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Summary

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CHIEF JUSTICE OF INDIA (CJI)

Introduction:

- **President will administer the oath of office to Justice Sharad Arvind Bobde, as 47th Chief Justice of India,** after naming him the next Chief Justice of India.
- With a long stint of eight years as Supreme Court judge, Justice Bobde is expected to demit office on April 23rd, 2021.
- Justice Bobde will succeed present CJI Ranjan Gogoi, who initiated the process of appointment by writing a letter to the Centre recommending his name. Justice Gogoi will be retiring from his post on November 17th, a day before Justice Bobde takes oath.

Appointment of Judges:

- The Chief Justice of India and the Judges of the Supreme Court are appointed by the President under **clause (2) of Article 124 of the Constitution.**
- The chief justice is appointed by the president after consultation with such judges of the Supreme Court and high courts as he deems necessary.
- The other judges are appointed by president after consultation with the chief justice and such other judges of the Supreme Court and the high courts as he deems necessary.
- The consultation with the chief justice is obligatory in the case of appointment of a judge other than Chief justice.

Conditions for Removal:

- Retirement on completion of 65 years, Resignation and Impeachment.
- Grounds for removal: proven misbehavior, incapacity.
- A judge may be removed from office through a motion adopted by Parliament on grounds of 'proven misbehavior or incapacity'. While the Constitution does not use the word 'impeachment', it is colloquially used to refer to the proceedings under Article 124 (for the removal of a Supreme Court judge) and Article 218 (for the removal of a High Court judge).

Appointment of Chief Justice:

- From 1950 to 1973, the practice has been to appoint the senior most judge of the Supreme Court as the chief justice of India.
- This established convention was violated in 1973 when A N Ray was appointed as the Chief Justice of India by superseding three senior judges.
- Again in 1977, M U Beg was appointed as the chief justice of India by superseding the then senior-most judge.
- This discretion of the government was curtailed by the Supreme Court in the Second Judges Case (1993), in which the Supreme Court ruled that the seniormost judge of the Supreme Court should alone be appointed to the office of the chief justice of India.

Qualifications of Judges: A person to be appointed as a judge of the Supreme Court should have the following qualifications:

- He should be a citizen of India.
- He should have been a judge of a High Court (or high courts in succession) for five years
- He should have been an advocate of a High Court (or High Courts in succession) for ten years
- He should be a distinguished jurist in the opinion of the president. From the above, it is clear that the Constitution has not prescribed a minimum age for appointment as a judge of the Supreme Court.

Oath or Affirmation:

- A person appointed as a judge of the Supreme Court, before entering upon his Office, has to make and subscribe

an oath or affirmation before the President, or some person appointed by him for this purpose. In his oath, a judge of the Supreme Court swears:

- to bear true faith and allegiance to the Constitution of India
- to uphold the sovereignty and integrity of India
- to duly and faithfully and to the best of his ability, knowledge and judgment perform the duties of the Office without fear or favor, affection or ill-will
- To uphold the Constitution and the laws.

Tenure of Judges:

- The Constitution has not fixed the tenure of a judge of the Supreme Court. However, it makes the following three provisions in this regard:
- He holds office until he attains the age of 65 years. Any question regarding his age is to be determined by such authority and in such manner as provided by Parliament.
- He can resign his office by writing to the president.
- He can be removed from his office by the President on the recommendation of the Parliament.

Powers of CJI: The Constitution itself clearly lays out heightened powers for the CJI. Broadly, these are:

- The CJI swears in the President and Governors.
- The President must consult with the Chief Justice before appointing Supreme Court or High Court judges.
- Article 127 gives the CJI power to appoint ad hoc Supreme Court judges.
- Article 128 the power to sit retired Supreme Court judges.
- Article 130 the power to sit the Court outside of Delhi (with the President's approval).
- Article 146 the power to appoint officers and servants of the Court.
- Article 222 the power to move high court judges to another high court.
- Articles 257, 258, and 290 which gives the CJI the ability to appoint an arbitrator to resolve certain financial disputes between the centre and the states.
- He or she is also paid a bit more than the rest of the justices, (presumably) for taking on these additional responsibilities.
- No FIR can be registered against serving or retired judges of the high courts or the Supreme Court. This has been laid down by a five-judge constitution bench in 1991 and endorsed by another five-judge bench in 2017.
- The 2017 judgment said this measure was meant to ensure the independence of the judiciary in the light of the apprehension that the executive is likely to misuse the power to prosecute the judges.
- **Original Jurisdiction:** As a federal court, the Supreme Court decides the disputes between different units of the Indian Federation.
- **More elaborately, any dispute between:**
 1. The Centre and one or more states; or
 2. The Centre and any state or states on one side and one or more states on the other; or
 3. Between two or more states.
- In the above federal disputes, the Supreme Court has exclusive original jurisdiction. Exclusive means, no other court can decide such disputes and original means, the power to hear such disputes in the first instance, not by way of appeal.
- **Appellate Jurisdiction:** As mentioned earlier, the Supreme Court has not only succeeded the Federal Court of India but also replaced the British Privy Council as the highest court of appeal. The Supreme Court is primarily a court of appeal and hears appeals against the judgments of the lower courts. It enjoys a wide appellate jurisdiction

which can be classified under four heads:

1. Appeals in constitutional matters.
 2. Appeals in civil matters.
 3. Appeals in criminal matters.
 4. Appeals by special leave.
- **Advisory Jurisdiction:** The Constitution (Article 143) authorizes the president to seek the opinion of the Supreme Court in the two categories of matters:
 1. On any question of law or fact of public importance which has arisen or which is likely to arise.
 2. On any dispute arising out of any pre-constitution treaty, agreement, covenant, engagement, and sander other similar instruments.

Collegium System:

- The **Collegium System is a system under which appointments/elevation of judges/lawyers to Supreme Court and transfers of judges of High Courts and Apex Court are decided by a forum of the Chief Justice of India and the four senior-most judges of the Supreme Court!**
- There is no mention of the Collegium either in the original Constitution of India or in successive amendments.
- The recommendations of the Collegium are binding on the Central Government; if the Collegium sends the names of the judges/lawyers to the government for the second time.

Working of a Collegium System:

- The **Collegium sends the recommendations of the names of lawyers or judges to the Central Government.** Similarly, the Central Government also sends some of its proposed names to the Collegium. The Central Government does the fact checking and investigates the names and resends the file to the Collegium.
- Collegium considers the names or suggestions made by the Central Government and resends the file to the government for final approval. **If the Collegium resends the same name again then the government has to give its assent to the names.** But time limit is not fixed to reply. This is the reason that appointment of judges takes a long time.

Conclusion:

- The **Chief Justice of India and the Judges of the Supreme Court are appointed by the President under clause (2) of Article 124 of the Constitution.**
- If Impeachment happens, ideally, the **CJI should not hear the matter or constitute the Bench to hear it.**
- In fact, no judge who is in line to be CJI in the future should sit on the Bench.
- The principle of “no one shall be a judge in his own case” should be strictly adhered to.

Mains Question:

- What is the procedure of Appointment, Oath, Tenure and Removal of the Chief Justice of India? Discuss in detail.

BANKS ARE SAFE

Introduction:

- The **Reserve Bank of India has assured** the public that the **Indian banking system is in sound state and there is no need to panic.**
- The clarification came in the light of rumours around certain commercial and co-operative banks, causing panic among depositors.
- RBI had issued a statement refuting social media rumours that nine state-owned banks would be closed.
- Most of the banks named in these rumours were part of the latest round of bank consolidation announced by the Finance Ministry to merge 10 public sector banks into four global-sized lenders.

Issue and rumour about banking system:

- On September 23, the **RBI had put restrictions on Punjab & Maharashtra Cooperative (PMC) Bank** after it had found out financial irregularities, and under-reporting of loans given to real estate developer HDIL.
- The **curbs included barring the bank from lending and accepting fresh deposits for the next six months** apart from capping withdrawals first at Rs 1,000 per account which was later revised upwards to Rs 10,000 and then again to Rs 25,000.
- After the fourth bi-monthly monetary policy announcement Governor said, "So far as the RBI is concerned, it is very clear that the banking system remains sound and stable and there is no reason for any panic".

Role of RBI:

- **RBI was caught napping as the scam at the leading cooperative bank** was going on for around eight years and its exposure to HDIL was over 73 per cent of its total book and that too the account had been an NPA for long.
- Reserve Bank governor Shaktikanta Das said the banking system is sound and stable, and **one incident at a cooperative bank should be used to generalise the health of the entire financial system.**
- On the PMC scam, RBI Governor said the **RBI acted very swiftly and promptly after it was brought to its notice.**
- The **RBI will review all the regulations of cooperative banks** and will discuss with the government if required.

Depositor needs to know about the safety of their hard-earned money:

- When a bank is liquidated, depositors are entitled to receive an insurance amount of 1 lakh per individual from the **Deposit Insurance and Credit Guarantee Corporation of India (DICGC).** The DICGC is a wholly owned subsidiary of the RBI.
- The 1 lakh insurance limit includes both principal and interest dues across your savings bank accounts, current accounts, fixed deposits and recurring deposits held with the bank.
- Deposit **insurance covers all commercial banks and foreign banks operating in India, State, Central and Urban Co-operative Banks, local area banks and regional rural banks.**
- When a bank fails to pay up the premium for deposit insurance, DICGC sometimes de-registers the bank and its insurance cover ceases.
- The **DICGC does not deal directly with depositors. The RBI (or the Registrar), on directing that a bank be liquidated,** appoints an official liquidator to oversee the winding up process.
- Under the DICGC Act, the liquidator is supposed to hand over a list of all the insured depositors (with their dues) to the DICGC within three months of taking charge. **The DICGC is supposed to pay these dues within two months of receiving this list.**
- In FY19, it took an average 1,425 days for the DICGC to receive and settle the first claims on a de-registered bank.

Conclusion:

- The RBI is looking at all aspects on PMC case and the matter is now under investigation, As per RBI Governor.
- Mumbai based PMC is under RBI directions after the bank management hid loans of Rs 6226 crore to the real estate company HDIL. These loans now are likely to be classified as NPAs as HDIL is in the bankruptcy courts.
- Loans by PMC Bank to the now bankrupt real estate developer HDIL had turned sour many years ago, but the lender had not classified those loans as 'non-performing', fearing harm of reputation, the former MD of PMC Bank Joy Thomas admitted in a letter to the RBI.

Mains Question:

- Describe the role of Deposit Insurance and Credit Guarantee Corporation of India (DICGC) and Reserve Bank of India (RBI) in the Context of the Current Situation of Punjab and Maharashtra Co-operative Bank (PMC).

COMMON TEST FOR HIGHER EDUCATION

Introduction:

- Approved by the **Ministry of Human Resource and Development, the National Testing Agency, NTA is all set to conduct a common admission test for 15 central universities** of the country for the next academic session.
- Till now the Central University **Common Entrance Test was conducted by Central University of Rajasthan.**
- The NTA also said to be in talks with other central universities to join the common test.
- According to the draft National Education policy, in the long run the NTA will institute processes which would ease admissions in to higher education programs and tests will be offered in all mediums of instruction.

National Testing Agency:

- **National Testing Agency (NTA) has been established** as a premier, specialist, autonomous and self-sustained testing organization **to conduct entrance examinations for admission/fellowship in higher educational institutions.**
- To assess competence of candidates for admissions and recruitment has always been a challenge in terms of matching with research based international standards, efficiency, transparency and error free delivery. The National Testing Agency is entrusted to address all such issues using best in every field, from test preparation, to test delivery and to test marking.

