lok Sabha, the President appoints a senior member of the Lok Sabha as the Pro Tem Speaker.
- Generally the most senior member is selected for this post.
- The President himself administers the oath to the Protem Speaker.
- He presides over the first meeting of the newly elected Lok Sabha and has all the powers of the Speaker.
- Its main function is to administer oath to the new members and to enable the House to elect a new Speaker.
- The main objective of the Protem Speaker is to preside over the meetings of the newly elected House and to conduct the election of the new Speaker of the House.

HISTORY OF PROTEM SPEAKER IN INDIA :

- The history of Speaker Pro Tem in India is also important and unique because in the year 1921, the posts of Speaker and Deputy Speaker were created under the Government of India Act, 1919 (Montagu-Chelmsford Reforms).
- At that time, these positions were called President and Deputy President respectively, and this practice continued until India gained independence in 1947.
- Under the Government of India Act, 1935, the names of President and Deputy President were changed to President and Vice President respectively.
- After independence, the structure and functioning of Parliament was further streamlined under the Indian Constitution, in which the role of the Pro Tem Speaker also became extremely important.
- The role of the Pro Tem Speaker is specifically in the first meeting of the newly elected House, where he or she administers the oath of office to the new members and ensures the election of the new Speaker.

- The Speaker Pro Tem is usually selected from among the most senior members of Parliament, who holds the post until a new Speaker is selected.
- Thus, the Protem Speaker is an important pillar of Indian democracy, which helps in maintaining the smooth and orderly functioning of the Parliament.

SYSTEM OF SELECTION OF PROTEM SPEAKER IN INDIA :

- The Speaker Pro Tem is appointed by the President or Governor of India. The President or the Governor administers the oath of office to the temporary Speaker.
- As per tradition, the most senior member with the consent of the Assembly members is appointed as the temporary Speaker, who serves until a permanent Speaker is elected.

DUTIES OF PROTEM SPEAKER :

The main duties of the Protem Speaker in India are as follows –

1. To preside over the first meeting of the Lok Sabha or State Legislative Assemblies.
2. Administering the oath of office to newly elected MPs or MLAs.
3. To conduct voting for the election of Speaker and Deputy Speaker.
4. To conduct floor test to prove the majority of the government.

SYSTEM OF ELECTION OF SPEAKER OF LOK SABHA :

- In India, the Speaker of the Lok Sabha is elected by the members of the lower house of the Indian Parliament, i.e. the Lok Sabha.
- Under this election process, MPs participate in secret ballot and the candidate who gets the most votes is appointed to the post of Speaker of the Lok Sabha.
- In India, any Lok Sabha member can be nominated for the post of Speaker.
- In the election of the Speaker of the Lok Sabha, important qualities like seniority, experience and impartiality of the candidate are taken into consideration.
- Once a candidate is agreed upon, his name is usually proposed by the Prime Minister or the Minister of Parliamentary Affairs.
- The tenure of the Speaker lasts until the Lok Sabha is dissolved.

- The Speaker does not resign on his own, or is not removed from office by a resolution passed by a majority vote of the Lok Sabha.

TENURE OF LOK SABHA SPEAKER :

- The Speaker of the Lok Sabha holds office from the date of his election until immediately before the first meeting of the next Lok Sabha (for 5 years).
- The Speaker is eligible for re-election.
- Even when the Lok Sabha is dissolved, the Speaker of the Lok Sabha does not vacate his office immediately, he continues to hold his office till the first meeting of the newly elected Lok Sabha.

ROLE AND POWERS OF THE SPEAKER OF LOK SABHA :



- The Speaker of the Lok Sabha is the final interpreter of the provisions of the Indian Constitution, rules of procedure and conduct of business of the Lok Sabha and parliamentary matters inside the House.
- They often give decisions which are respected by the members and which are binding in nature.
- The Speaker also presides over the joint sitting of both the Houses of Parliament.
- Such meetings are called to resolve the deadlock between the two houses, in which the role of the Speaker is very important.
- The Speaker also has the power to adjourn the House or adjourn the meeting in the absence of a quorum (third part of the House).
- In case of casting vote, the Speaker has the right to vote in case of tie, which is called casting vote. Its purpose is to resolve the deadlock arising in the House.
- Even in the case of Money Bill, the Speaker has the right to take decisions, he takes the final decision regarding the Money Bill.

- The special powers of the Speaker also include that he has the right to take decisions in the case of disqualification of members under the Tenth Schedule.
- The Speaker also serves as the ex-officio Chairman of the Indian Parliamentary Group (IPG) and as the ex-officio Chairman of the Conference of Presiding Officers of Legislative Bodies.
- The Speaker also plays an important role in the formation of various types of committees in India, where the chairmen of all parliamentary committees work under his direction.
- The Speaker is also the custodian of the rights and privileges of the House, its committees and members and the right to refer any question to the Committee of Privileges for examination, inquiry and report also depends on him.

“PLEA SEEKING TO STAY ON IMPLEMENTATION OF THE NEW CRIMINAL LAWS”

THIS ARTICLE COVERS “DAILY CURRENT AFFAIRS” AND THE TOPIC DETAILS OF “PLEA SEEKING TO STAY ON IMPLEMENTATION OF THE NEW CRIMINAL LAWS” THIS TOPIC IS RELEVANT TO THE “POLITY AND GOVERNANCE” SECTION OF THE UPSC—CSE EXAM.

WHY IN THE NEWS:

A petition was filed in the Supreme Court requesting a halt to the enforcement and enactment of three new criminal laws: **Bharatiya Nyaya Sanhita, 2023, Bharatiya Nagrik Suraksha Sanhita, 2023, and Bharatiya Sakshya Adhinyam, 2023**, slated to take effect from July 1st.

REASONS FOR REFORMING CRIMINAL LAWS IN INDIA:

- **Historical Origins:** Previous laws in India stem from the colonial era and were designed to maintain British control over the legal system. **Example:** Section 124A of the IPC, which criminalises sedition, was introduced during British rule to suppress dissent against colonial authority. Its application remains contentious, particularly concerning its potential misuse against activists and journalists.
- **Emphasis on Punishment:** Earlier laws prioritised punitive measures over ensuring justice for citizens. For example, Several offences in the IPC carry the death penalty, prompting ongoing debates regarding its efficacy as a deterrent and its alignment with evolving societal values.
- **Obsolete Framework:** Enacted in the 19th century, existing laws do not adequately reflect contemporary so-

cial norms, technological advancements, or evolving justice needs. For instance, in 2018, the Supreme Court deemed adultery laws unconstitutional, underscoring the necessity for laws to adapt to societal changes.

- **Low Conviction Rates:** Outdated laws contribute to low conviction rates and protracted legal procedures, eroding public confidence in the legal system. In 2022, the National Crime Records Bureau reported a conviction rate of only 19.7% for serious crimes such as murder and rape.
- **Gender Insensitivity:** Previous laws inadequately address crimes against women and children, reflecting insensitivity and gaps in legal protections. A 2020 National Family Health Survey-5 survey revealed that one in three women in India has experienced physical or sexual violence, necessitating robust legal safeguards.
- **Complex Procedures:** Cumbersome processes and excessive paperwork lead to delayed trials and inefficiencies in the criminal justice system. A 2023 study by the Centre for Public Interest Litigation highlighted that only 0.1% of witnesses in rape cases receive any form of protection, hindering prosecution efforts.
- **Potential for Misuse:** Authorities may exploit laws to target individuals and violate civil liberties, as seen in cases of misuse of sedition charges. For example, anti-terrorism laws with vague definitions of “unlawful activities” have been used to target minority groups and activists, raising concerns about human rights abuses.
- **Lack of Victim-Centric Approach:** Legal proceedings often prioritise technicalities over providing support and justice for victims. According to a 2022 report by the National Crime Victims Relief Fund, only 30% of eligible victims receive compensation, highlighting the need for a more accessible and victim-oriented system.
- **Inadequate Technological Integration:** Older laws lack provisions for leveraging modern technology, hindering effective investigation and evidence presentation. Despite over 2.4 million cybercrime cases in 2022, the conviction rate stands at a mere 3.4%, underscoring the urgent need for technological advancements and skilled cybercrime investigators.
- **Limited Scope:** Existing laws fail to address emerging crimes such as cybercrimes, terrorism, and organised crime effectively. Crimes like crypto-jacking and drone-based attacks lack specific legal frameworks, leaving authorities ill-prepared and response mechanisms unclear.

COMPARISON OF EXISTING AND NEW CRIMINAL LAWS IN

INDIA:

Features	Existing Laws (IPC, CrPC, IEA)	New Criminal Laws: (BNS, BNSS, BSB)	Key Changes in New Criminal Laws
Scope of Offences	IPC defines various crimes.	BNS aims to simplify and clarify offences, categorising them into minor, major, and heinous.	Potential for clearer sentencing guidelines and easier understanding of crimes.
Investigation & Trial Procedures	CrPC outlines procedures for investigation, trial, and appeals.	BNSS focuses on speedy trials, witness protection, and victim assistance.	Aims to reduce delays, improve witness protection, and offer a victim-centric approach.
Evidence Admissibility	IEA determines what evidence is admissible in court.	BSB proposes stricter standards for electronic evidence and introduces "judicial discretion" for certain evidence.	Potential for tighter control over electronic evidence and more flexible handling of sensitive information
Punishment & Sentencing	IPC prescribes punishments for various offences.	BNS introduces tiered sentencing based on offence severity and mitigating factors.	Potentially fairer sentencing and increased focus on rehabilitation for minor offences
Focus on Rights & Safeguards	All laws contain provisions for due process and fundamental rights.	BNS and BNSS emphasise legal aid, community policing, and restorative justice mechanisms.	Potential for better access to legal representation, community involvement in crime prevention, and victim reparation.
Technology Integration	Existing laws lack comprehensive provisions for technology.	BNS and BSB address cyber-crimes, digital forensics, and electronic evidence handling.	Aims to better address modern forms of crime and utilise technology for efficient investigations.