Mission:

- **To improve equity and quality in education by administering research based valid, reliable, efficient, transparent, fair and international level assessments.**
- The best subject matter experts, Psychometricians and IT delivery and security professionals will ensure that the current gaps in existing assessment systems are properly identified and bridged.

Objectives:

- **To conduct efficient, transparent and international standards tests** in order to assess the competency of candidates for admission, and recruitment purposes.
- **To undertake research on educational, professional and testing systems** to identify gaps in the knowledge systems and take steps for bridging them.
- **To identify experts and institutions** in setting examination questions.
- **To produce and disseminate information and research** on education and professional development standards.

Functions:

- **To identify partner institutions with adequate infrastructure** from the existing schools and higher education institutions which would facilitate conduct of online examinations without adversely impacting their academic routine.
- To **create a question bank** for all subjects using the modern techniques.
- To **establish a strong R&D culture** as well as a pool of experts in different aspects of testing.
- To help individual colleges and universities in the field of testing and to provide training and advisory services to the institutions in India.
- To provide quality testing services to the academic institutions in India.
- To undertake any other examination that is entrusted to it by the **Ministries/Departments of Government of India/State Governments.**
- To undertake the reforms and training of school boards as well as other bodies where the testing standards should be comparable with the entrance examinations.

Need of NTA:

- Earlier and till now it used to be OMR based test in which reliability was an issue but **NTA being computer based test** in which reliability is not an issue.
- **Computer-based tests can be taken all year round in most locations.** Students can appear for the tests when and where it is convenient for them. They don't need to travel to a particular location to take the exam, so it is helpful for the students from remote areas as well.
- **Different versions of the test papers are created, equivalent to each other in terms of the content and difficulty level.** This way, one test taker can see only a small proportion of the questions, and since there are different versions, every test taker gets different questions. So, that way, the risk of cheating in a computer-based test is limited.
- **Test takers with disabilities can also take exams through CBT.** Braille keyboards are available for those who are visually disabled. Text can be enlarged or presented in a manner which enhances its readability. It can also be read aloud to assist candidates who have a hearing disability. ®

Concerns of NTA:

- It is an **expensive option and this factor can deter many government organisations** from opting for it.
- Sometimes in social sciences and human sciences where aptitude of the candidate can be properly judged by more elaborate questions.
- There is a **possibility of a technical glitch, power outage or a system failure.**
- There is an **uneven distribution of internet network** as the internet network in some areas can be poor.

Conclusion:

- Computer based test may initially appear to be expensive but in the long run it will be cheaper.
- We need to train our teachers to set the right kind of questions.
- Need to examine the critical thinking aspect.

Mains Question:

- Ministry of Human Resource and Development give approval to the National Testing Agency; (NTA) is all set to conduct a common admission test for 15 central universities of the country. Describe Objectives, functions and Concerns related to NTA. And Why the NTA is given this responsibility? Explain.

ASEAN RAMAYANA FESTIVAL

Introduction:

- The **5th International Ramayana Festival organized by Indian Council for Cultural Relations (ICCR)** is being held from 17-19 September 2019 in **New Delhi**.
- The maiden day of festival was presided by Union Minister for Home Affairs as Chief Guest.
- The epic **Ramayana has emerged as a key soft power tool in the Union government's Act East Policy**, as India hosts an ASEAN Summit with the leaders of all 10 nations in the Southeast Asian bloc in attendance.

Key Highlights:

- The year 2019 is 5th edition of International Ramayana Festival.
- Artistes from the **10 nations-Thailand, Myanmar, Singapore, Cambodia, Indonesia, the Philippines, Malaysia, Brunei, Vietnam and Laos** -were in India on an invitation by the Indian Council for Cultural Relations to be part of a Ramayana Festival organised by it.
- The **festival started with a performance at the Kamani auditorium in Delhi on Saturday** and travelled to **Ahmadabad, Hyderabad and Lucknow before concluding in Ayodhya**.

- The festival is being organized for 5th year in row, during which 17 countries have participated with their artists and rendered their versions of Ramayana.
- The ICCR was established with the vision of propagating Indian culture and its values to the whole world and organizing Ramayana festival is one way to realize this vision.
- Ramayana is one such scripture of India that has transcended Personal, Religious, Societal, Cultural and National boundaries and reached a Global audience.

Indian Council for Cultural Relations (ICCR):

- It was **founded in 1950 by Maulana Abul Kalam Azad** who was independent India's 1st Education Minister.
- ICCR was transferred from **Ministry of Education and Youth Affairs to the Ministry of External Affairs (MEA) in 1971.**
- ICCR's has its **headquarters at Delhi.**

ICCR Objectives:

- To actively participate in formulation and implementation of programmes and policies relating to India's external cultural relations.
- To foster and strengthen mutual understanding and cultural relations between India and other countries.
- To promote cultural exchanges and develop relations with other countries and people, national and international organization in field of Culture.

Conclusion:

- Prime Minister of India hosted the Southeast Asian leaders for the **ASEAN-India Summit to commemorate 25 years of New Delhi's partnership with the bloc.** The ASEAN leaders will also attend the Republic Day ceremony as chief guests.
- The epic Ramayana is seen as a **shared heritage of the eastern world** and the saga is a popular theme for theatre presentation in ASEAN countries.
- Delhi is of the view that Ramayana, along with Buddhism, provides a **strong cultural bond between India and all the ASEAN Countries.**

Mains Question:

1. What are the significances of the ASEAN Ramayana Festival for the ASEAN Countries? Explain.

CLIMATE CHANGE AND INDIA

Introduction:

- Over the past few days, **large parts of Bihar and several areas in Uttar Pradesh** have been reeling under floods due to excessive rainfall.
- A **similar situation was witnessed in Mumbai last month**, where heavy downpour and massive water logging caused mayhem.
- **A few months ago, more than three dozen people died in one of the longest heat waves** in the country with temperatures reaching 48 degrees Celsius.
- Not just in India, such extreme weather events have been witnessed globally, making it the most pressing issue in the present times.

Climate Change:

- Climate change is certainly without argument the most serious global environmental crisis. It is not the only environmental problem, but it is **unique in its multi-scalar characteristic, from the global to the local. And, in many ways, it is arguably the most immediate of our problems.**

- At one level, for many people climate change has become an existential problem, a problem that risks undermining the conditions for productive life and therefore a problem that does not override but certainly permeates all kinds of other issues.
- For many others, climate change is a distant problem that is overwhelmed by more immediate issues.
- The **Paris Agreement on climate change is set to become operational in 2020**, and discussions on what developmental pathways can India pursue to align its social objectives and energy needs with its commitments made under the UN pact have begun.

Factors affecting Climate Change:

- Earth's temperature is influenced by the energy entering and leaving the planet's system. When incoming energy from the sun is absorbed by the Earth system, Earth is warmed.
- When the sun's energy is reflected back into space, Earth cools. Both natural and anthropogenic factors can cause changes in Earth's energy balance.

Natural Factors:

- The Earth's climate can be affected by a number of natural factors.
- The prominent ones are continental drift, volcanoes, ocean currents, the earth's tilt, and comets and meteorites.
- The natural factors affect the climate change in a long term and persist for thousand to millions of years.

Major initiatives of the Government for climate change:

■ National Action Plan on Climate Change (NAPCC):

- The Action plan covers eight major missions on Solar, Enhanced Energy Efficiency, Sustainable Habitat, and Water, Sustaining the Himalayan Ecosystem, Green India, Sustainable Agriculture and Strategic Knowledge on Climate Change.

■ International Solar Alliance (ISA):

- ISA was jointly launched by the Prime Minister of India, and the then President of France, in Paris on the side-lines of CoP 21 in 2015.
- The vision and mission of the alliance is to provide a dedicated platform for cooperation among solar resource rich countries that lie completely or partial between the Tropics of Capricorn & Cancer.

■ State Action Plan on Climate Change (SAPCC):

- State governments have drafted climate strategies aligned with the eight National Missions under the NAPCC.
- The strategies focus on issues ranging from climate mitigation, energy efficiency, and resource conservation to climate adaptation.

■ FAME Scheme for E-mobility:

- Union Government in April 2015 launched Faster Adoption and Manufacturing of Hybrid and Electric vehicles (FAME) – India Scheme with an aim to boost sales of eco-friendly vehicles in the country.
- It is a part of the National Mission for Electric Mobility.

■ Atal Mission for Rejuvenation & Urban Transformation (AMRUT) for Smart Cities:

- Comprehensive development occurs in areas by integrating the physical, institutional, social and economic infrastructure. Many of the sectoral schemes of the Government converge in this goal, although the path is different.
- There is a strong complementarity between the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and Smart Cities Mission in achieving urban transformation. While AMRUT follows a project-based approach, the Smart Cities Mission follows an area-based strategy.

■ Pradhan Mantri Ujjwala Yojana:

- The scheme provides LPG connections to five crore below-poverty-line beneficiaries.

- The connections are given in the name of women beneficiaries to reduce their dependence on fossil fuels and conventional fuel like cow dung for cooking food, thus reducing air pollution.

■ **UJALA scheme:**

- The scheme was launched by the Prime Minister of India in January 2015 with a target of replacing 77 crore incandescent lamps with LED bulbs.
- The usage of LED bulbs will not only result in reducing electricity bills but also help in environment protection.

■ **Swachh Bharat Mission:**

- Swachh Bharat Abhiyan (Clean India Movement) is a campaign that was launched by Prime Minister of India on October 2, 2014.
- The campaign seeks to clean the streets, roads and infrastructure of the country's 4041 statutory cities and towns.

Way Forward:

- Improve the models by minimising the known biases in simulating observed regional climatic patterns, especially the Indian summer monsoon.
- Develop an ensemble of plausible scenarios in the regional context.
- Improve spatial resolution for regional/local manifestations of climate change impacts.
- Develop sensitivity studies for regional/local manifestations of climate change impact.
- Develop predictive models that focus on short term variations as well as longer-term change, to help guide policy making over time.

Mains Question:

- Explain the impact of climate change worldwide, in particular in India and how governments the world over are struggling to minimize the impacts caused by climate change?

COSMOS NEW DIMENSIONS

Introduction:

- On 8th October, the Royal Swedish Academy of Sciences announced the 2019 Nobel Prize for Physics.
- Three scientists have been awarded the prize this year for their contribution to the understanding of the evolution of the universe.
- One half of the prize has been given to Canadian-American scientist James Peebles "for theoretical discoveries in physical cosmology".
- The other half has been given jointly to Swiss astronomers Michel Mayor and Didier Queloz "for their discovery of an exoplanet orbiting a solar-type star".
- The laureates will receive the award at an elegant ceremony in Stockholm on December 10, the anniversary of the death of prize founder Alfred Nobel.

Cosmology:

- Cosmology is a branch of astronomy that involves the origin and evolution of the universe, from the Big Bang to today and on into the future.
- According to NASA, the definition of cosmology is "the scientific study of the large scale properties of the universe as a whole."
- Cosmologists puzzle over exotic concepts like string theory, dark matter and dark energy and whether there is one universe or many (sometimes called the multiverse).
- While other aspects astronomy deals with individual objects and phenomena or collections of objects, cosmology spans the entire universe from birth to death, with a wealth of mysteries at every stage.

Cosmological Theories:**■ Big Bang Theory:**

- The Big Bang theory is the prevailing cosmological model for the birth of the universe.
- It states that at some moment all of space was contained in a single point of very high-density and high-temperature state from which the universe has been expanding in all directions ever since.
- Modern measurements place this moment at approximately 13.8 billion years ago. After the initial expansion (inflation), the universe cooled sufficiently to allow the formation of subatomic particles and later simple atoms.
- The majority of atoms produced by the Big Bang were hydrogen and helium along with trace amounts of lithium and beryllium.
- Giant clouds of these primordial elements (hydrogen and helium) later coalesced through gravity to form stars and galaxies.

Steady State Theory:

- Universe is always expanding but maintaining a constant average density, with matter being continuously created to form new stars and galaxies at the same rate that old ones become unobservable as a consequence of their increasing distance and velocity of recession.
- A steady-state universe has no beginning or end in time, and from any point within it the view on the grand scale i.e., the average density and arrangement of galaxies is the same. Galaxies of all possible ages are intermingled.

Space Telescopes:**■ Hubble Telescope:**

- The Hubble Space Telescope is a large telescope in space. NASA launched Hubble in 1990.
- It was built by the United States space agency NASA, with contributions from the European Space Agency.
- Hubble is the only telescope designed to be serviced in space by astronauts. Expanding the frontiers of the visible Universe, the Hubble Space Telescope looks deep into space with cameras that can see across the entire optical spectrum from infrared to ultraviolet.

■ Kepler Telescope:

- Launched in March 2009, the \$600 million Kepler mission searched the night sky for Earth-like planets using the "transit method."
- The probe's camera measured changes in the brightness of 150,000 stars in one patch of sky to identify alien planets, including ones that could potentially be inhabited by humans.
- Since the launch of the observatory, astronomers have discovered thousands of extra solar planets, or exoplanets, through Kepler telescope alone.
- Most of them are planets that are ranging between the size of Earth and Neptune (which itself is four times the size of Earth).
- Most of these planets were discovered in a small region of the constellation Cygnus, at which Kepler was pointed for the first four years of its mission.
- As of March 2018, Kepler had found 2,342 confirmed planets; add potential planets and its find of exo-worlds stands at 4,587.
- Currently orbiting the sun 156 million km from the earth, the Kepler spacecraft will drift further from our planet when mission engineers turn off its radio transmitters.
- The telescope has now run out of the fuel needed for further operations.

Conclusion:

- In October 1995, Michel Mayor and Didier Queloz announced the first discovery of a planet outside our solar system, an exoplanet, orbiting a solar-type star in our home galaxy, the Milky Way.

- This year's Laureates have transformed our ideas about the cosmos.
- While James Peebles' theoretical discoveries contributed to our understanding of how the universe evolved after the Big Bang, Michel Mayor and Didier Queloz explored our cosmic neighborhoods on the hunt for unknown planets.
- Their discoveries have forever changed our conceptions of the world.

Mains Question:

1. According to "Big Bang Theory", our universe is expanding. What is its effect on Gravitation?

Also Explain Cosmological Theories.

DRAFT SOCIAL SECURITY CODE

Introduction:

- After years of deliberations, the **union government has finally circulated the draft social security code**, a key labour law proposal that seeks to amalgamate a clutch of existing laws and proposes several new initiatives including universal social security for unorganized sector workers and, insurance and health benefits for gig workers including the Ola and Uber drivers.
- Besides, it also proposes corporatization of existing organizations like EPFO and ESIC headed by people other than the labour minister.

Objectives of the draft:

- To amalgamate a clutch of existing laws and proposes several new initiatives including universal social security for unorganized sector workers and, insurance and health benefits for gig workers.
- To corporatize of existing organizations like EPFO and ESIC headed by people other than the labour minister.

Key highlights of the draft:

- **Insurance, PF, life cover for unorganized sector employees:**
 - Central Government shall formulate and notify, from time to time, suitable welfare schemes for unorganized workers on matter relating to life and disability cover; health and maternity benefits; old age protection; and any other benefit as may be determined by the central government.
- **Corporatization of EPFO and ESIC:**
 - The pension, insurance and retirement saving bodies including EPFO and ESIC will be body corporate. Labour minister, labour secretary, the central PF commissioner and Director General of ESIC may not be by default the head of such organizations.
- **Benefits for Gig workers:**
 - "Central Government may formulate and notify, from time to time, suitable social security schemes for gig workers and platform workers" and such schemes would encompass issues like "life and disability cover", "health and maternity benefits", "old age protection" and "any other benefit as may be determined by the Central Government".
- **Maternity Benefit:**
 - Subject to the other provisions of this Code, every woman shall be entitled to, and her employer shall be liable for, the payment of maternity benefit at the rate of the average daily wage for the period of her actual absence, that is to say, the period immediately preceding the day of her delivery, and any period immediately following that day.
- **The Code on Social Security, 2019:**
 - It will merge eight exiting labour laws including Employees' Compensation Act, 1923; Employees' State Insurance Act, 1948, Employees' Provident Funds and Miscellaneous Provisions Act, 1952; Maternity

Benefit Act, 1961; Payment of Gratuity Act, 1972; Cine Workers Welfare Fund Act, 1981; Building and Other Construction Workers Cess Act, 1996 and Unorganized Workers' Social Security Act, 2008.

Criticisms related to it:

- There is **no uniform definition of "social security"**, nor is there a central fund. The corpus is proposed to be split into numerous small funds creating a multiplicity of authorities and confusion.
- It is not clear how the **proposed dismantling of the existing and functional structures**, such as the Employees' Provident Fund Organisation (EPFO) with its corpus of 10 lakh crore which will be handed over to a government-appointed central board is a better alternative.
- Crucial categories such as "workers"; "wages"; "principal-agent" in a contractual situation; and "organised-unorganized" sectors have not been clearly defined.
- This will continue to impede the extension of key social security benefits such as PF, gratuity, maternity benefits, and healthcare to all sections of workers.
- There is **no commitment on the government's part to contribute to the listed social security measures**, even as the Code is clear about employee and employer contributions.
- The Bill welcomes aboard large sections of the workforce "gig workers" such as those working in taxi aggregate companies like Uber and Ola. But how exactly the **government proposes to facilitate their access to PF or medical care is not clear**.

Conclusion:

- Social security should include worker retraining, not just unemployment allowance. It **should help/mandate the gig workers buy insurance and save for old age**, perhaps by automatically deducting a fraction of the payments received into their bank accounts into insurance/pension accounts, say, in the National Pension System.
- **Social security should help elders deploy their skills to match the demand** anywhere in the world.
- Comprehensive healthcare and a quality education system would plug into social security, improving work-life earnings and enhancing the earning capacity of the next generation.

Mains Question:

1. What is the significance of Draft Social Security Code? Explain.

DTH V/S OTT

Introduction:

- According to a recent report by the **Telecom Regulatory Authority of India (TRAI)**, the **average active subscriber base of DTH services** has seen a sharp decline of 25 percent in this quarter coming down to 54.26 million in April to June quarter in comparison to 72.44 million in January to March this year.

Reasons for fall in DTH subscribers:

- This coincides with the new DTH tariff regime implemented from 1st April. The **decline in subscriber base highlights the challenges faced by DTH operators** during the transition to new tariff regime.
- Meanwhile the rise of **OTT services also seems to have impacted the DTH subscription numbers**. With high competition in the segment, OTT service providers give consumers a combination of both attractive content and subscription package.
- However **regulation for OTT platforms continues to remain a contentious issue** with the Government mulling over its options.
- A recent survey suggests that almost 55% Indians prefer OTT over DTH services and almost 87% of Indians use mobile to watch videos these days.

Demand of OTT more than DTH:

- **55% Indians prefer DTH over OTT.** This due to the new regulation that TRAI bring in January 2019.
- Moreover, **convince and ease of viewing** that OTT platforms provides is much higher than DTH.
- **87% of Indians are viewing video on their mobiles** as data service charges in recent years have been decreased.
- Due to increase in cable bills, the DTH operators **witnessed an unprecedented 25 per cent fall in subscribers** in the April-June quarter of 2019.
- However, these numbers are not correct as TRAI has changed the method of computation of calculating decline in DTH subscribers. Hence, there is no such drastic reduction in DTH subscribers.
- Also, it is a **tedious task for consumers to decide which channels they want to watch.** This could be one of the reasons for switching to OTT services.
- However, TRAI has launched a mobile application which helps consumers to choose channels easily and at the same time allow them to decrease their monthly bills.
- According to KPMG report, India will have more than 500 million subscribers to the OTT platform by 2023.

The differences and similarities between DTH and OTT:

DTH	OTT
<ul style="list-style-type: none"> ● DTH is an acronym for ‘Direct to Home’ service. It is a digital satellite service that provides television viewing services directly to subscribers through satellite transmission anywhere in the country. ● The signals are digital by nature and are received directly from the satellite. 	<ul style="list-style-type: none"> ● An ‘Over the Top’ media service is any online content provider that offers streaming media as a standalone product. The term is commonly applied to video-on-demand platforms, but also refers to audio streaming, messaging services, or internet-based voice calling solutions. ● It needs access to the internet and smart phones, tablets, laptop/computers.

- The **content** and the **context** of DTH and OTT are completely different. OTT platforms are very **personal** whereas DTH connections are **more social** in nature.
- They **complement each other as well** like the OTT platforms suggest about the material available on DTH **by advertisements.**

Regulation of OTT Services:

- The major challenge that OTT services are facing for OTT regulations is to find a way to **separate out the OTT services from larger internet.**
- Moreover, the mobile phone license services in India are heavily regulated. In fact, the **issue is not the regulation of OTT but regulation of telephone service.**
- In more developed countries such as in Europe, there is not much tension between regulation of OTT and provincial sale tax (PST) services as found in India.
- However, OTT providers are governed by the **Section 79 of Information and Technology Act, 2000** exempts intermediaries (OTT service providers) from liability in certain instances.
- It states that intermediaries will not be liable for any third party information, data or communication link made available by them.

Conclusion:

- There is lot of churning in DTH and OTT services in India. As far as the regulation is concerned, there is more lot needs to be streamlined for OTT platforms.
- Ultimately, the consumers will decide who is the winner among OTT and DTH.

Mains Question:

1. What are the reasons for fall in DTH Subscribers and Why there is demand of OTT more than DTH? Explain.

ELIMINATING SINGLE USE PLASTICS

Introduction:

- Government of India has laid great emphasis on eradicating single use plastic which has become one of the biggest sources of pollution.
- During Independence Day Speech this year Prime Minister had urged the people to take a **pledge on Mahatma Gandhi's 150th Anniversary on 2nd October to make the country free of single use plastic.**

Plastic:

- **Plastic is a polymer that was considered as one of the biggest breakthroughs** made by man.
- It gained with it many **advantages** –
 - Easy availability.
 - Low cost.
 - Minimal weight.
 - Could be moulded into any shape.
 - Didn't break easily and didn't degrade easily.
- But, the **advantage of not breaking and degrading easily** has become one of the biggest cause of concern today.
- There is no way to dispose it off. It may take **thousands of years in degrading** even if it is burnt. It is thus, **very dangerous for the ecology.**
- In 1950, global plastic production = 1.5 million Tonnes.
- **In 2016, global plastic production = 335 million Tonnes.**
- **Plastic flows into the sea in the form of:**
 - Fragments as common micro plastics.
 - Plastic thread from synthetic fibres.
 - Food items in the form of foam.
 - Micro beads from soaps, cosmetics.
 - Building and construction activities.
 - Fishing and coastal tourism, etc.
- Plastics are present in huge quantities in the Pacific, Atlantic and Indian Ocean.
- Plastics in the form of polythene and polypropylene are present.
- Their consumption then **kills the marine animals and human beings also acquire various diseases** on their consumption of sea food.