ADVANTAGES OF THE BILLS:

- **Expanded Offences:** The bills include terrorism, corruption, mob lynching, and organised crime under penal laws.
- **Zero FIR Provision:** Allows complaints to be registered at any police station, regardless of where the crime occurred.
- **ICT Applications:** Proposes Video recording of search and seizure operations and increased use of electronic evidence and forensics.
- **Introduction of Community Service:** Community service is introduced as a new form of punishment.
- **Revised Sedition Laws:** Introduces a test for criminal intent to prevent misuse of sedition laws.
- **Speedy Justice Initiatives:** Advocates for Video trials and trials in absentia to expedite justice.
- **Alignment with Supreme Court Rulings:** Excludes attempted suicide and adultery as criminal offences, aligning with recent Supreme Court decisions.

- **Release of Undertrials:** Requires police superintendents to apply to release undertrials who have served half or one-third of their maximum possible sentence.

CHALLENGES ASSOCIATED WITH THE BILLS:

- **New Definition of Sedition:** Defines sedition broadly, potentially infringing on free speech rights.
- **Police Powers:** Grants unchecked powers of arrest to the police.
- **Vagueness in Offences:** The drafting of offences remains vague, increasing the risk of arbitrary arrests.
- **Religious Offences:** Fails to revisit offences related to religion and blasphemy.
- **Borrowed Legislation:** Adopts offences from other laws without clarifying reasons, like those under the UAPA.
- **Criminalisation of Speech:** Offences such as sedition and obscenity may suppress freedom of expression.
- **Marital Rape:** Does not criminalise marital rape, despite existing laws against sexual violence.

- **Outdated Terminology:** Uses outdated terms like “modesty” in laws related to crimes against women.
- **Bail Adjudication:** Provides little improvement in the process of bail adjudication.
- **Torture in Investigation:** This does not address issues related to torture in obtaining evidence from suspects.
- **Death Penalty for Mob Lynching:** Imposing the death penalty for mob lynching may be seen as excessively harsh.
- **Retention of Outdated Laws:** Retains a significant portion of the antiquated IPC, which dates back over 160 years.
- **Forensic Investigation:** Mandates forensic investigation for every crime scene without addressing logistical challenges.
- **Committee Issues:** The committee lacks diversity and transparency in its public consultations and recommendations.
- **Political Use of Criminal Law:** Raises concerns about the political use of criminal law as a preemptive tool.
- **Police Custody:** Extends the period during which a person can be held in police custody, potentially infringing on civil liberties.
- **International Practices:** Lags behind other countries in updating colonial-era penal codes to meet present-day standards.

WAY FORWARD:

- **Balancing State Security and Individual Freedom:** Future reforms must balance state security needs and individual rights.
- **Ensuring Equality and Equitability:** Critical for maintaining public trust and fairness in criminal law reforms.
- **Impact on Vulnerable Groups:** Reforms’ effectiveness will be judged based on their impact on vulnerable populations, victims, and the disadvantaged.

ENEMY AGENT ORDINANCE IMPLEMENTED IN JAMMU AND KASHMIR UNION TERRITORY IN INDIA

(This article is related to the section ‘ Indian Constitution

and Governance, State Legislature, Centre – State Relations in India, India and its Neighboring Countries’ under UPSC Civil Services Mains General Studies Paper- 2 and ‘ Procedure of Trial under Unlawful Activities (Prevention) Act (UAPA), Enemy Agents Ordinance, 2005, Enemy Agents Ordinance in Jammu and Kashmir ‘ under UPSC Preliminary Exam. It also includes suggestions from the PLUTUS IAS Team. This article is related to ‘ Enemy Agents Ordinance implemented in Jammu and Kashmir Union Territory in India’ under ‘ Daily Current Affairs’.)

WHY IN THE NEWS ?



- Recently, the Director General of Police (DGP) of Jammu and Kashmir has said that those who support terrorists in India or in Jammu and Kashmir will be prosecuted. **Unlawful Activities Prevention Act (UAPA)** in place of **Enemy Agents Ordinance, 2005** Should be prosecuted by investigating agencies under.
- There is a provision for life imprisonment or death penalty under this law.

ABOUT JAMMU AND KASHMIR ENEMY AGENT ORDINANCE :



- India’s The Enemy Agent Ordinance of the State of Jammu and Kashmir has a very old history.
- This ordinance was first issued by the Dogra Maharaja of Jammu and Kashmir in 1917.

- This **“ordinance”** It is so called because the laws made during the Dogra rule in Jammu and Kashmir **“ordinance”** It was called so.
- After the partition of India, this Ordinance was re-enacted as law in the year 1948 by the Maharaja in exercise of his law making powers under Section 5 of the Kashmir Constitution Act, 1939.

DEFINITION OF ENEMY AND ENEMY AGENT :

- Under the Enemy Agent Ordinance, an enemy is described as “any person who, directly or indirectly, is engaged in any activity carried out by external aggressors to overthrow the Government established by law in the Union Territory of Jammu and Kashmir.” Participates in or assists in the campaign.
- The meaning of enemy agent is that if a person helps the enemy of the country by conspiring or in collaboration with another person, then he is called an enemy agent.

PROVISION OF PUNISHMENT :

- Under this Ordinance, enemy agents may be punished with death or imprisonment for life or rigorous imprisonment for a term which may extend to 10 years, and may also be fined.

JUDICIAL VERIFICATION AND TRIAL :

- In the case of Rehman Shah vs. State of Jammu and Kashmir, 1959, the Supreme Court of India declared the Enemy Agents Ordinance constitutional in India.
- Under this ordinance, the prosecution is conducted by a special judge appointed by the government on the advice of the High Court.
- Under this ordinance, the accused is not allowed to appoint any lawyer without the permission of the court and there is also no provision to appeal against the decision given under this ordinance.

WHAT IS UNLAWFUL ACTIVITIES PREVENTION ACT (UAPA) ?

- The Unlawful Activities Prevention Act (UAPA) was passed in 1967 and its initial objective is to effectively prevent illegal activity groups in India.
- The Act includes provisions relating to terrorist financing, cyber-terrorism, individual designation, and confiscation of assets.
- It has been amended several times, the latest amendment of which was made in the year 2019.
- Under the Unlawful Activities Prevention Act (UAPA), the National Investigation Agency (NIA) has the au-

thority to investigate and prosecute cases registered under UAPA across the country.

- It provides for the death penalty and life imprisonment as the highest punishment for terrorist acts.
- The act allows for the detention of suspects without charge or trial for up to 180 days and the denial of bail to the accused unless the court is satisfied that they are not guilty.
- Under this Act, terrorism is defined as any act which causes or intends to cause death or hurt to any person, or causes damage to or destruction of any property, or which Threatens the unity, security or economic stability of India or any other country.



PROCESS OF TRIAL UNDER ENEMY AGENT ORDINANCE IN JAMMU AND KASHMIR :

The process of trials under the Enemy Agent Ordinance in Jammu and Kashmir is as follows –

- **Trial before Special Judge :** The trial under the Enemy Agents Ordinance is conducted by a special judge, appointed “by the Government in consultation with the High Court”.
- **Court approval required to hire a lawyer :** Under this ordinance, the accused cannot hire a lawyer to defend himself unless permitted by the court.
- **No provision for appeal against the decision :** There is no provision for appeal against the decision of the special court under the Enemy Agents Ordinance. The decision of the special judge can be reviewed only by “a person selected by the Government from among the judges of the High Court” and the decision of that person will be final.
- **Prohibition on disclosure or publication of the matter :** According to this Ordinance, any person who, without the previous permission of the Government, discloses or publishes any information in connection with any proceeding or in relation to any person under this Ordinance, shall be punished with imprisonment of ei-

ther description for a term which may extend to two years, or with fine, or with both. can be done.

- Under this ordinance, those who help terrorists are also considered enemies and can be punished with imprisonment or fine or both.

PRELIMS QUESTIONS

Q1. Consider the following statements regarding Pro Tem Speaker.

1. The Pro Tem Speaker is appointed by the Prime Minister of India or the Chief Minister of the concerned state.
2. The Speaker Pro Tem is sworn in by the Chief Justice of the Supreme Court of India.
3. The term 'Protem Speaker' is not clearly mentioned in the Constitution of India.
4. The Speaker Pro Tem presides over the first meeting of the newly elected Lok Sabha and has all the powers of the Speaker.

Which of the above statement/statements is correct?

- (a) Only 1, 2 and 3
- (b) Only 2, 3 and 4
- (c) Only 1 and 2.
- (d) Only 3 and 4.

Answer – D

Q2. Consider the following statements regarding Enemy Agent Ordinance.

1. This ordinance was first issued in 1917.
2. Under this ordinance, enemy agents could be punished with the death penalty or life imprisonment.
3. According to this ordinance, they can be punished with rigorous imprisonment up to 10 years, and fine can also be imposed against them.
4. There is no provision for appeal against the decision of the special court under the Enemy Agents Ordinance.

Which of the above statement/statements is/are correct?

- (a) Only 1, 2 and 3.
- (b) Only 2, 3 and 4.
- (c) None of these.
- (d) All of the above.

Answer – D

MAINS QUESTIONS

Q1. What do you understand by Protem Speaker? Discuss in detail about the functions and powers of Protem Speaker in India. (UPSC CSE – 2020. Word Limit – 250 Marks – 15)

Q2. Discuss the role of new Criminal Laws in contemporary society.