Single Use Plastics:

- There is **no comprehensive definition** for single-use plastic, crucial for any ban to be successful.
- The problems caused by them were recognized in 2007.
- It has been found everywhere i.e. **right from depth of the oceans to the peaks of Himalayas.**
- Single used plastics are **used once and thrown away.**
- They accumulate in the water bodies and choke the drains which lead to floods.

Environmental impacts:

- Some studies suggest that **plastic bags and Styrofoam containers can take up to thousands of years to decompose**, contaminating soil and water, and posing significant ingestion, choking and entanglement hazards to wildlife on land and in the ocean.

Health and social impacts:

- Several studies have shown that **the toxins in Styrofoam containers can transfer to food and drinks, and this risk seems to be accentuated when people reheat the food while still in the container.**
- Styrofoam items contain toxic chemicals such as styrene and benzene. Both are considered carcinogenic and can lead to additional health complications, including **adverse effects on the nervous, respiratory and reproductive systems, and possibly on the kidneys and liver.**
- In low-income regions, domestic waste including **plastics is often burnt for heating and/or cooking purposes, exposing largely women and children to prolonged toxic emissions.**
- Research has shown that in developed as well as in developing countries, littering of plastic bags and Styrofoam containers can lead to perceived 'welfare losses'.

Economic impacts:

- **Asia-Pacific Economic Cooperation (APEC)** estimated a \$1.3 billion economic impact of marine plastics to the tourism, fishing and shipping industries in that region alone.
- **Styrofoam usually can't be recycled locally** but must instead be transported to a centralized plant.
- In addition, 95% of Styrofoam is air, making it not cost-effective to store or ship for recycling purposes.
- Because of the porosity of foamed plastic products, cleaning such products, which are often contaminated with food or drinks, is difficult and energy-intensive, further increasing the cost of recycling.

Way Forward:

- **Target the most problematic single-use plastics** by conducting a baseline assessment to identify the most problematic single use plastics, as well as the current causes, extent and impacts of their mismanagement.
- **Identify and engage key stakeholder groups** – retailers, consumers, industry representatives, local government, manufacturers, civil society, environmental groups, and tourism associations to ensure broad buy-in. Evidence-based studies are also necessary to defeat opposition from the plastics industry.
- **Promote alternatives** before the ban or levy comes into force, assess the availability of alternatives. Ensure that the preconditions for their uptake in the market are in place.
- **Enforce the measure chosen effectively**, by making sure that there is clear allocation of roles and responsibilities.
- **Monitor and adjust the chosen measure** if necessary and update the public on progress.

Mains Question:

1. Assess the potential social, economic and environmental impacts of the Plastic. How will the poor be affected? What impact will the preferred course of action have on different sectors and industries? Explain.

EMPOWERING RURAL WOMEN

Introduction:

- **Rural women are key agents for achieving the transformational economic, environmental and social changes required for sustainable development.**
- But limited access to credit, health care and education are among the many challenges they face, which are further aggravated by the global food and economic crises and climate change.
- Empowering them is a key not only to the **well-being of individuals, families and rural communities, but also to overall economic productivity**, given women's large presence in the agricultural workforce worldwide.

Role of UN in empowering Women:

- UN Women supports the leadership and participation of rural women in shaping laws, strategies, policies and programmes on all issues that affect their lives, **including improved food and nutrition security, and better rural livelihoods.**
- Training equips them with skills to pursue new livelihoods and adapt technology to their needs.
- In **India**, with support from UN Women's Fund for Gender Equality, the Dalit Women's Livelihoods Accountability Initiative has helped women marginalized by the caste system engage in the Mahatma Gandhi National Rural Employment Guarantee scheme.
- Between 2009 and 2011, in eight districts, their participation grew from 2,800 to more than 14,000. Many Dalit women now have bank accounts in their names and are unionized to defend their rights.

Need of Women Empowerment:

- India is a land of customs, tradition and practices which have been developed through centuries to centuries.
- These customs, tradition and practices become the consciousness of our society. We worship female Goddesses, give importance and respect to our mothers, daughters, sisters, wives, friends, etc.
- But at the same time, we can't ignore the patriarchal system of our society and male superiority. In fact, principles of gender equality are enshrined in our Constitution.
- **The Constitution of India not only grants equality to women but also empowers the State to adopt measures of positive discrimination in favour of women.**

List of Women Empowerment Programmes/Schemes in India:

Women Empowerment Programmes	Year of Commencement	Objectives
Beti Bachao Beti Padhao Scheme	22 January, 2015	To provide education to girls' and their welfare. To prevent the violation in the interest of girls. To celebrate the birth of a girl child.
One Stop Centre Scheme	1st April, 2015	1. It is a Centrally Sponsored Scheme. Its aim is to set up One Stop Centres (OSC) which is to be funded from the Nirbhaya Fund. 2. To provide support and assistance to women affected by violence at private or at any public place, irrespective of caste, class, religion, region, sexual orientation or marital status.
Women Helpline Scheme	1st April, 2015	To provide 24 hour emergency and non-emergency response to women affected by violence including sexual offences and harassment both in public and private sphere, including e family, community, workplace, etc.
UJJAWALA : A Comprehensive Scheme for Prevention of trafficking and Rescue, Rehabilitation and Re-integration of Victims of Trafficking and Commercial Sexual Exploitation	December 2007	For the prevention of trafficking and providing support for rescue, rehabilitation, reintegration and repatriation of women and child victims of trafficking for commercial sexual exploitation in India. The Scheme is being implemented mainly through NGOs to provide direct aid and benefit to the victims of trafficking.
Working Women Hostel	Introduced in 1972-73 and after amendment re-launched on 6th April, 2017	To promote availability of safe and conveniently located accommodation for working women, with day care facility for their children, wherever possible, in urban, semi urban, or even rural areas where employment opportunities for women exist.

Rajiv Gandhi National Creche Scheme for the Children of Working Mothers	The programme was recast by the Government of India in 2006	<ol style="list-style-type: none"> 1. To provide day-care facilities for children (6 months to 6 years) of working mothers in the community. 2. To improve nutrition and health status of children. 3. To promote physical, cognitive, social and emotional development of children. 4. To educate and empower parents /caregivers for better childcare.
SWADHAR Scheme (A Scheme for Women in Difficult Circumstances)	2002	For providing holistic and integrated services to women in difficult circumstances and without any family, social and economic support, such as destitute widows deserted by their family in religious places like Vrindhaban and Kashi, women prisoners released from jails; women survivors of natural disasters who have been rendered homeless, trafficked women/girls rescued or runaway from brothels, women victims of terrorist violence without any means for survival, mentally challenged women and women with HIV/AIDS deserted by their family, etc.
Support to Training and Employment Programme for Women (STEP)	The Ministry has been administering STEP Scheme since 1986-87 as a 'Central Sector Scheme'. It was revised in December, 2014	To provide skills that give employability to women, to provide competencies and skill that enable women to become self-employed/ entrepreneurs.
Nari Shakti Puraskar	1999	To recognise women who have exceeded expectations to challenge the status quo and make a lasting contribution to women's empowerment.
Women Empowerment and Livelihood Programme in Mid-Gangetic Plains- 'Priyadarshini'	Pilot Project	It focuses on Women empowerment and Livelihood in Mid-Gangetic Plains. It also empower to address their political, legal, health problems.
Mahila E-Haat	7th March, 2016	It will help women to make financial and economic choices which will enable them to be a part of 'Make in India' and 'Stand Up India' initiatives.
Rashtriya Mahila Kosh (RMK) is also known as the National Credit Fund for Women (NCFW)	1993	It caters to the credit needs of the poor and asset-less women in the informal sector.
Central Social Welfare Board (CSWB)	1953	To promote social welfare activities and implementing welfare programmes for women and children through voluntary organisations.
Development of Women and Children in Rural Areas (DWCRA)	1982-83	To improve the socio-economic status of the poor women in the rural areas through creation of groups of women for income-generating activities on a self-sustaining basis.

Challenges and Way Forward:

- **Poor literacy rate:** Low level of education among rural women can be considered as the single most important

cause of their dismal participation in developmental activities. Because of their illiteracy, they are not considered in decision making process, neither at family nor at village level.

- The following chart can help in understanding the actual level of illiteracy persist among women.
- Government comes up with a number of programs in order to improve the educational level of girl child. The most widespread and effective is- **Beti Bachao Beti Padhao Abhiyan**. This comprehensive campaign tries to impact the mindset of society towards the girl's education.
- Ministry of Women and Child Development has already come up with **Mahila Shakti Kendras (MSK) that focuses over the digital literacy at gram Panchayat level**.
- **Deendayal Upadhyay Antyodaya Yojana**- Ajeevika is one such program of government of India that tries to tackle the low skill issue among the rural women. The two components under Ajeevika are worth noticing--
 - a. **Deendayal Upadhyay Grameen Kaushal Yojana.**
 - b. **Mahila Kisan Sashaktikaran Yojana.**
- **Poor accessibility and support**- Lack of credit access, extension services and inheritance rights over the land are some of the important reasons why women have no other opportunities but to be an agricultural labor, who works for mere subsistence. In agriculture itself, there exist poor linkages between farm and non-farm activities. Women, therefore, are rarely involved in any linkages associated with agriculture.
- Government is promoting the formation of **women Self- help group (SHG) under the National Rural Livelihood Program (NRLM)**. These self-help groups are provided with formal credit facilities. Besides, MoWCD also form Rashtriya Mahila Kosh. The fund provides micro-credit facilities to the women in informal sectors of the economy. These loans are hassle free and are being given without any collateral.
- Government is also promoting a **digital marketing portal- Mahila e-Haat**. This portal is launched for women entrepreneurs. The intention is to provide more market accessibility to women entrepreneurs for their products.
- **Lack of adequate convergence of scheme**-There exists a large number of schemes, distributed among various ministries, for the empowerment of rural women. With this lack of convergence, the wholehearted efforts for the development would not take place and the aims remain scattered. In addition, it also impedes the optimum utilization of resources.
- **Scheme of Mission for Protection and empowerment for women** is a step in converging the entire women centric scheme, so that better implementation can be done. Convergent support is being proposed for equal access to healthcare, quality education, career and vocational guidance, social security and digital literacy at gram Panchayat level.
- **More vulnerability towards climate change**- Rural women are affected differently and severely by climate change. Pradhan Mantri Ujjawala Yojana is a good step of the government in this regard. Under the scheme, rural women are provided with free LPG connection in their kitchen. That will make their kitchen smokeless and improve their health condition.

Conclusion:

- The empowerment of women is a continuous process. India has historical background of gender discrimination. The Government also understands that there is a need of multidimensional war against the gender inequality that persists in rural Indian society.
- However, making policy documentation and program framework is only the first step and the easiest task. The real efforts lie in its implementation. The holistic empowerment of rural women possible when all the women related schemes converge through a single channel.
- It should be understood that there exists diversity even among rural women as well. The problems faced by women belongs to SC/ST group are different from what the upper-class women face. Therefore, one size fits all approach cannot be the solution.

Mains Question:

1. Among all form of empowerments, economic empowerment is the most important one. Both the social and political empowerment of a section depends upon its level of economic empowerment. Discuss it in the backdrop of women empowerment.

FATF SETBACK FOR PAKISTAN

Introduction:

- Financial Action Task Force (FATF), the international money laundering watchdog warned Pakistan that it did not taken sufficient measures to fully implement a UNSC resolution against 26/11 mastermind Hafiz Saeed and other terrorists associated with terrorist groups such as Lashkar-e-Taiba and Jamaat-ud-Dawa.
- After closely scrutinising Pakistan's progress record on curbing money flows to terrorists and terrorist organisations, **FATF said that Pakistan must "identify, assess and understand its money laundering, terror financing risks, including transnational risks and risks associated with terrorist groups" operating from its soil.**

Financial Action Task Force (FATF):

- The Financial Action Task Force (FATF) is an inter-governmental body established in 1989 on the initiative of the G7.
- It is a "policy-making body" which works to generate the necessary political will to bring about national legislative and regulatory reforms in various areas. The FATF Secretariat is housed at the OECD headquarters in Paris.

Objectives:

- The objectives of the FATF are to **set standards and promote effective implementation of legal, regulatory and operational measures** for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system.

Functions:

- The FATF monitors the progress of its members in implementing necessary measures, reviews money laundering and terrorist financing techniques and counter-measures and promotes the adoption and implementation of appropriate measures globally.
- In collaboration with other international stakeholders, the FATF works to identify national-level vulnerabilities with the aim of protecting the international financial system from misuse.

Blacklist and Grey list:

- FATF maintains **two different lists of countries:**
- Those that have deficiencies in their AML/CTF regimes, but they commit to an action plan to address these loopholes, and those that do not end up doing enough. This is commonly known as grey list.
- Once a country is blacklisted, FATF calls on other countries to apply enhanced due diligence and counter measures, increasing the cost of doing business with the country and in some cases severing it altogether.
- As of now there are only two countries in the blacklist: - Iran and North Korea, and seven on the grey list, including Pakistan, Sri Lanka, Syria and Yemen.

Implications of the FATF's move:

- The Financial Action Task Force (FATF) is likely to take strong action on Pakistan given its inadequate performance on terror financing and has managed to pass in only 6 of the 27 items.
- They said the country may be put in the **'Dark Grey' list.**
- Sources added that Islamabad will be isolated by all members of the FATF for failing to take enough measures.
- The country was placed on the Grey List by the watchdog in June 2018 and was given 15 months to complete the implementation of a 27-point action plan, failing which it be placed in the Black List.
- According to the FATF, rules, there is **one essential stage between "Grey" and "Black" lists, referred to as "Dark Grey".** This is the issuance of a strong warning so that the concerned country gets one last chance to improve
- "Dark Grey" was the term used for warning up to 3rd Phase. Now it's just called warning -- that is the 4th phase.

27 Point Action Plan:

- It has been **created in consensus with Asia Pacific Group.**
- Pakistan has told the FATF that it will implement its action plan to accomplish these objectives of properly identifying, assessing and supervising the removal of terrorism financing risks on a risk-sensitive basis.
- It will improve inter-agency coordination between provincial and federal authorities to combat terror financing risks.
- It will demonstrate that Law-Enforcement Agencies (LEAs) are identifying and investigating the widest range of terrorism financing activity.
- As per the plan approved by the FATF, nine targets have to be met in January 2018, about 13 by May 2019 and the remaining in September 2019.

Way Forward:

- Pakistan should democratize its politics and military rule should be restricted.
- There is a rise of civil and political administration resilience against Military rule and its imposition. This has to be sustained as there is lot of support from civil society.
- With time being imposed on Pakistan to make changes, Pakistan has to stick to its commitments as there will be direct monitoring and intense scrutiny by the International organisations.

Mains Question:

1. What is the mandate and objectives of Financial Action Task Force? Discuss its importance for India – Pakistan relations.

HACKATHON

Introduction:

- Innovation and incubation are the new approach to the task of nation building and helping to find practical and out-of-the box solutions to everyday problems in various fields are events that have come to be popular as hackathons.
- **Hackathons are attempts to find homegrown solutions to problems.** The second edition of the Singapore-India Hackathon that started at IIT-Madras came to an end. This first joint international hackathon between India and any other country is an initiative of Prime Minister of India.
- Addressing the event Prime Minister said through events like the hackathons, the aim is to create an ecosystem for innovation in India.
- Reiterating that India was poised to become a 5 trillion dollar economy, the PM stated that innovation and startups will play a crucial role in achieving the milestone.

HACKATHON:

- **A hackathon** (also known as a hack day, hackfest or codefest) is a **design sprint-like event in which computer programmers and others involved in software development, including graphic designers, interface designers, project managers, and others**, often including domain experts, collaborate intensively on software projects.
- The **goal of a hackathon is to create usable software or hardware with the goal of creating a functioning product** by the end of the event. Hackathons tend to have a specific focus, which can include the programming language used, the operating system, an application, an API, or the subject and the demographic group of the programmers.
- In other cases, there is no restriction on the type of software being created.

Different types of Hackathon:

Offline Hackathons:

- Usually lasts for 24 hours.
- Aim to solve problem statements for specific themes.

Online Hackathons

- Companies engage participants across different geographies and time zones.
- Purpose is to solve problem, drive innovation.

Internal Hackathons

- Also known as a corporate hackathon.
- Conducted by an organisation for its employees.
- Helps to crowd source ideas, collaboration and engagement.

External Hackathons

- Company engages people within organisation.
- Influenced by goals.
- Enables companies to harvest ideas across the globe.

Application based Hackathons

- Based on specific platforms for development.

Language Hackathons

- Based on specific programming language.
- Conducted to improve features for specific application programming interface.

Cause based Hackathons

- Also known as social hackathons.
- Addresses prominent issues like healthcare, education, public services.
- Aim to empower people.
- Addresses specific social problems.

Demographic hackathons:

- Engages specific demographic groups.
- Often conducted alongside interactive workshops.
- Build awareness; promote a collaborative culture that nurtures innovation.

Singapore – India Hackathon:

- The Singapore India Hackathon, an initiative of Prime Minister of India, which is the first of its kind joint international hackathon between India and any other country in IIT Madras.
- 20 teams are taking part in the 36-hour long hackathon. **Each team will have three students from both countries** for exchange of culture and ideas.

Singapore-India hackathon focused on 3 areas:

- Good health and well-being.
- Quality education.
- Affordable and clean energy.

Social Hackathons:

- A simple model to predict drought or water scarcity.
- Automatic instrument to record call of specific birds.
- Ability to record weather parameters in a location.
- Recorder to identify, capture frequency and amplitude range of target species.
- Recorder will store data with relevant weather information.
- 'SMART' system to guide patients.
- Detect nature of waste and enable automated segregation.
- Geo-tag places with photograph, category, type of disabled-friendly facility.
- Social media analyses
- GPS enabled smart phones.

Smart India Hackathons:

- **Smart India Hackathon 2020 is a nationwide initiative to provide students a platform to solve some of the pressing problems we face in our daily lives**, and thus inculcate a culture of product innovation and a mindset of problem solving.
- The last edition of the hackathon saw over 5 million+ students from various colleges compete for the top prize at 65+ locations.
- In SIH 2020, the students would have the opportunity to work on challenges faced within various Ministries, Departments, Industries, PSUs and NGOs to create world class solutions for some of the top organizations including industries in the world, thus helping the Private sector hire the best minds from across the nation.

It can help to:

- Harness creativity & expertise of students.
- Spark institute-level hackathons.
- Build funnel for 'Startup India' campaign.
- Crowd source solutions for improving governance and quality of life.
- Provide opportunity to citizens to provide innovative solutions to India's daunting problems.

Conclusion:

- Prime Minister of India hailed India's innovation ecosystem and said the country was committed to creating homegrown solutions for global applications.
- From schools to higher education and research, an ecosystem was being created so that it becomes a medium for innovation even as the country was one among the top three startup ecosystems in the world.
- India was poised to become a USD 5 trillion economy and innovation and startups will play a crucial role.
- Encouraging innovation and incubation for two big reasons one is we want easy solutions and to solve India's problems to make life easier.

Mains Question:

1. India was poised to become a USD 5 trillion economy and innovation and startups will play a crucial role. How Smart India Hackathon make it easier for India? Explain.

ENDGAME TUBERCULOSIS**Introduction:**

- The **World Health Organisation has released new data that reveals that TB cases have fallen by 50,000 cases in India since 2017.**

- WHO has published a global TB report every year since 1997. These reports provide an assessment of the TB epidemic, and the progress in prevention, at global as well as country levels.
- For India, **Prime Minister has set a goal to eradicate TB by the year 2025**. In his address to the United Nations last month, he underscored the UN's own target is to eliminate the disease by 2030.

Tuberculosis:

- **TB is one of the leading causes of death worldwide and the leading cause from a single infectious agent, ranking above HIV/AIDS.**
- TB is an infectious disease caused by the bacillus *Mycobacterium tuberculosis*.
- It **typically affects the lungs (pulmonary TB) but** can also affect other sites.
- The disease is spread when people who are sick with pulmonary TB expel bacteria into the air, for example by coughing.
- Broader influences on the TB epidemic include levels of poverty, HIV infection, under nutrition and smoking.
- Diagnostic tests for TB disease include – Rapid molecular test, Sputum smear microscopy, Culture-based methods
- Without treatment, the **mortality rate from TB is high.**

Global tuberculosis report:

- **WHO has published a global TB report every year since 1997.**
- The main **aim of the report is to provide a comprehensive and up-to-date assessment of the TB epidemic**, and of progress in prevention, diagnosis and treatment of the disease at global, regional and country levels.
- This is done in the context of recommended global TB strategies and targets endorsed by WHO's Member States and broader development goals set by the United Nations.
- For the period 2016–2035, these are **WHO's End TB Strategy and the United Nations' (UN) Sustainable Development Goals (SDGs), which share a common aim: to end the global TB epidemic.**

India TB report 2019

- The **number of HIV-infected people who go on to develop Tuberculosis (TB) is increasing in India.**
- TB is the **leading cause of morbidity and mortality among People Living with HIV (PLHIV)**. This group is 21 times more likely to develop TB than persons without the virus.
- India is the **third-highest HIV burden country in the world**, with an adult prevalence of 0.22 per cent.
- **India ranks second in the world** as far as TB-related mortality is concerned.
- Overall, the **TB burden in India is highest in Uttar Pradesh.**
- Percentage of pediatric tuberculosis (TB among the population aged less than 15 years) cases have also slightly gone up.

Fight against TB:

- The **years 2018 and 2019 have been landmark years in the fight against TB**, globally and in India, with the first ever High-Level Meeting on TB held at the United Nations last year.
- In India, there is high political will and commitment to end TB, budgets are slowly increasing, new social support schemes have been announced and TB survivors are speaking up.
- **World TB Day is observed on March 24. The theme of World TB Day 2019 – 'it's time' – puts the accent on the urgency to act on the commitments** made by global leaders to:
 - scale up access to prevention and treatment;
 - build accountability;
 - ensure sufficient and sustainable financing including for research;
 - promote an end to stigma and discrimination, and
 - Promote an equitable, rights-based and people-centred TB response.

Initiatives to achieve set target under END TB strategy:

- Tuberculosis (TB) remains the biggest killer disease in India, outnumbering all other infectious diseases put together this despite our battle against it from 1962, when the National TB Programme (NTP) was launched.
- TB treatment is free in India.
- **India aims to eliminate TB by 2025.**
- **UN aims to eliminate TB by 2030.**
- Mass BCG vaccination to prevent TB.
- In 1978, the Expanded Programme on Immunization (EPI) began, giving BCG to all babies soon after birth and achieving more than 90% coverage.
- In 1993, the **Revised National TB Control Programme (RNTCP) was launched, offering free diagnosis and treatment for patients**, rescuing them from otherwise sure death.
- **Tamil Nadu**, an erstwhile global leader in TB research during the 1960s through the 1990s, will now become the **global leader in TB control.**
- Initiative of TB Harega Desh Jeetega campaign.