Q3. Outlining the main provisions of the Enemy Agents Ordinance, 2005, discuss how it acts as an effective measure in ensuring internal security of the country and curbing terrorism or does it violate human rights? Give a logical explanation. (UPSC CSE – 2021 Word Limit – 250 Marks – 15)

SCIENCE AND TECHNOLOGY

“PUSHPAK ISRO’S REUSABLE LAUNCH VEHICLE CLEARED TESTED.”

THIS ARTICLE COVERS “DAILY CURRENT AFFAIRS” AND THE TOPIC DETAILS OF “PUSHPAK ISRO’S REUSABLE LAUNCH VEHICLE CLEARED TESTED.” THIS TOPIC IS RELEVANT TO THE “SCIENCE AND TECHNOLOGY” SECTION OF THE UPSC—CSE EXAM.

WHY IN THE NEWS?

The Indian Space Research Organisation achieved a milestone with the third experiment of its reusable launch vehicle landing at the Aeronautical Test Range in Chitradurga, Karnataka.

MORE ABOUT THE NEWS:

- After the successful missions of RLV LEX-01 and LEX-02, RLV LEX-03 reaffirmed the reusable launch vehicle’s autonomous landing capability under increasingly difficult release and severe wind conditions.
- **Pushpak**, the space agency’s winged vehicle, was deployed from an Indian Air Force **Chinook helicopter** at an altitude of 4.5 km.
- During this ground-rolling phase, Pushpak employs its rudder and nose-wheel steering system to autonomously ensure stable and precise movement along the runway.
- According to ISRO, this mission validated an advanced guidance algorithm crucial for future Orbital Re-entry Missions, focusing on longitudinal and lateral plane error corrections.
- The LEX-03 mission used sensors such as an inertial sensor, radar altimeter, flush air data system, and Nav-IC. Importantly, it successfully reused the winged body and flight systems from the LEX-02 mission, showcasing ISRO’s robust capability in designing reusable flight systems.

NEED FOR REUSABLE LAUNCH VEHICLE:

- **Cost Reduction:** Reusing launch vehicle components, such as rocket stages, engines, and other parts, can significantly reduce the overall cost of each launch compared to expendable launch vehicles discarded after a single use. This makes space exploration and utilisation more economically viable.

- **Increased Launch Cadence:** Reusable vehicles can be refurbished and relaunched more quickly, allowing for a higher frequency of launches. This enables more missions, satellite deployments, and other space activities.
- **Sustainability:** Reusable launch vehicles reduce the hardware and resources required for each launch, making space activities more environmentally sustainable than expendable rockets’ high waste.
- **Technological Advancement:** The development of reusable launch vehicles drives innovation in propulsion, avionics, materials, and recovery systems. This technological progress benefits the entire space industry.
- **Accessibility:** Lowering launch costs through reusability can make space more accessible to a wider range of commercial, scientific, and governmental entities, fostering growth in the space economy.

CHALLENGES IN RECOVERING AND REFURBISHING REUSABLE LAUNCH VEHICLE PARTS INCLUDE:

- **Structural Integrity:** The launch vehicle components must withstand the extreme stresses and temperatures experienced during launch, atmospheric re-entry, and landing. Ensuring the structural integrity of these parts is crucial for safe reuse.
- **Thermal Protection:** The vehicle and its components need robust systems to shield them from the heat generated during re-entry. Developing effective and reusable thermal protection is a key challenge.
- **Propulsion Efficiency:** The propulsion systems, such as rocket engines, must maintain high efficiency and performance after repeated use. Refurbishing and reusing these components without degradation in performance is critical.
- **Guidance and Control:** The vehicle’s guidance and control systems must accurately navigate the atmospheric re-entry and landing phases, compensating for uncertainties and disturbances. Reliable and adaptable control algorithms are necessary.
- **Recovery and Refurbishment:** Recovering the vehicle components safely and efficiently and refurbishing them for the next mission requires specialised facilities, equipment, and processes. Minimising the time and cost of this process is a major challenge.

- **Regulatory and Environmental Compliance:** Reusable launch vehicles must comply with various regulatory and environmental requirements, such as safety, security, and liability standards, and mitigate the impact on the atmosphere and space environment.

WAY FORWARD:

- **Thermal Protection Systems:** It is crucial to develop robust and reusable thermal protection systems that can withstand the extreme heat and stresses of launch, atmospheric re-entry, and landing. This includes materials, coatings, and designs that can be refurbished and reused.
- **Propulsion Efficiency:** It is essential to ensure that the rocket engines and propulsion systems maintain high efficiency and performance after repeated use. Refurbishment processes and design improvements are needed to minimise degradation.
- **Guidance and Control:** Enhancing the guidance, navigation, and control systems to enable precise and reliable atmospheric re-entry and landing is a key challenge. Autonomous control algorithms must be able to handle the complexities of reusable vehicle operations.
- **Recovery and Refurbishment:** Streamlining the recovery, inspection, and refurbishment processes is critical to minimise turnaround time and cost. Specialised facilities, equipment, and procedures are required to prepare the reusable components for the next launch efficiently.
- **Structural Integrity:** Designing the airframe, tanks, and other structural components to withstand the repeated stresses of launch, flight, and landing without compromising their integrity is essential for reliable reuse.
- **Regulatory and Safety Compliance:** Ensuring RLVs meet all regulatory requirements for safety, environmental impact, and liability is necessary for widespread adoption and commercial viability.
- **Operational Experience:** Gaining more operational experience through repeated test flights and demonstrations is crucial to refining RLVs' technologies, processes, and operational procedures.
- **Cost-Benefit Analysis:** Conduct thorough cost-benefit analyses to optimise the design and operations of RLVs, ensuring the benefits of reusability outweigh the additional development and maintenance costs.
- **Collaboration and Knowledge Sharing:** Fostering international collaboration and knowledge sharing among space agencies, research institutions, and pri-

vate companies to accelerate the development and adoption of RLV technologies.

PRELIMS QUESTIONS

Q1. Pushpak some time in the news:

- India's new launchpad is in the Tamil Nadu.
- India's new first reusable launch vehicle.
- India's new cryogenic engine.
- New exploration marine device

ANSWER: B

MAINS QUESTIONS

Q1. Discuss the role of the ISRO in curbing the Kessler Syndrome.

ECONOMY

“INDIA’S POTENTIAL TO TAP THE ROOFTOP SOLAR(RTS)”

THIS ARTICLE COVERS “DAILY CURRENT AFFAIRS” AND THE TOPIC DETAILS OF “INDIA’S POTENTIAL TO TAP THE ROOFTOP SOLAR(RTS)” THIS TOPIC IS RELEVANT TO THE “ECONOMY” SECTION OF THE UPSC—CSE EXAM.

WHY IN THE NEWS?

In the fiscal year 2023-2024, India saw a significant rise in its installed rooftop solar (RTS) capacity, increasing by **2.99 GW**, marking the most substantial annual growth. By March 31, the total RTS capacity in India had **reached 11.87 GW**, as reported by the Ministry of New and Renewable Energy. As energy demand continues to escalate, India must intensify efforts to further expand its rooftop solar potential.

RTS PROGRAMME:

- The RTS program in India was initiated through the Jawaharlal Nehru National Solar Mission launched in January 2010.
- Originally, the mission aimed to generate 20 GW of solar energy across three phases: 2010-2013, 2013-2017, and 2017-2022.
- In 2015, the government revised its target to 100 GW by 2022, with a significant component focused on rooftop solar (RTS), aiming for 40 GW.
- Each State and Union Territory was assigned yearly targets as part of this initiative. As of December 2022, India achieved an installed RTS capacity of 7.5 GW and extended the 40 GW RTS target deadline to 2026.
- Despite improvements in financial incentives, technology, awareness, and training, substantial room remains for growth. India’s total potential for rooftop solar stands at approximately 796 GW.
- To meet its broader renewable energy goals of installing 500 GW by 2030, with 280 GW from solar sources, RTS must contribute around 100 GW by the same year.

STATE PERFORMANCE:

- As of March 31, 2024, several states in India have made notable progress in their rooftop solar (RTS) capacities, with Gujarat, Maharashtra, and Rajasthan leading the

way.

- Gujarat has achieved an installed RTS capacity of 3,456 MW, facilitated by its efficient approval processes, a large network of RTS installers, and widespread consumer awareness.
- Maharashtra follows closely with an RTS capacity of 2,072 MW, benefiting from robust solar policies and a supportive regulatory framework.
- Rajasthan, leveraging its expansive land area and abundant solar irradiance, boasts the country’s highest RTS potential at 1,154 MW. The state’s efforts in simplifying approvals, offering financial incentives, and fostering public-private partnerships have been pivotal in driving this growth.
- Other states, such as Kerala, Tamil Nadu, and Karnataka, have also performed commendably, with installed capacities of 675 MW, 599 MW, and 594 MW. However, states like Uttar Pradesh, Bihar, and Jharkhand have yet **to tap into their RTS potential fully** and are facing challenges such as bureaucratic obstacles, inadequate infrastructure, and low public awareness.
- The **Pradhan Mantri Surya Ghar Muft Bijli Yojana** is a flagship initiative aimed at equipping one crore households with RTS systems and providing up to 300 units of free electricity per month.
- This scheme, which targets an average system size of 2 kW per household, aims to add 20 GW to India’s RTS capacity.
- With a financial outlay of ₹75,021 crore, the scheme includes substantial financial assistance for consumers, incentives for distribution companies, support for local bodies and solar model villages, payment security mechanisms, capacity building, and extensive awareness and outreach efforts.
- It also encourages the adoption of advanced solar technologies, energy storage solutions, and smart grid infrastructure to bolster the nation’s renewable energy landscape.