Prevention of TB:

- BCG vaccination for infants.
- Maintaining respiratory hygiene.
- Not spitting in public.
- Avoiding damp areas.
- Wearing face masks, if infected.
- Avoiding close contact with people.
- Directly Observed Treatment Short Course.

Conclusion:

- The **targets set in the End TB strategy are global reduction of 20% in incidence and 35% in mortality by 2020**, taking 2015 as the base year.
- With India accounting for the highest TB incidence and mortality globally, success in realising the End TB targets hinges largely on the country strengthening its systems.
- The **major step in defeating the disease and achieving the targets is to record every diagnosed patient** through case notification.
- While better funding might help India closer to its stated goal of ending TB by 2025, much more is needed in terms of funding and commitment on all fronts.

Mains Question:

1. Tuberculosis can be one of the major hurdles in converting the human capital in India to Demographic Dividend. Highlight the reasons for the rising TB problem and suggest measures to eliminate the problem?

FIGHT AGAINST MALNUTRITION

Introduction:

- The **ministry of Women and Child Development in association with the Bill & Melinda Gates Foundation and Deendayal Research Institute** is developing a **POSHAN atlas under POSHAN Abhiyan.**
- Poshan Abhiyan is a **government's multi-ministerial convergence mission** to ensure attainment of malnutrition free India by 2022.

- The **Atlas will map the crops and food grains grown in different regions** of the country so that nutritious protein rich food in local areas can be promoted.

POSHAN Abhiyan:

- **POSHAN Abhiyan was launched on International Women's day (March 8) in 2018** to boost nutrition among children and women.
- It is a multi-ministerial convergence mission with the **vision to ensure attainment of malnutrition free India by 2022.**
- Its **aim to ensure holistic development and adequate nutrition for pregnant women, mothers and children.**
- Its large component involves gradual scaling-up of interventions supported by on-going World Bank assisted 'Integrated Child Development Services (ICDS) Systems Strengthening and Nutrition Improvement Project' (ISSNIP) to all districts in the country by 2022.

Targets of the Mission:

- The **target of the mission is to bring down stunting among children in the age group 0-6 years** from 38 % to 25% by 2022.
- Prevent and reduce stunting in children (0-6 years): By 6 % at 2% per annum (p.a.).
- **Prevent and reduce under-nutrition** (underweight prevalence) in children (0-6 years): By 6% at 2% p.a.
- **Reduce the prevalence of anemia among young Children, Women and Adolescent Girls:** By 9% at 3% p.a.
- **Reduce Low Birth Weight (LBW):** By 6% at 2% p.a.

Significance:

- The **project will include investments in improving the skills and capacities of ICDS staff and community nutrition workers.**
- It aims at strengthening systems of citizen engagement and grievance redress and establishing mobile technology based tools for improved monitoring of services.
- The **project ensures convergence of all nutrition related schemes** and provides performance based incentives to states and community nutrition and health workers.

Need of the Poshan Atlas:

- Due to the different cropping patterns across India, it is difficult to come out with a single common solution to address malnutrition.
- Hence, **to tackle malnutrition, Poshan Atlas will be promoting regional cropping patterns** and embracing local food that are rich in protein.

Challenges of the Mission:

- The **under nutrition data reveals that children are not getting treatment even for simple diseases such as measles.**
- India's **primary health infrastructure is not strong enough as India's focus was on secondary and tertiary treatment.**
- However, the National Policy on healthcare 2017, for the first time, dedicated itself for the primary health care.
- Health and wellness center, which are primary health care centers, are being set up under Ayushman Bharat Yojana.
- These centers are key for the achieving major targets of Indian health sectors because many of the countries which has strong health infrastructures such as UK, Sweden and Brazil, they invest most of their health budget in Primary health sectors.
- **Infections such as parasite (worms) infection.** These worms reduce the ability of body to intake food and reduce ability to absorb nutrients.

- India has a **National De-worming Programme** being implemented at school levels. Due to increasing infection, government is now thinking to extend such programme to community level.

Suggestions:

- There is **need to improve ICDS** because as per the survey by Comptroller and Auditor General of India, a lot of Anganwadi **do not have even weighing machines** to measure the weight of a child.
- Though India has various scheme to tackle malnutrition such as Mid-day meal scheme, there is need to **monitor the progress** of such scheme and augmented real time delivery of such schemes to the targeted beneficiaries.
- The **awareness level in villages about under/over nourishment have to be increase** as villages often ignore the connection between under/over nourishment with the thinness and obesity of a child. This can be done through ASHA or Auxiliary nurse midwife (ANM).
- The **adolescent girls, who will become mothers, will have to be educated** about health hygiene and other aspects. Hence, they will not only take care about their health but will also take care of the health of future family as well.
- Government should **use every opportunity available** to fill the loopholes in the health care systems. For example, earlier, it was noticed that after giving blood samples for anemia testing, many of the people do not care/know about their report. Hence, under **Anemia Mukh Bharat Programme, government applied 3 T (Test, Treat and Talk)** Principle in which the patient is tested and given medicine on the spot.

Conclusion:

- To improve the child feeding practices across India, breastfeeding is inadequate as only 55% of babies (0-6 months) are exclusively breastfed. Less than 10% of the children get right amount of food at age of 6 months.
- Hence, there is need for an awareness campaign to make people aware about calorie gap due to poor complementary feeding practices and about low birth weight as 20-25% children are born with low birth weight.
- If India can manage the low birth weight, by addressing issue in adolescent period, that can make really a major difference in countering malnutrition levels in India.

Mains Question:

1. What are the significances and Challenges faced by the Poshan Abhiyan? Explain.

INCOME TAX - E ASSESSMENT

Introduction:

- **Finance Minister inaugurated the Income Tax Department's National E-assessment Centre (NeAC)**, which will reduce face-to-face interaction between taxpayers and tax officials.
- The setting up of NeAC is a **step for better taxpayer service, reduction of taxpayer grievances** in line with the Prime Minister's vision of 'Digital India' and promotion of ease of doing business.
- Under the new system, taxpayers will receive notices on their registered e-mails as well as on registered accounts on the official web portal.
- They will also receive real-time alerts by way of SMS on their registered mobile number, specifying the issues for which their cases have been selected for scrutiny.

National E-assessment Centre (NeAC):

- NeAC will be **an independent office that will look after the work of e-Assessment scheme** which is recently notified for faceless e-assessment for income tax payers.
- There would be a **NeAC in Delhi to be headed by Principal Chief Commissioner of Income Tax (Pr.CCIT)**.
- There are **8 Regional e-Assessment Centres (ReAC)** set up at Delhi, Mumbai, Chennai, Kolkata Ahmadabad, Pune, Bengaluru and Hyderabad which would comprise Assessment unit, Review unit, Technical unit and Verification units.

- Each **ReAC will be headed by Chief Commissioner of Income Tax (CCIT)**.
- Cases for the specified work shall be assigned by the NeAC to different units by way of automated allocation systems.

New e-assessment scheme:

- In **September 2019 the government notified the 'E-Assessment Scheme, 2019' (Scheme)** laying down the framework to carry out the 'e-assessments'.
- As intended, the **scheme brings in a 360-degree change in the way tax assessments** will be carried out in future.
- Under the new scheme, a taxpayer would not be aware of the tax officer who carries out the assessment, as it could be an officer located in any part of the country.
- The following **distinct centre and units have been set up under the scheme:**
 - National e-assessment centre
 - Regional e-assessment centre
 - Assessment units
 - Verification units
 - Technical units
 - Review units

(A) National e-assessment centre:

- The National e-assessment centre (NeAC) located at **Delhi would be the nodal point for all the communication between the tax department and the taxpayer**, and would facilitate the conduct of tax assessments in a centralized manner.
- An automated system would form the basis for selection of cases for tax assessment and allocation of such cases to assessment units through the regional e-assessment centre.
- The **NeAC would be responsible for issuing notices/other communication to the taxpayer's** registered email address and receiving response from taxpayers.

(B) Regional e-assessment centre:

- Eight regional centres have been set up at New Delhi, Mumbai, Chennai, Kolkata, Ahmadabad, Pune, Bangalore and Hyderabad which would work in tandem with the NeAC to facilitate the conduct of e-assessment proceedings.
- The regional centres would be under the regional jurisdiction of a chief commissioner of income tax and shall house the specialized units.

(C) Assessment Units:

- The assessment units will facilitate the conduct of e-assessment and would function under the instructions of the NeAC and regional centre.
- The tax officers in the assessment units will review the tax return, identify issues to determine any liability (including refund) under the Act, seek information or clarification from taxpayers on identified issues, analyse the information furnished by the taxpayer, etc.

(D) Verification Units:

- Verification units will facilitate the conduct of e-assessment by the assessment unit.
- Their function will include enquiry, cross verification, examination of books of accounts, examination of witnesses and recording of statements and such other functions as may be required for the purposes of verification.

(E) Technical Units:

- Technical units will support the assessment units with assistance on various tax positions.
- This would include any assistance or advice on legal, accounting, forensic, information technology, valuation,

transfer pricing, data analytics, management or any other technical matter which may be required under this scheme.

(F) Review Units:

- The review units would assist the NeAC in carrying out any review of the draft assessment order submitted by the assessment units.
- The review unit will also check whether applicable judicial decisions have been considered and dealt with in the draft order.

E-exchange of Communication:

- All the communication, whether internal between the various centres and units or externally with the taxpayer, shall be carried out only by electronic mode.
- The electronic modes include emails, upload of documents on e-filing portal, mobile app, real time alerts and messages to taxpayers, etc.

Personal appearance by taxpayer:

- Under the scheme, a taxpayer shall not be required to appear in person or through his authorized representative before any tax authority in connection with the tax assessment.
- However, in case a modification is proposed in the draft assessment order, and an opportunity is provided to the taxpayer to make his submissions, the taxpayer may seek a personal hearing to make oral submissions or present his case before the income-tax authority in any unit under this scheme.
- The scheme provides that such hearing will be facilitated only through a video conference or video telephony and there will be no scope for a physical appearance or interaction with the tax officer.

Conclusion:

- The government launched the scheme on 7 October and has selected 58,322 cases for assessment under it in the first phase.
- For this purpose, e-notices have been served on taxpayers for the cases related to tax returns filed for financial year 2017-18.
- Accordingly, the taxpayers have been advised to check their registered e-filing accounts/email ids and furnish their response within 15 days.
- It is important for taxpayers to ensure that their contact details are updated on the e-filing portal so that communication is received on a real time basis.
- It is hoped that the new scheme would help reduce litigation at the first level and provide the taxpayers a fair, transparent and efficient assessment process.

Mains Question:

1. Discuss the Key features and significance associated with the NeAC. Also explain the Need of NeAC for the Income Tax Department.

LEGISLATIVE IMPACT ASSESSMENT

Introduction:

- **Winter session of parliament is all set to begin on 18th November** and will conclude on 13th December.
- Ahead of the month long session, the **Chairman of Rajya Sabha has advocated detailed Legislative Impact Assessment.**
- Chairman called **for informed law making in the country by bringing out social, economic, environmental and institutional impacts of legislative proposals.** This will help in realising the stated objectives of various laws.

Background:

- There is a **concern over law making process in India** because it does not consider unanticipated outcomes and its impact.
- In **present India, does not have any kind of institutional arrangement for studying the impact of legislation** on society.

Legislative Impact Assessment:

- It is **also called Post-Legislative Scrutiny**.
- The idea of legislative impact assessments is slowly getting traction around the world, since there is widespread acceptance of the idea that laws and rules need to be comprehensively analyzed prior and post to their enactment so as to minimize such negative externalities or at the very least, to identify them.
- The **intent of the legislation is great in India but the implementation of the law is poor**.
- LIA is a method of estimating the likely impacts of government policy before and after it is adopted, and comparing different policy designs to determine which produces the best result.

Benefits of Legislative Impact Assessment:

- Because of the increased transparency, **LIA makes government decision makers more accountable to the public and to Parliament**.
- The **central goal of LIA is to ensure that laws and rules efficiently produce economic, social, and environmental benefits**, that is, that benefits justify costs.
- Establishing and following a PLIA framework in both letter and spirit would allow us to identify optimal law and policy changes and ensure that preferred options are those that are **economically feasible, operationally viable, and socially acceptable, among several other considerations**.

Objectives of LIA:

- To identify the policy problem, its root cause and the need for action.
- Benchmark it against available alternatives.
- Conduct stakeholders meetings and identify potential impact.
- Cost-benefit analysis of the preferred option.

Concerns over the Lawmaking Process in India:

- Laws are often passed with inadequate scrutiny and Assessment.
- Rush to offer quick-fix solutions to complex problems without assessing long term impact.
- As a result, both lawmakers and Citizens are frequently blindsided by the unanticipated impact.
- The law often runs aground on issues of implementation.

Post-Legislative Scrutiny by parliament:

- As an emerging dimension within the **oversight role of parliament, Post-Legislative Scrutiny (PLS) can be considered a broad concept, consisting of two dimensions**.
- First, it looks at the enactment of the law, whether the legal provisions of the law have been brought into force. Second, it looks at the impact of legislation, whether intended policy objectives are met, if implementation and delivery can be improved and if lessons can be learnt.
- **PLS, often carried out by parliamentary committees, is a prominent feature of parliamentary democracy**.

Benefits of PLS:

- **The three main benefits emerging from PLS:**
 - a. It **strengthens democratic governance**: legislation adopted by parliament should be implemented

and applied in accordance with the principles of rule of law, legality and legal certainty. Because of the increased transparency, LIA makes government decision makers more accountable to the public and to Parliament.

- b. It **allows the identification of potentially adverse effects of new legislation** and the opportunity to act to prevent these.
- c. It **enables the consistent appraisal of how laws respond to the issues they intend to regulate**. It also enables the legislator to learn from experience, both in terms of what works and what does not and how effective implementation is in meeting objectives, with an eye to making better legislation in future.

Conclusion:

- **Essentially impact assessment not only helps make better laws but also ensures higher public accountability by requiring reasonable justifications** for the enactment and failures of laws.
- This would reduce the misuse of hastily drafted legislation for political gains and make our claims of being a participatory democracy less illusory.
- Concerns regarding the internal capacity of the government are valid in this regard. It **may limit the conduct of extensive impact analysis and also indicate towards the requirement of building new institutions for this purpose**.
- However, governmental capacities are not augmented in an instant. The aim should be to build these incrementally.
- It should be ensured that the law and the society roughly step up with each other.

Mains Question:

1. To bring out social, economic, environmental and institution impacts of legislative proposals for informed law making in the Country. Discuss in the context of the need for Legislative impact Assessment in India?

MOSAIC EXPEDITION

Introduction:

- Among 300 scientists from the world, a **32 – year polar researcher from Kerala will be the only person to join MOSAIC expedition**.
- India's Vishnu Nandan will be the only Indian aboard the multidisciplinary drifting observatory for the Study of Arctic Climate (MOSAIC) expedition.
- He will be aboard the German research vessel Polar stern, anchored on a large sheet of sea ice in the Central Arctic, drifting along with it during the pitch-black Polar winter.

MOSAIC:

- The **Multidisciplinary Drifting Observatory for the Study of Arctic Climate (MOSAIC)** is an international research expedition to study the physical, chemical, and biological processes that coupled the Arctic atmosphere, sea ice, ocean, and ecosystem.
- **MOSAIC is the first year-round expedition** into the central Arctic exploring the Arctic climate system.
- During the year-round operation of research, the distributed regional network of observational sites will be set up on the sea ice surrounding the ship icebreaker RV Polarstern.
- The icebreaker RV Polarstern is a German Research Vessel which is mainly used for research in the Arctic and Antarctica.
- The results of **MOSAIC will contribute to enhance understanding of the regional and global consequences of Arctic climate change** and sea-ice loss and improve weather and climate predictions.
- The project has been designed by an international consortium of leading polar research institutions, **under the umbrella of the International Arctic Science Committee (IASC)**.

International Arctic Science Committee:

- The International Arctic Science **Committee (IASC) is a non-governmental, international scientific organization.**
- IASC promotes and supports leading-edge interdisciplinary research in order to foster a greater scientific understanding of the Arctic region and its role in the Earth system.

Significance/ Benefits of the MOSAiC Mission:

- MOSAiC will contribute to a quantum leap in our understanding of the coupled Arctic climate system and its representation in global climate models.
- The **focus of MOSAiC lies on direct in-situ observations** of the climate processes that couple the atmosphere, ocean, sea ice, biogeochemistry, and ecosystem.
- The researcher will study about climate change in Arctic. The shift in polar vortices that shifted south and blasted cold air in Florida and heat wave in Europe are some of the impacts that prove climate change in Arctic has global influence.
- The mission is important to understand the processes in far north for the world leaders to make right decisions.
- The Multidisciplinary drifting Observatory for the Study of Arctic Climate (MOSAiC) will be a collaborative step to **understand the reasons of climate change in the polar region.**
- The results of MOSAiC mission will contribute to enhance understanding of the regional and global consequences of Arctic climate change.
- It will be **helpful in understanding the reasons behind the sea-ice loss and improve weather and climate predictions.**
- Its expeditions will support safer maritime and offshore operations, increase coastal-community resilience, contribute to an improved scientific basis for future traffic along northern sea routes.

Institutes involved in the MOSAiC Mission:

- This expedition mission has been designed by an international consortium of leading polar research institutions under the umbrella of the International Arctic Science Committee (IASC). Other institutes involved in this mission are;
 1. The Alfred Wegener Institute, Germany
 2. Helmholtz Centre for Polar and Marine Research (AWI), Germany
 3. Arctic and Antarctic Research Institute (AARI), Russia
 4. The University of Colorado, USA
 5. Cooperative Institute for Research in Environmental Sciences (CIRES), USA

Conclusion:

- The results of MOSAiC mission will not only reveal the reasons behind the climate change but also guide the human being and other institutions to be pro-active in dealing with the problem of climate change.

Mains Question:

1. Explain the Objective and Significance of the MOSAiC Expedition. How it is important to understand the reasons of the Climate Change.

OPERATION SADBHAVANA

Introduction:

- In Jammu and Kashmir, apart from safeguarding the borders, **Army is also taking several initiatives for the betterment of the people.**
- As a part of this goodwill initiative, the **Indian Army has established 45 Army Goodwill schools in J&K** wherein over 14 thousand students are studying at present.

Military Civic Action Programmes:

- Army has undertaken a large number of **Military Civic Action programmes aimed at ‘Wining the Hearts and Minds’ of the people in J&K and North Eastern States**, as part of a strategy for conflict resolution.
- These **programmes aim to achieve the following:-**
 - a. Fulfilling the needs of the Peoples and to alleviate their problems.
 - b. Development of remote and inaccessible areas where civil administration is barely existent.
 - c. Assuaging the feeling of alienation and moulding public opinion towards peace and development.
 - d. Fan the desire for firmer integration with the nation.
- These civic actions include a wide range of activities across the entire spectrum of development and demonstrate the ‘humane face’ of the soldier.
- It is ensured that the projects are planned as per needs of the local population and are handed over to the state administration on completion.
- In **Jammu and Kashmir**, the projects are being **implemented under Operation SADBHAVANA**.
- Similar activities are also being undertaken as part of **Operation SAMARITAN in the North East**.

Operation Sadbhavana:

- Operation Sadbhavana (Op Sadbhavana) **was launched by the army in 1998 in rural areas of Jammu & Kashmir** where terrorists and anti-national elements had wrought havoc by large scale destruction of government property and public assets like schools, bridges, electricity supply system etc causing severe hardships to locals.
- Under **Op Sadbhavana Army took up a large number of welfare and development projects**. Spending Rs450 Cr over the last fourteen years, the Army has succeeded in improving the quality of life of populace and wins their hearts and minds.
- The **focus of Operation Sadbhavana has been on Quality Education, Women and Youth Empowerment, Infrastructure Development and Health and Veterinary Care. Educational / Motivational Tours outside J&K are undertaken to expose the rich heritage and progress of India for the students, youth and opinion makers.**

- **Education:**

- Quality education is a prime requirement in militancy affected areas of J&K.
- The **Army has established 53 modern English medium Army Goodwill Schools** under the State Board and CBSE having all facilities.
- These schools remain heavily subscribed and at places hostel facilities are also provided at few places and in some schools.
- Local teachers and support staff get employment opportunities and these schools are well received by the people.
- In an **effort to reach out to the poor children in the difficult areas assistance to approximately 2700 State Govt schools** in terms of renovations, construction of additional class rooms, toilets, playgrounds, sports fields /facilities, provision of furniture, computers and educational software packages, stationery, books and school uniforms for poor students and assistance in setting up libraries and laboratories has been provided.

- **Computer Education:**

- Computer literacy centres have been established at a number of places including local government schools to provide computer literacy to children, youth and ladies who have no access to such facilities in the environment they hail from.
- These centres provide computer education in basics concepts of operating systems, use of MS Office software and Internet for knowledge and empowerment.

- **Infrastructure Development:**

- The Army stepped in to **provide assistance by undertaking a number of small and large infrastructure**

projects under Op Sadbhavana to ameliorate the condition of the local population like construction of foot bridges, tracks to improve connectivity in rural areas, schools, orphanages, primary health centres, community development centres, and vocational training centres, rural mini hydel electrification projects, installation of transformers, erection of solar lights and distribution of solar lights, provisioning of generators, construction of check dams, water supply schemes, digging of hand pumps and bore wells for water etc.

- Other development projects like construction of **bus stop shelters, utility toilets, renovation of rural government schools, development of play fields** and stadiums and construction of model villages destroyed in 2005 earthquake were undertaken.

■ **Medical Care:**

- A **major focus area of Op Sadbhavana is health care medical needs of the people in the rural areas** who do not have excess to specialised medical care facilities.
- To provide same Army organises a number of medical camps and has established a number of health centres. These centres provide essential medical aid to the locals.
- These centres have been equipped with ultra sound, ECG machines, oxygen cylinders, nebulizers etc. In addition villagers are regularly educated on family planning, child care, basic hygiene and sanitation. Free medicines are provided.
- The Army also provides artificial limbs to civilians injured in mine blast and terrorism related incidents.

■ **Para Medical Care:**

- Motivated youth are identified in **medical camps in rural areas for further training in Para medical care and first aid by the Army Field Hospitals.**
- These men are provided civil recognized certificates for spreading awareness of hygiene and sanitation amongst their people, become self-employed and be readily available for immediate medical aid in case of emergencies.

■ **Veterinary Camps:**

- Veterinary Camps are regularly organized by the Army's Remount and Veterinary Corps in conjunction with representatives of Govt Veterinary Department to provide veterinary care and advice to people rearing cattle in remote rural areas of the State.
- Volunteers are trained by the Army in emergency first aid and treatment of animals.