ABOUT THE PRADHAN MANTRI SURYA GHAR MUFT BIJLI YOJANA:

Launched by the Government of India in 2024 to provide free electricity to households through rooftop solar installations.

KEY DETAILS OF THE SCHEME:

- This scheme aims to install rooftop solar systems in 1 crore households across India and provide up to 300 units of free electricity per month to these households.
- The government is providing a subsidy of up to 60% of the cost for solar systems up to 2 kW capacity and 40% for systems between 2-3 kW. The subsidy is capped at 3 kW capacity.
- At current benchmark prices, the subsidy amounts to ₹30,000 for a 1 kW system, ₹60,000 for a 2 kW system, and ₹78,000 for a 3 kW or higher system.
- Households can apply for the scheme through the national rooftop solar portal and choose a vendor from the list provided. They can also access low-interest loans to cover the remaining costs after the subsidy.
- The total outlay for the scheme is ₹75,021 crore. It is expected to add 30 GW of rooftop solar capacity and reduce 720 million tonnes of CO2 emissions.
- The scheme is also expected to create around 17 lakh jobs in various sectors like manufacturing, supply chain, installation, and operations.

TO ENSURE ROBUST GROWTH OF ROOFTOP SOLAR (RTS) INSTALLATIONS, SEVERAL KEY STRATEGIES CAN BE IMPLEMENTED:

- **Increasing Awareness:** Educating consumers about the benefits of RTS is crucial. Awareness campaigns can highlight cost savings, environmental benefits, and the long-term sustainability of solar energy.
- **Enhancing Economic Viability:** Making RTS financially feasible for households is essential. Government subsidies are helpful, but there is a need for diverse low-cost financing options. Increasing the availability of RTS loans from both banks and non-bank financial companies can simplify the process, making it as accessible as obtaining loans for vehicles.
- **Promoting Research and Development:** Investing in R&D for solar technology, energy storage solutions, and smart-grid infrastructure can reduce costs, enhance performance, and improve the reliability of RTS systems. This innovation is vital for making solar energy more competitive and attractive to consumers.
- **Building a Skilled Workforce:** Initiatives like vocational training programs such as the 'Suryamitra' solar PV technician program should be expanded. These programs help in creating a skilled workforce capable of installing, maintaining, and servicing RTS systems efficiently.

- **Regulatory and Standards Enhancement:** Continuously reviewing and updating regulations related to net-metering, grid-integration standards, and building codes is essential. This ensures that the infrastructure supports RTS growth effectively and addresses emerging challenges.

"OUTSTANDING PERFORMANCE OF INDIA EVALUATED BY THE FATF"

THIS ARTICLE COVERS "DAILY CURRENT AFFAIRS" AND THE TOPIC DETAILS OF "OUTSTANDING PERFORMANCE OF INDIA EVALUATED BY THE FATF" THIS TOPIC IS RELEVANT TO THE "ECONOMY" SECTION OF THE UPSC—CSE EXAM.

WHY IN THE NEWS:

India has attained a remarkable achievement in the mutual evaluation conducted in 2023-24 by the Financial Action Task Force (FATF), according to government sources. This milestone underscores significant progress in the country's efforts to combat money laundering (ML) and terrorist financing (TF).

ABOUT THE FATF:

- The Financial Action Task Force (FATF) is an international organization established in 1989 following a meeting of G-7 nations in Paris. Its goal is to combat global money laundering and terrorist financing activities.
- Initially focused solely on money laundering, the FATF expanded its mission after the 9/11 attacks in 2001 to include efforts against terrorist financing. In April 2012, it further broadened its scope to address the financing of Weapons of Mass Destruction (WMD).
- The FATF issues recommendations to its 39 member countries, including major financial centres worldwide. These recommendations, first outlined in April 1990 as the Forty Recommendations, provide a framework for combating money laundering and terrorist financing.
- They were later supplemented with additional standards, including the 40+9 Recommendations in 2004, and expanded in 2012 to cover new threats such as WMD proliferation.
- The FATF operates through its Plenary, which convenes three times annually to make decisions and review member countries' adherence to its standards.
- Over 200 jurisdictions globally have committed to implementing FATF Recommendations, facilitated by a

network of nine FATF-Style Regional Bodies (FSRBs).

- India, initially an observer in 2006, became a full FATF member in 2010. It also participates in regional bodies like the Asia Pacific Group (APG) and the Eurasian Group (EAG).
- Indonesia is an observer of the FATF, alongside important international organizations such as the Asian Development Bank (ADB), International Monetary Fund (IMF), Interpol, and the World Bank. These observers contribute to FATF discussions and initiatives related to global financial integrity and security.

FATF PRESIDENT:

- The FATF President is a senior official chosen by the FATF Plenary from its members. They preside over and lead FATF Plenary and Steering Group meetings, overseeing the FATF Secretariat's operations.
- The President serves as the primary spokesperson for the FATF, representing the organisation externally. Each term begins on 1 July and concludes on 30 June, two years later.
- **T. Raja Kumar** of Singapore has been serving as the FATF President since July 2022.

FATF SECRETARIAT:

- Situated at the OECD headquarters in Paris, the FATF Secretariat supports the substantive work of FATF members and its global network.
- Funding for the Secretariat and related services is derived from the FATF's annual budget, which is financed through contributions from its members.

GREY AND BLACK LISTS OF THE FATF:

- The FATF Plenary convenes three times a year (in February, June, and October) to review the Mutual Evaluation Reports (MERs) of member countries.
- Countries found to have significant deficiencies in their Anti-Money Laundering/Combating the Financing of Terrorism (AML/CFT) measures are placed on the "grey list" for enhanced monitoring.
- Failure to address FATF concerns can result in placement on the "blacklist" of high-risk jurisdictions.
- The Grey List warns countries considered havens for terrorist financing and money laundering activities, while the Black List includes Non-Cooperative Countries or Territories (NCCTs) supporting such activities. Due to recent developments, Iran, North Korea, and Myanmar are currently on the Black List.

- Countries on these lists face economic sanctions from financial institutions affiliated with the FATF, difficulties in obtaining loans, reduced international trade, and potential international boycotts.
- Pakistan was removed from the grey list after demonstrating significant progress in addressing FATF recommendations following several years of heightened monitoring.

CHALLENGES AND SOLUTIONS FOR FATF:

- Implementing FATF standards poses challenges such as domestic coordination issues, capacity limitations, and resource inadequacies.
- There are also difficulties in understanding and mitigating Money Laundering/Terror Financing (ML/TF) risks, exacerbated by outdated risk assessment tools and weak national regulatory frameworks.
- Adopting a risk-based approach, supported by enhanced data sharing among stakeholders and leveraging modern technologies like machine learning for real-time, accurate data analysis, is crucial to strengthening the FATF's effectiveness. These steps are vital in addressing the evolving landscape of ML/TF threats and enhancing global financial security.

WAY FORWARD:

- **Strengthening the FATF Global Network:** The FATF has expanded its global network by establishing nine FATF-Style Regional Bodies (FSRBs) to promote the implementation of its standards worldwide.
- **Providing Guidance and Technical Assistance:** The FATF publishes guidance, best practices, and other resources to help countries implement its standards effectively.
- **Enhancing Monitoring and Evaluation:** The FATF conducts regular mutual evaluations of member countries to assess their compliance with the FATF standards and identify areas for improvement. It also monitors the progress of countries on the "grey list" and "black list".
- **Promoting International Cooperation:** The FATF encourages international cooperation and information sharing among member countries, financial intelligence units, and law enforcement agencies to combat money laundering and terrorist financing more effectively.
- **Addressing Emerging Threats:** The FATF continuously updates its standards to address new and evolving threats, i.e. the financing of the proliferation of weapons of mass destruction and the misuse of virtual assets.

MAINS QUESTIONS

Q1. Discuss the Pradhan Mantri Surya Ghar Muft Bijli Yojana, which aims to ensure affordable and accessible renewable energy in every household as well as in remote areas.

Q2. Discuss the role of FATF in the fight against money laundering.

ENVIRONMENT AND ECOLOGY

“PESA HAS BOOSTED FOREST CONSERVATION IN INDIA.”

THIS ARTICLE COVERS “DAILY CURRENT AFFAIRS” AND THE TOPIC DETAILS OF “PESA HAS BOOSTED FOREST CONSERVATION IN INDIA.” THIS TOPIC IS RELEVANT TO THE “ENVIRONMENT AND ECOLOGY.” SECTION OF THE UPSC—CSE EXAM.

WHY IN THE NEWS?

The **Panchayat (Extension to Scheduled Areas) Act 1996** granted political empowerment to Scheduled Tribes, prompting them to assert their rights. Their dependence on forests for livelihoods strongly opposed commercial timber harvesting and mining activities. The conservation strategy in India has faced persistent challenges involving conflicts between conservation efforts and local communities’ resource extraction practices, as well as conflicts between conservation goals and economic development initiatives. Government responses have often been fragmented, oscillating between prioritising one aspect over another based on the dynamic interplay among different factions within the national, state, and local political spheres.

MORE ABOUT THE NEWS:

- The concentration of political power determines the influence of national or state elites, typically favouring the interests of large corporations over those of local communities.
- This tendency often results in deforestation driven by activities such as mining, power projects, commercial logging, and large dams, which can overshadow conservation efforts and the livelihoods of forest-dependent communities.
- In India, conservation initiatives frequently adopt a **top-down approach**, leading to local communities

losing access to vital traditional forest lands crucial for their sustenance.

- **Is there a policy approach capable of reconciling these contradictions?** According to **Saad Gulzar, Apoorva Lal, and Benjamin Pasquale**, the answer lies in providing marginalised communities with mandated political representation. This approach not only enhances forest conservation but also safeguards their economic interests.
- **What form should this political representation take?**
- A blend of decentralisation and democratisation, where marginalised local communities living in or near forests are granted substantive, rather than symbolic, political representation. This empowerment allows them to participate actively in decision-making processes and effectively manage natural resources.

THE METHODOLOGY ADOPTED TO COME TO THIS CONCLUSION :

- Based on empirical data to facilitate the specific type of political representation they advocate: **the Panchayat (Extension to Scheduled Areas) Act (PESA) 1996**, PESA extends local governance structures to Scheduled Areas defined under the Fifth Schedule of the Constitution. These areas predominantly consist of tribal populations, where customary rights of Scheduled Tribes (ST) are recognised.
- In contrast, the **73rd Amendment of 1992** formalised local self-government through Panchayati Raj Institutions (PRI) in non-scheduled Areas but did not mandate ST representation. PESA further introduces **electoral quotas** mandating that all chairperson positions and at least half of the seats on each local government council be reserved for ST individuals.
- However, in states like Gujarat, where PESA implementation has been inadequate, a common issue is the ab-

sence of mandated ST representation in gram sabha committees.

- This diverse governance landscape provides valuable comparative datasets on local self-governance and forest cover across different geographic regions and over time.
- The authors leverage this variation to analyse villages: those with local self-government in Scheduled Areas (with mandated ST representation), those without such mandated representation, villages that adopted PESA earlier, and those that did so later. Their study employs a “**difference-in-differences**” framework using **remote-sensing microdata from satellites like LANDSAT, Sentinel, and DMSP, specifically the MEaSURES Vegetation Continuous Fields (VCF) and Global Forest Cover (GFC) datasets spanning 2001-2017.**
- Unlike previous studies relying on fieldwork in limited communities to monitor local changes in forest outcomes, this research utilises remote sensing to assess deforestation and afforestation rates over time, focusing on the causal effect of ST-mandated representation on forest conservation outcomes.

INCREASE IN STS REPRESENTATION BOOSTING TREE CANOPY:

- Analysing changes in tree and vegetation cover across various forested areas surrounding different village types, the researchers observed that “increasing formal representation for Scheduled Tribes (ST) led to an annual average increase in tree canopy by 3% and a reduction in the rate of deforestation.”
- These effects were more pronounced in areas with higher initial forest cover. Importantly, the study found that these improvements began specifically “after the implementation of PESA elections that mandate quotas for ST.”
- The presence of Panchayati Raj Institutions (PRIs) or local self-government alone, introduced in 1993 but without mandated ST representation, did not yield similar conservation benefits.
- This demonstrates a **causal relationship** rather than a mere correlation. Empowered as political actors, STs had economic incentives to preserve trees crucial for their livelihoods, which heavily rely on non-timber forest products and sustenance needs. Thus, they opposed commercial timber and mining activities—key drivers of deforestation.
- “**Forest stewardship**” facilitated under PESA, where STs effectively pursue their economic interests, thereby enhancing forest conservation.

- Furthermore, qualitative and quantitative evidence supports another critical mechanism for improving forest health: opposition to mining activities. Increased ST representation empowered communities to resist large-scale mining operations, significantly reducing deforestation rates in PESA villages located near mines. However, the introduction of PESA elections also correlated with an uptick in conflicts related to mining interests.

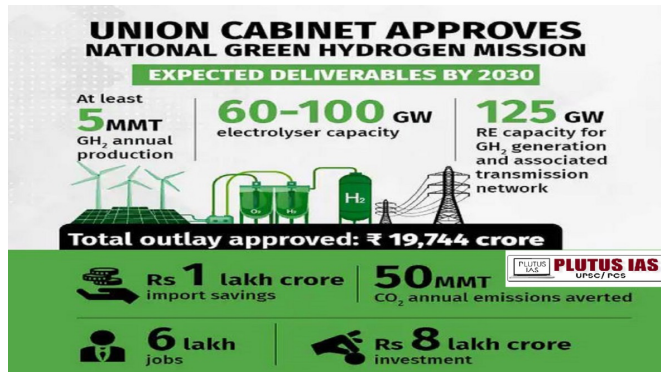
BY FOLLOWING STEPS TO IMPLEMENT PESA TO BOOST FOREST COVER EFFECTIVELY:

- **Recognising community forest rights:** Expediting the process of recognising individual and community forest rights under the Forest Rights Act can empower tribal communities to manage and conserve forests.
- **Capacity building of Gram Sabhas:** Providing training and resources to Gram Sabhas on forest management inventory and using tools like GPS can enable them to monitor and protect forest resources effectively.
- **Reducing conflicts over mining and development projects:** Strengthening the provision that empowers Gram Sabhas to oppose mining and other commercial projects that lead to deforestation can help communities protect forests.
- **Promoting sustainable livelihoods:** Schemes like MGNREGA that provide employment to tribal communities and develop local infrastructure can reduce their dependence on forests and promote conservation.
- **Overcoming administrative hurdles and resistance to change:** Addressing bureaucratic apathy and lack of political will in the forest bureaucracy is essential for effectively implementing PESA and FRA.
- **Amending state laws:** States must amend laws related to land acquisition, excise, forest produce, mines and minerals, agricultural produce market and money lending to align with PESA provisions.

NATIONAL GREEN HYDROGEN MISSION

(This article is related to the section ‘ Biodiversity, Environment and Ecology, Environmental Protection, National Green Hydrogen Mission and its related challenges’ under UPSC Civil Services Mains General Studies Paper – 3 and ‘ Fossil Fuels, Climate Change, Environmental Pollution, Renewable Energy’ section under UPSC Preliminary Exam. It also includes suggestions from the PLUTUS IAS Team. This article is related to ‘ National Green Hydrogen Mission ‘ under ‘ Daily Current Affairs ‘.)

WHY IN THE NEWS ?



- Recently, the Ministry of New and Renewable Energy (MNRE) has increased the annual allocation of green ammonia from 550,000 tonnes to 750,000 tonnes to meet the growing demand of the fertilizer sector in India.
- This initiative of the Ministry of New and Renewable Energy has increased the support for green hydrogen in India.

INTRODUCTION TO NATIONAL GREEN HYDROGEN MISSION (NGHM) :

- National Green Hydrogen Mission (NGHM) is an important initiative to encourage commercial production of green hydrogen in India and make India a net exporter of the fuel and lays down a roadmap for green hydrogen in India.
- The main objective of this mission is to increase the demand for green hydrogen in India as well as promote its production, use and export.

Following are some important initiatives under National Green Hydrogen Mission in India –

- Green Hydrogen Transition Program (SIGHT):** It aims to provide strategic interventions for the production of green hydrogen.
- Manufacturing of Electrolyzer:** Under this, the development of electrolyzers will be encouraged, which use electricity to split water into hydrogen and oxygen.
- To encourage production of green ammonia:** Under National Green Hydrogen Mission Green will also encourage the production of ammonia, which is used in the production of steel and cement.
- Launching a dedicated portal:** Under National Green Hydrogen Mission A dedicated portal has been launched that provides information about the mission and steps towards green hydrogen ecosystem in India.

- Schemes in other areas:** India has also launched other related initiatives to promote the use of green hydrogen in the steel, transportation and shipping sectors.

OTHER INITIATIVES RELATED TO RENEWABLE ENERGY LAUNCHED IN INDIA :

- National Wind-Solar Hybrid Policy.**
- Jawaharlal Nehru National Solar Mission (JNNSM).**
- PM-Kusum.**
- International Solar Alliance.**
- Rooftop solar scheme.**

INTRODUCTION AND IMPORTANCE OF GREEN AMMONIA:



- Ammonia is a colorless gas with a pungent odor.
- It is lighter than air and its vapor density is 8.5.
- Because it is highly soluble in water, it is called ammonia.
- Ammonia is primarily used in the manufacture of nitrogen-containing fertilizers such as urea and ammonium nitrate.
- In addition, ammonia can also be used for engine operation and other uses.
- Green ammonia production uses 100% renewable energy, making it carbon-free.
- The method of its production uses electrolysis of water, in which hydrogen and air are separated.
- Next, in the Haber process these two elements are reacted together at high temperature and pressure to produce ammonia (NH₃).

USE OF GREEN AMMONIA IN INDIA :

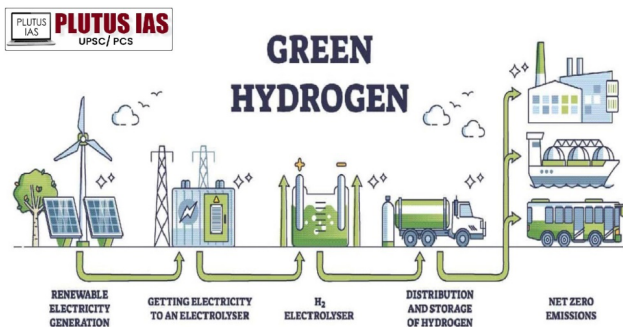
Following are some examples of use of green ammonia in India –

- **In storing energy storage** : Ammonia can be easily stored in liquid form in large quantities at moderate pressure (10–15 bar) or by refrigerating it at -33 °C. This makes it an ideal chemical repository for renewable energy.
- **As a zero carbon fuel** : Ammonia can be burned in engines or used as a fuel to generate electricity. When it is used, the only by-products of ammonia are water and nitrogen.
- **To replace the use of fuel oil in the marine industry** : There is a possibility of replacing the use of fuel oil in marine engines through the marine industry. Along with this, the importance of green ammonia is also increasing.

IMPORTANCE OF GREEN AMMONIA :

- In the future, green ammonia has the potential to become a fuel for climate-neutral transportation and will be used in the production of carbon-neutral fertilizers.
- This fertilizer will help in making the food supply chain carbon-free.
- The use of green ammonia will be essential to meet the urgent needs of CO₂-free electricity and sufficient food production for the world's growing population.

MAIN CHALLENGES RELATED TO NATIONAL GREEN HYDROGEN MISSION:



- Producing hydrogen from renewable sources is relatively expensive compared to producing hydrogen from fossil fuels. Due to the high cost of production from renewable sources, it accounts for less than 1% of global hydrogen production.
- There are doubts about achieving the goal of being a high technology manufacturing hub, as India has not managed to become a net exporter of solar cells, semiconductors or wind energy components despite various supportive policies.
- The basic manufacturing base in India continues to be

weak. It also lacks the capacity to appropriately absorb and utilize global capital.

SOLUTION / WAY FORWARD :



The path to solution under the National Green Hydrogen Mission in India is as follows –

HIGH COST OF PRODUCTION AND USE :

- Currently, the production cost of green hydrogen is higher than conventional hydrogen, which is produced from fossil fuels or other low-carbon sources (such as nuclear or blue hydrogen). To solve this problem, it is necessary to develop efficient technologies, which can reduce the production cost of green hydrogen.
- One possible solution could be to use more efficient electrolysis systems, which require less energy to produce the same amount of hydrogen. This may be possible with the use of advanced materials or more efficient catalysts.
- Another solution could be to integrate green hydrogen production with other renewable energy technologies, such as wind or solar farms. This can reduce the cost of electricity used in the electrolysis process, making green hydrogen more competitive than conventional hydrogen.

IMPLEMENTING INCENTIVES AT THE REGULATORY LEVEL :

- Governments can encourage the production and use of green hydrogen by implementing regulatory incentives such as tax credits and subsidies.
- This will accelerate the adoption of this green hydrogen technology in India and will play an important role in its development.

LACK OF ADEQUATE INFRASTRUCTURE AND SUPPLY CHAIN :

- The production, storage, transportation and distribution of green hydrogen requires dedicated infrastructure and supply chains.

- The existing infrastructure and supply chain for conventional hydrogen is not sufficient or compatible to meet the needs of green hydrogen.
- Therefore, efficient and cost-effective supply chains for green hydrogen should be developed in India.

TO ESTABLISH COORDINATION BETWEEN VARIOUS STAKEHOLDERS AND CONCERNED SECTORS :

- The development of green hydrogen in India involves multiple stakeholders and sectors such as renewable energy producers, electrolyzer manufacturers, hydrogen producers, transporters, distributors and end users.
- There is a need for coordination among all these to ensure alignment of policies, standards, regulations, incentives and markets for this technology.

AWARENESS DISSEMINATION AND CAPACITY BUILDING AMONG POTENTIAL USERS AND PRODUCERS, NEED TO DEVELOP NECESSARY SKILLS AND COMPETENCIES :

- Green hydrogen is still a developing technology, which requires awareness generation and capacity building among potential users and producers.
- The development of green hydrogen in India needs to demonstrate the benefits, safety and feasibility of green hydrogen in various applications and in different sectors.
- Furthermore, there is also a need to develop the skills and competencies required for the production and utilization of green hydrogen.

“MAHARASHTRA’S WATER CRISIS.”

THIS ARTICLE COVERS “DAILY CURRENT AFFAIRS” AND THE TOPIC DETAILS OF “MAHARASHTRA’S WATER CRISIS.” THIS TOPIC IS RELEVANT TO THE “ENVIRONMENT AND ECOLOGY.” SECTION OF THE UPSC—CSE EXAM.

ABOUT NEWS:

Following last year’s insufficient monsoon season, the Maharashtra government declared numerous areas in the state affected by drought. This scenario starkly contrasts with the State’s coastal regions, where frequent heavy rainfall has resulted in significant flooding. Marathwada’s challenges are influenced by its geographic location, topography, soil composition, agricultural methods, and crop selections.

RAIN-SHADOW EFFECT:

- Marathwada is situated in the rain-shadow area of the

Western Ghats. Upon encountering these mountains, moist winds from the Arabian Sea ascend and cool, resulting in substantial rainfall (2,000-4,000 mm) on the western slopes.

- However, when these winds cross the Ghats and descend into Western Maharashtra and Marathwada, they lose most of their moisture, leading to significantly lower rainfall (600-800 mm) in Marathwada.
- Climate change exacerbates the situation in central Maharashtra, where drought severity and frequency have increased. Consequently, Marathwada and North Karnataka have emerged as the second driest regions in India after Rajasthan.

EFFECTS OF RAIN-SHADOW AREAS ON CROPS:

- Due to its low rainfall, Marathwada’s crops are profoundly affected. Agricultural practices in the region are ill-suited to the climate, exacerbated by sugarcane cultivation, a major contributor to the water crisis.
- Sugarcane requires 1,50-2,50 cm of water during its growing season and demands nearly daily irrigation, unlike pulses and millets, which need only four or five irrigations per crop cycle.
- Since the 1950s, the area under sugarcane has steadily increased until plateauing in recent years. Now, sugarcane occupies 4% of the total cropped area but consumes a staggering 61% of irrigation water.
- This shift has significantly reduced the average river outflow in the upper Bhima basin. Government policies supporting sugarcane pricing and sales have further expanded its cultivation, diverting irrigation from more nutritious crops.
- Despite the **Maharashtra Water and Irrigation Commission’s (1999)** recommendation to restrict sugarcane cultivation in areas receiving less than 1,000 mm of rainfall annually, production has continued to grow.
- The government has been promoting sugarcane-juice-based ethanol production since December 2023, despite concerns over its sustainability in water-stressed regions where 82% of Maharashtra’s sugar is produced from low-rainfall areas.

ROLE OF TOPOGRAPHY AND SOIL:

- The characteristics of soil and topography play crucial roles in Marathwada’s agricultural landscape. The region is predominantly endowed with clayey black soil, known locally as “**regur**,” which is fertile and adept at retaining moisture.
- However, it has a low infiltration rate, leading to sur-

face water runoff rather than groundwater recharge during rainfall.

- To mitigate this runoff, Maharashtra has invested in constructing numerous dams, making it the state with the most large dams in India (1,845).
- The soil's low hydraulic conductivity means it holds water for extended periods after rain, which can result in crop losses, as **WELL Labs' research** in the area has observed.
- Despite the soil's moisture-retentive properties, water scarcity in Marathwada varies significantly. The region is crisscrossed by parallel tributaries of the Godavari and Krishna rivers flowing southeast, each flowing through valleys separated by gently sloping hills.
- These valleys typically have perennial groundwater, while upland areas rely on seasonal groundwater. Groundwater slowly migrates underground from uplands to valleys, causing wells in upland areas to dry up a few months after the monsoon season, exacerbating water scarcity in these regions.
- Therefore, these upland areas face severe water shortages and deserve targeted assistance to overcome their natural disadvantages.

RESILIENCE OF MARATHWADA:

- Achieving water resilience in Marathwada hinges on strategic approaches that maximise available resources and promote sustainable practices.
- **Supply-side solutions** involve traditional watershed management techniques such as constructing water-conserving structures like contour trenches, earthen bunds, and gully plugs. These structures help retain rainwater, but they often accumulate silt, reducing their effectiveness over time.
- Leveraging funds from programs like the **Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)** could facilitate the design and implementation of silt-trapping mechanisms. Concurrently, training programs for farmers on regular desilting can increase the longevity and efficiency of these structures.
- To manage water demand effectively in a region with limited rainfall, practices include adopting water-efficient irrigation methods, cultivating drought-resistant crops, and diversifying livelihoods.
- Marathwada should transition to high-value, low-water-consuming crops better suited to local conditions. Additionally, shifting sugarcane production to states like Uttar Pradesh, Bihar, and West Bengal, where wa-

ter resources are more abundant, is crucial for sustainable water management.

- Fostering water resilience in Marathwada necessitates a holistic approach that balances conservation efforts with sustainable agricultural practices and economic diversification.
- By optimising water use, enhancing watershed management, and promoting crop diversification, Marathwada can mitigate water scarcity challenges and build resilience for the future.

PRELIMS QUESTIONS

Q.1. Consider the following statements regarding the National Green Hydrogen Mission.

1. This fertilizer helps in making the food supply chain carbon-free.
2. It can be used to produce carbon-neutral fertilizers.
3. Ammonia is primarily used in the manufacture of nitrogen-containing fertilizers such as urea and ammonium nitrate.
4. The production of green hydrogen uses 100% renewable energy, making it carbon-free.

Which of the above statement/statements is correct?

- (a) Only 1, 2 and 3.
- (b) Only 2, 3 and 4.
- (c) None of these.
- (d) All of the above.

Answer – D

MAINS QUESTIONS

Q.1. Underlining the main objectives and importance of the National Green Hydrogen Mission, discuss what are the main challenges related to green hydrogen in India and how effective is it as a clean fuel? Discuss rationally. (UPSC CSE – 2021 Word Limit – 250 Marks – 15)

Q2. CROPPING PATTERN IN INDIA IS MAINLY DRIVEN BY PRICES PREVAILING IN THE MARKET IRRESPECTIVE OF THE CLIMATIC CONDITIONS. CRITICALLY ANALYSE THE ROLE OF THE MSP AND GOVERNMENT SUBSIDIES IN EMPOWERING FARMERS TO PRACTICE SUSTAINABLE AGRICULTURE PRACTICES.

HISTORY & CULTURE

BHAKTI MOVEMENT IN INDIA AND BIRTH ANNIVERSARY OF SANT KABIR DAS

(This article is related to the section ' Medieval Indian History, Art & Culture and Heritage, Contribution of Kabir Das in Bhakti Movement, Important Personalities of Bhakti Movement in India' under UPSC Civil Services Mains Exam General Studies Paper- 1 and ' Bhakti Movement in India, Sant Kabir Das, Kabir Bijak (Poems and Verses), Kabir Granthavali, Kabir Ke Dohe' under UPSC Preliminary Exam. It also includes suggestions from the PLUTUS IAS Team. This article is related to ' Bhakti Movement in India and Birth Anniversary of Sant Kabir Das' under ' Daily Current Affairs '.)

WHY IN THE NEWS ?



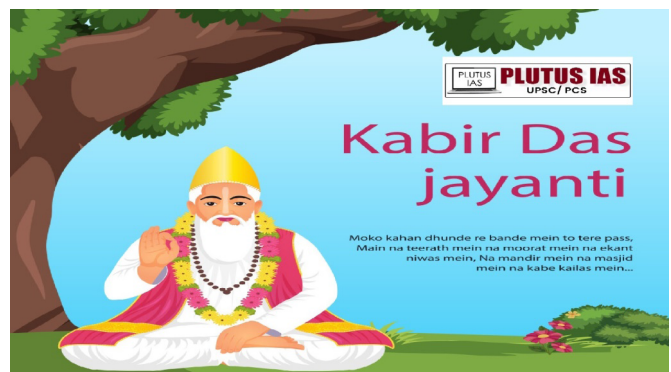
- Recently, the Prime Minister of India celebrated the 647th birth anniversary of Kabir Das, a medieval saint and poet prominent in the Bhakti movement, on June 22, 2024.
- In India, Kabir Das Jayanti is celebrated on Jyeshtha Purnima date according to the Hindu Lunar Calendar.

KABIR DAS :

- Kabir Das was a mystical poet and saint of 15th century medieval India.
- His early life was spent in a Muslim family, but he was greatly influenced by his teacher, Ramananda, a prominent pioneer of the Bhakti movement, who belonged to the Hindu religion.
- He was born in Varanasi district of Uttar Pradesh, and was brought up by a Hindu weaver couple.
- Kabir Das was an important figure of the Nirguna

branch of the Bhakti movement, which emphasized devotion and love for God.

- His works are famous as the greatest poems of the Gyanmargi sub-branch of the Nirgun branch of the Bhakti period of Hindi literature.☒
- Kabir received spiritual guidance from his gurus, such as Ramanand and Sheikh Taqi, and gave a unique shape to his philosophy.
- Kabir's couplets which he wrote in the form of his own verses reflect his fame.
- His works were written in Hindi language and he used his couplets to make people aware.☒
- His works have significantly enriched Indian literature and the development of Hindi language.
- The works written by him in Brajbhasha and Awadhi dialects are famous even today.
- Kabir Das's writings had a great influence on the Bhakti movement and include texts like Kabir Granthawali, Anurag Sagar, Bijak and Sakhi Granth.
- His verses are found in the Guru Granth Sahib, the scripture of Sikhism.
- His major creative works were compiled by the fifth Sikh Guru, Guru Arjan Dev.
- He gained most fame for his two-line couplets, known as ' **Kabir's couplets** '.
- **Language** : Kabir's works were written in Hindi language, which were easy to understand. To make people aware, he used to write his articles in the form of couplets.



BHAKTI MOVEMENT IN INDIA :

- The Bhakti movement was a very important literary phenomenon or movement in the cultural history of the medieval period in the entire cultural history of India, which originated mainly in India between the 6th and 17th centuries and spread very rapidly in the then Indian society.
- The main objective of this movement was to propagate fervent devotion to a personal god or deity, emphasizing direct spiritual experience, love and devotion as a means to salvation and divine attainment.
- The Bhakti movement in India eliminated many social inequalities such as caste, creed and religion, leading to profound changes in religious practices, social relations, cultural expressions and philosophical ideas across India.
- This movement originated in the southern states of India, probably in the Tamil region, where Alvars (devotees of Vishnu) and Nayanars (devotees of Shiva) and Vaishnava and Shaiva poets propagated devotion through poetry.
- The Alvars and Nayanars traveled from one place to another singing hymns in the Tamil language in praise of their gods.
- The feeling of glory and love of God was expressed in his works.
- Established by the Bhakti movement as a way and way to attain God through Bhakti Yoga.
- This movement gave a new direction to logical religious ideas in place of the religious ostentation, evil practices etc. prevalent in the medieval society of India and spread and enriched social unity in place of communal fanaticism, mutual animosity and caste discrimination.
- On the one hand, Saguna Bhakti traditions in India during the Bhakti movement focused on the worship of specific deities such as Shiva, Vishnu and their incarnations or various forms of the Goddess, often conceptualized in anthropomorphic forms. On the other hand, Nirguna Bhakti was based on the worship of an abstract form of God.

SOCIAL SYSTEM OF INDIA AT THE TIME OF BHAKTI MOVEMENT :

- The Bhakti movement was an important movement among the Hindu, Muslim and Sikh communities in the Indian subcontinent.
- During this period, socio-religious reformers made devotion to God the main basis.

- In this movement in India, poets from high and low castes made literature an important medium, which firmly established popular fiction.
- These saints criticized communal fanaticism and caste discrimination in the society and claimed the relevance of religion in the field of genuine human aspirations.
- All the poets of the Bhakti movement in India considered devotion to God as the true means of attaining freedom from the illusions of the world for all people in India.
- The devotion of the poets of the Bhakti movement was based on selfless and exclusive devotion.
- This movement played a meaningful role against the divisive and destructive elements of the then Indian society and established the path of attaining God through Karma Yoga, Gyan Yoga, and Bhakti Yoga.
- The Bhakti period poets gave importance to devotion to God and tried to eradicate idol worship.

ROLE OF WOMEN IN BHAKTI MOVEMENT :

- The Bhakti movement brought significant changes for women in Indian society.
- This movement provided women with a medium to express their spirituality and devotion, helping them break out of domestic roles.
- Women actively participated in religious meetings, sang devotional songs and participated in spiritual discussions.
- Women saints also had an important contribution in this movement. Through his writings he promoted religious sentiments and reduced caste discrimination.
- This movement helped in bringing positive changes in the spiritual life of women and gave them more equality in the society.

ANDAL :

- Andal was a female Alvar who saw herself as the beloved of Vishnu. His works and the sense of devotion inherent in them are prominent even today.

KARAIKAL AMMAIYAR :

- Karaikal Ammaiyar was a devotee of Shiva. He adopted the path of rigorous penance to achieve his goal.
- His works have been preserved within the Nayanar tradition.

IMPORTANT PERSONALITIES OF BHAKTI MOVEMENT :

KANNADA REGION :

- The Bhakti movement in the Kannada region was started by Basavanna (1105–68) in the 12th century.

MAHARASHTRA :

- The Bhakti movement in Maharashtra began in the late 13th century. Its supporters were called Varkari. Its most prominent names include Gyandev (1275–96), Namdev (1270–50), and Tukaram (1608–50).

ASSAM :

- Srimanta Sankardeva was a Vaishnava saint who was born in 1449 AD in Nagaon district of Assam. He started the Neo-Vaishnav movement.

BENGAL :

- Chaitanya was a famous saint and reformer of Bengal, who popularized the Krishna cult.

NORTH INDIA :

- Many poets were associated with the Bhakti movement in this region from the 13th to the 17th century.
- Kabir, Ravidas, and Guru Nanak explained the importance of the formless God (Nirguna Bhakti).
- Mirabai (1498–1546) of Rajasthan composed devotional verses in praise of Krishna and sang his praises.
- Surdas, Narsingh Mehta, and Tulsidas also made invaluable contributions to Bhakti literature and the Bhakti movement and enhanced its glorious legacy.

Thus the Bhakti movement played an important role in ending caste discrimination, religious ostentation and fanaticism in medieval Indian society.

SRINAGAR TO BE RECOGNIZED AS ' WORLD CRAFT CITY ' IN INDIA

(This article is related to the section ' Indian History, Art & Culture, Indian Heritage, Sculpture, Crafts ' of UPSC Civil Services Mains General Studies Paper-1 and ' Folk Art, Crafts, World Crafts Council, World Crafts City, UNESCO Creative City Network ' of UPSC Preliminary Exam. It also includes suggestions from the PLUTUS IAS Team. This article is related to ' Srinagar gets recognition as World Crafts City in India ' under ' Daily Current Affairs. ')

WHY IN THE NEWS ?

- Srinagar was recently declared as 'World Craft City' by the World Craft Council (WCC). (World Craft City-

WCC)' Has been recognized as.

- This is the fourth Indian city to receive this recognition.
- Three cities of India have already been recognized as World Craft Cities.
- In the year 2021, Srinagar was designated as a creative city as a part of the UNESCO Creative City Network (UCCN).
- Craft products like paper pulp, walnut wood carvings, carpets, Sozni embroidery, pashmina and Kani shawls are made here.

**WHAT IS THE WORLD CRAFT CITY (WORLD CRAFT CITY-WCC) ?**

- The World Craft City program has been launched with the aim of encouraging development in the field of crafts across the world.
- Under this programme, various cities are recognized as 'World Craft Cities' recognizing the contribution of craftsmen, local authorities and communities.☑
- WCC-International was established in 1964.
- Mrs. Kamaladevi Chattopadhyay of India, one of the founding members of WCC-International, attended the first WCC General Assembly.
- He founded the Indian Crafts Council to preserve and enhance the craft heritage of India.☑
- to any city in the world Receiving such recognition encourages the hard work and extraordinary talent of the artisans, which promotes innovation and development in the crafts and handicrafts sector.
- This program helps in opening up new markets for the artisans and new opportunities for the craft products made by them and they get the benefit of advanced training programs and workshops.
- Besides this, it also promotes the tourism sector and it attracts tourists interested in the field of cultural and

craft heritage.

SIGNIFICANCE OF DESIGNATING SRINAGAR CITY AS A CREATIVE CITY IN THE FIELD OF CRAFTS AND FOLK ARTS :

- Srinagar city has been designated as a creative city in the field of crafts and folk arts.
- Srinagar city has become the second city in India in this category after Rajasthan city Jaipur.
- This nomination will not only bring global recognition to Srinagar but will also help in international funding, collaboration with craft universities and product promotion.
- Additionally, Srinagar, the capital of Jammu and Kashmir, has now become a part of the world's 295 'Creative Cities Network'.
- Every year UNESCO invites applications from various cities of the world to include them in its 'UCCN Project'.
- These applications from India are sent through the Ministry of Culture.

UNESCO CREATIVE CITIES NETWORK (UCCN) :

- UNESCO's Creative Cities Network (UCCN) was launched in 2004.
- It is primarily aimed at cities that recognize creativity as a key factor in their urban development.
- This network comes under Sustainable Development Goal-11, which relates to sustainable cities and communities.
- The seven creative sectors under this network include crafts and folk arts, media arts, film, design, gastronomy, literature and music.

Following is the list of Indian cities included in UCCN –



- **Srinagar** : Crafts and Folk Arts (2021)

- **Mumbai** : film (2019)
- **Hyderabad**: Gastronomy (2019)
- **Chennai** : Creative City of Music (2017)
- **Jaipur** : Crafts and Folk Arts (2015)
- **Varanasi** : Creative City of Music (2015)

These cities are important for their special creative traditions, arts, and cultural development.

INTRODUCTION AND WORK OF UNESCO :



- UNESCO is a special type of agency that works under the United Nations.
- It strives to establish peace through international co-operation in the fields of education, science, and culture.
- The headquarters of UNESCO is located in Paris, France.

Following are the major initiatives of UNESCO –

- **Man and Biosphere Programme:** This program works for the protection and management of natural resources.
- **World Heritage Programme:** This program is responsible for the protection of historical, cultural, and natural sites.
- **Global Geopark Network:** This network covers special sites for the conservation and education of natural life.
- **Creative Cities Network:** The network works to safeguard the cultural and creative heritage of urban sites.
- **Atlas of the World's Languages in Danger:** This atlas provides information on endangered languages.

MAJOR REPORTS TO BE RELEASED BY UNESCO :

- Major reports issued by UNESCO are important for enhancing, developing and sharing knowledge in various

fields.

- These reports are an important means of increasing knowledge among all parts of the world. Some reports are issued with the aim of informing the general public, while many reports introduce experts to UNESCO's specialist knowledge of areas.
- These diverse publications and co-edits, translated into more than 70 languages, serve the purpose of driving positive change in the world.
- UNESCO's major world reports are on a variety of topics, such as education, science, culture, communication and information. These reports provide information on globally important topics.
- **UNESCO Science Report** : UNESCO's science reports regularly lay out the blueprint for science, technology, innovation governance (STI).
- UNESCO has released an important report on the status of education of children with disabilities in India, highlighting that implementing inclusive education in India is complex and requires a good understanding of the diverse needs of children and their families in different contexts. need to.
- **Global Education Monitoring Report** : Global Education Monitoring Report is also released to examine the state of development in the field of education across the world. This report provides information on various educational issues and gives suggestions for the development of education.
- **State of the Education Report in India** : It can be an important source to examine the status of education in India in detail.

UNESCO RECOGNIZES KOZHIKODE AS THE CITY OF LITERATURE

(This article is related to the section ' Indian History, Art & Culture, Indian Literature ' of UPSC Civil Services Mains General Studies Paper – 1 and ' Kozhikode city of Kerala, City of Literature, UNESCO Creative City Network, Kundalatha ' of UPSC Preliminary Exam. It also includes suggestions from the PLUTUS IAS Team. This article is related to ' UNESCO recognizes Kozhikode as City of Literature' under ' Daily Current Affairs ' .)

WHY IN THE NEWS ?

- Recently UNESCO included the Kerala city of Kozhikode under the UNESCO Creative Cities Network (UCCN) recognized as 'City of Literature'.



UNESCO :



UNESCO (United Nations Educational, Scientific and Cultural Organization) is a specialized organization of the United Nations aimed at promoting peace and security throughout the world.

- It promotes international cooperation in education, arts, science and culture.
- UNESCO's purpose is to encourage international cooperation in education, arts, science and culture to promote world peace and security.
- It promotes sharing of knowledge and free flow of ideas so that we can get better information about each other's life.
- UNESCO programs help the United Nations achieve the Sustainable Development Goals set out in the 2030 Agenda authorized by the General Assembly in 2015.

UNESCO CREATIVE CITIES NETWORK :

- The UNESCO Creative Cities Network (UCCN) aims to provide support to creative cities around the world as well as promote their cultural and economic development.
- UNESCO Creative Cities Network (UCCN) was established in 2004.
- The network covers seven creative sectors covering

cities. Which are as follows –

- **Crafts and Folk Arts:** It includes local arts, crafts, folklore, and tribal arts.
- **Design :** Design, fashion, graphics, and other creative arts are included.
- **Movie :** This category includes cinema, documentary, and other film styles or genres.
- **Gastronomy :** The culinary arts category includes the culture of food and drink, especially the creation and presentation of special dishes.
- **Materials :** The category of literature under the Creative Cities Network by UNESCO includes languages, literature, folklore and other written literary genres.
- **Media Arts :** under this category Including television, radio, digital media, and other media formats.
- **Music :** Music, singing, instruments, and other music related styles are included under this category.
- The network promotes cultural exchange and cooperation through an annual conference between mayors of different cities and other stakeholders.
- In the year 2024, this conference will be held in Braga, Portugal in the month of July.

THE MAIN OBJECTIVES OF UNESCO CREATIVE CITIES NETWORK (UCCN):

- UNESCO Creative Cities Network (UCCN) includes 350 cities in the year 2024.
- The UNESCO Creative Cities Network (UCCN) is an international recognition that aims to lead cities to prosperity through the development of cultural and creative industries.
- One of the main objectives of UCCN is to be dedicated to promoting creativity in local communities.
- It helps cities to safeguard their local cultural heritage and promote their creative industries.
- In addition, UCCN also seeks to promote international cooperation between cities.
- It provides cities with a medium to broadcast their creative products around the world and gives them the opportunity to become strongly connected on an international level.

- Kozhikode, Kerala has been recognized as “City of Literature” by UCCN. This is an important event, as the city is renowned for its literary and creative heritage and has now gained global recognition.

WHICH CITIES OF INDIA ARE INCLUDED IN UCCN?



The following cities are included under UCCN in India –

- **Kozhikode :** Many prominent personalities of Kerala’s literary and cultural world, major media houses, and numerous libraries (more than 500) are present here. Moreover, over the years many films have been made here and theater professionals have made their mark. The first Malayalam novel “**Kundalatha**” was composed by Appu Nedungadi in Kozhikode in the year 1887. Poets, scholars and publishers here have contributed to Malayalam literature and cultural diversity.
- **Jaipur :** It is involved in the field of crafts and folk art. (2015)
- **Varanasi :** It is included as a Creative City of Music. (2015)
- **Chennai :** It is included as Creative City of Music. (2017)
- **Mumbai :** It is included in the field of film. (2019)
- **Hyderabad:** It is involved in the field of culinary arts. (2019)
- **Srinagar :** It is involved in the field of crafts and folk art. (2021)

PRELIMS QUESTIONS

Q.1. Consider the following statements regarding the Bhakti movement in India and Kabir Das.

1. Kabir Das was a person of the Gyanmargi sub-branch of the Nirguna branch of the Bhakti period of the Bhakti movement.
2. The works of Kabir Das have significantly enriched the

development of Indian literature and Hindi language.

3. The Bhakti movement started from South India and reached North India.
4. Because of the Bhakti movement, women Helped in getting out of domestic roles.

Which of the above statement/statements is/ are correct?

- (a) Only 1, 2 and 3.
- (b) Only 2, 3 and 4.
- (c) None of these.
- (d) All of the above.

Answer – D

Q2. Match the following list.

City	UCNN's creative sector
1. Srinagar	: Crafts and Folk Arts (2021)
2. Mumbai	: film (2019)
3. Chennai	: Creative City of Music (2017)
4. Jaipur	: Crafts and Folk Arts (2015)

Whose creative sector is matched with the above mentioned cities?

- (a) Only 1, 2 and 3.
- (b) Only 2, 3 and 4.
- (c) None of these .
- (d) All of the above.

Answer- D

Q3. Manuscripts of which famous works of India have been included in the Memory of the World Register by UNESCO? (UPSC-2018)

- (a) Ramcharit Manas
- (b) Mahabharata
- (c) Samveda
- (d) Rigveda

Answer-D

MAINS QUESTIONS

Q1. Outline the main reasons for the emergence of the Bhakti movement in India and discuss how the Bhakti movement influenced Indian society. Played an important role in ending communal fanaticism, religious ostentation and caste discrimination in the society? present a rational opinion. (Word limit – 250 marks – 15)

Q2. What do you understand about the World Crafts City Programme? What are the challenges in the field of crafts in India and how can they be resolved? Discuss logically. (Word limit – 250 marks – 15)

Q3. What do you understand about the UNESCO Creative Cities Network? Underlining the main objectives of UNESCO Creative Cities Network, discuss in detail the names of major cities of India included in different categories in this network and their importance. (Word limit – 250 marks – 15)