■ **Women and Youth Empowerment:**

- In keeping with the ethos of Army's commitment towards women empowerment and welfare activities, special emphasis has been laid to create vocational training centres, where local women are taught traditional skills / crafts, made aware about personal health, birth control measures, and bringing up their children.
- Skill development training like operating of computers, knitting, tailoring, candle making, bag making, carpets / basket weaving, jam and sauce production, horticulture, fashion designing etc are taught through local women themselves who are employed as guides.

■ **Youth Empowerment:**

- **Unemployed youth are an ideal target group for subversion and fomenting political unrest in the State by terrorists and inimical elements.**
- In order to help the youth and thwart the nefarious designs of inimical elements, numerous Youth Guidance Employment Nodes (YGENs) have been established across the State under Op Sadbhavana to create awareness about various job opportunities, competitions and eligibility criteria for jobs.
- Skills training as mechanics, machine operators, poultry farming, animal husbandry, compounders, tourist guides, mountaineers, sportsmen are conducted to make them self-sufficient and integrate in the local economy.

- **Educational Tours:**

- **Educational tours are organized under Op Sadbhavana for students and opinion makers from all regions of the State to various parts of India** with a view to providing them an exposure to the rich cultural diversity and varied traditions of other parts of the country and progress achieved under conditions of peace and stability.
- This exposure enables them to **become responsible “citizens of tomorrow” and gives them an insight to appreciate the vast natural, historical and cultural heritage** of our country.

- **Sports Stadia and Tournaments:**

- To boost and revive sports activities in the State based on requests by the State Government, seven stadia have been constructed at Bandipur, Ganderbal, Kulgam, Budgam and Shopian.
- These stadia have a seating capacity from 5000 to 7000 and facilities for conducting number of sports tournaments.
- To identify and nurture sports talent in the State a number of sports activities and tournaments are organised like T-20 Cricket Tournaments like Jammu Premier League and Kashmir Premier League.

- **Vocational Training Centres:**

- **Under Op Sadbhavana assistance is provided to the local community members to enable them to hone and develop their traditional as well as modern skills** like jam and sauce making, carpet, shawl weaving, beauty and hairdressing, stitching, family welfare, child care, family planning, adult education, computers education etc.
- This enables the women and community members to become self-reliant and monetarily independent.

Conclusion:

- Projects undertaken under Op Sadbhavana have yielded tremendous results in improving the quality of life of the populace and have provided major benefits to the locals of the State by contributing to the local economy and generating employment opportunities.
- The projects undertaken by the Army are aimed at supplementing the efforts of the State Government to improve the quality of life of people in the State and have helped in winning the hearts and minds of the people.

Mains Question:

1. Critically comment on the objectives and consequences of Indian army's 'Operation All Sadbhavana' in Jammu and Kashmir.

RAFALE

Introduction:

- **Defence Minister of India ceremonially received the first Rafale fighter aircraft in France** on 8 October 2019, three years after **India signed an agreement with France to procure 36 such fighter jets.**
- Categorized as a 4.5 generation aircraft for its radar-evading stealth profile, the **Rafale aircraft is expected to be a game changer for the Indian Air Force**, as most of its aircraft are either third- or fourth-generation fighters.
- Also, **India will only be the fourth country after France, Egypt and Qatar to fly the Rafale.**

Indian Air Force Gets its First Rafale:

- **India ordered 36 Rafales fighter from France in September 2016 deal** worth Rs.59, 000 Crore.
- All **Rafales jets expected to arrive India in September 2022.** IAF has already completed preparation to welcome Rafales.
- First squadron of Rafale to be deployed at Ambala airbase. Second squadron to be stationed at Hasimara base in West Bengal.

- Rafale jets to come with various India-specific modifications including Israeli mounted helmet with Radar warning receivers, low band jammers, 10 hour flight data recording infra red search, tracking system etc.
- **Rafale can carry out all combat aviation missions to achieve air superiority** and air defence close air support, in-depth air strikes, reconnaissance, anti-ship strikes nuclear deterrence.

Rafale:

- **Introduced in 2001**, Rafale is a **twin-engine**, canard-delta wing, multirole combat aircraft designed and built by French company Dassault Aviation.
- The aircraft is considered **one of the most potent combat jets globally**.
- The fighter jet, equipped with a wide range of weapons, is intended to perform air supremacy, interdiction, aerial reconnaissance, ground support, in-depth strike, anti-ship strike and nuclear deterrence missions.
- The aircraft is available in **three main variants: Rafale C single-seat** land-based version, Rafale B **twin-seat land-based version** and Rafale M **single-seat carrier-based version**.

Features of Rafale:

- Rafale is a **twin-jet combat aircraft capable of carrying out a wide range of short and long range missions**, including ground and sea attacks, reconnaissance, high-accuracy strikes and nuclear strike deterrence.
- The aircraft were **developed for the French Air Force and Navy**.

India's need of Rafale aircraft:

- The Indian government felt the need to revamp its IAF fleet by introducing multi-role combat aircraft considering the prevalent security environment.
- **After the Kargil experience, the Indian Armed Forces and the Defence Ministry were of the opinion that the combat ability of the Indian Air Force to strike targets required radical improvement.**
- This **need was first recorded in 2001**.

Dispute with sharing price:

- Earlier deal - The **previous government's price for 126 aircraft was never finalised, and no contract was signed or executed**. Hence, no official figure on the price was ever given.
- New Deal - Recently, the Defence Minister declined to share the cost of the Rafale fighters under the new deal, with Rajya Sabha.
- It was said that the price details were "**classified information**". This was as per the **Inter-Governmental Agreement (IGA) between the Governments of India and France**.
- Accordingly, material exchanged under IGA is governed by the provisions of the Security Agreement.
- However, in 2016, Minister of State for Defence had shared the price in the Lok Sabha in a written reply. The basic price of each Rafale aircraft was said to be around Rs 670 crore.
- At the time of its signing, the **36-aircraft deal was said to be worth around Rs 59,000 crore**.

Conclusion:

- The Rafale twin-jet fighter aircraft, that entered service with the French Navy in 2004, will come to India with certain modifications for the Indian Air Force.
- The Defence Ministry came to a conclusion that an aircraft adds to the combat strength of the forces only when it is loaded with the requisite weaponry, which enables it to strike targets.

Mains Question:

1. Discuss the Significances of the Rafale Jet Aircraft and how the aircraft adds the combat strength to the Indian Forces. Also explain the main issues revolved around the Rafale Deal Controversy.

SMART POLICING

Introduction:

- **Vice President of India has stressed on the need to make policing and police station people centric and receptive.**
- Addressing a National Seminar on SMART policing, he suggested tapping the IT potential in investigation and safety and security management.
- Vice President also emphasised **on the need to address shortage of manpower, improving transport and communication facilities** and other aspects of police reforms as suggested by the Supreme Court.

Background:

■ Pre-independence:

- **First Police Commission was set up soon after the 1857 Mutiny** to deliberate upon the regulatory framework for police in the country.
- **Set up in 1860**, the recommendations of this Commission resulted in the enactment of the Police Act of 1861-a law that still governs police.
- A review of the issues arising from **the implementation of the Police Act of 1861 was done in 1902**, through the setting up of the **Second Police Commission**.
- The Commission came out with a detailed report covering various aspects relating to the organization of police force, adequacy of training, strength, pay, investigating offences, etc.

■ Post-independence:

- After independence, the **first Police Reforms Committee was set up by Kerala in 1959**.
- This was followed by a **succession of Police Commissions appointed by different State Governments mainly during sixties and seventies** (West Bengal in 1960-61, Punjab in 1961-62, Delhi in 1968, Tamil Nadu in 1971 etc).
- At the **Central Government level**, a Working Group on Police by the Administrative **Reforms Commission was set up in 1966**.
- This was followed by the setting up of the **Gore Committee on Police Training in 1971** and subsequently the **National Police Commission** which, between 1977-1981, submitted 8 reports suggesting wide ranging reforms in the existing police set-up and **also a Model Police Act**.
- None of the major recommendations by the National Police Commission were adopted by any government.

■ Policing in India:

- Under the Constitution of India, **Police and Public order are state subjects under the Seventh Schedule to the Constitution**. As a result, all states have their individual police laws.
- Also, Article 355 of the Constitution enjoins upon the Union to protect every state against external aggression and internal disturbance.
- Legally, the **Police Act, 1861** is still the basic instrument governing the functioning of the Indian Police.
- Besides **the Indian Penal Code, 1862, the Indian Evidence Act, 1872 and the Criminal Procedure Code of 1973** also govern the functioning of the police.

Major Issues with Police in India:

■ Police Infrastructure:

- The weaponry, vehicles etc. used by police force at lower level is obsolete and is unmatched with the modern weaponry used by the criminals and anti-social elements.

- **Arduous nature of duties and working conditions:**
 - The nature of the duties is very uncertain and the police itself say that policemen are on duty all the time – it's a violation of Human Rights.
- **Over-burden:**
 - Police force is over-burdened especially at lower levels where constabulary is forced to work continuously for 14-16 hours, 7 days a week. It adversely impacts their performance.
- **Qualifications and training of police personnels:**
 - Police training methods have been out dated and aspects of human rights are largely ignored in training modules.
 - Training of police officials is heavily biased in favour of higher level officials. 94% of the total training expenditure is on IPS officers' training.
- **Politicization of Police:**
 - Politicization of a police force is a major problem as it affects the autonomy of police force making them to sub serves the interests of political executive at the cost of ordinary citizens.
 - CID at the state level has failed to perform because of political cases led by the ruling parties against their opponents and because of excessive political interference by political executive.
- **Lack of co-ordination between centre and states:**
 - It is a matter related to maintenance of law & order results in ineffective functioning of police force.
 - The dual command at district and state levels have resulted in the problem of co-ordination between the civil servants and police officials because of ego clashes and inconceivable personal differences.
- **Judicial reforms have not been effective**
 - As most of the criminals are not punished for the crime they committed.
 - In spite of recommendations of various commissions, crime investigation has not been separated from maintenance of law & order.

Need for Reforms:

- **Improvement in capacity and infrastructure of police forces:**
 - Boosting infrastructure and capacity of the police forces includes increase in the number of police personnel in the country, improvement in recruitment, training and service conditions including up-gradation on one hand and improving the infrastructure, working hours, housing facilities on the other.
- **Revisiting the constitution of police forces in the country through legislative/administrative changes:**
 - The legislative changes include, enactment of the organized Crimes Act, a single police act for the country, moving Police to the Concurrent List, declaration of Federal Crimes, measures regarding registration of crimes, statutory backing for the CBI, Commissionerate system for large areas, revival and strengthening of the beat constable system and some changes in criminal procedure and evidence systems.
 - In addition to the legislative changes, there is an **urgent need for administrative reforms as well.**
 - On the administrative side, changes include separation of investigation from law and order, specialized wings for Social and Cyber Crimes, restricting the police to core functions, setting up authorities as directed by the Supreme Court, strengthening state machinery and linking prosecution with police.
- **Technological Reforms:**
 - The police force needs to keep pace with changing times. Modernization of the force has become inevitable especially in cyber security, counterterrorism/insurgency and relying on technology for policing.
 - Technological reforms includes modernization of the control room, fast tracking the Crime and Criminal Tracking Network and System (CCTNS) pushing for National Intelligence Grid (NATGRID) and pushing for incorporation of new technology into policing.

Way Forward:

- Since the police is a vital part of our criminal justice system, it is necessary to institute a wider spectrum of reforms rather than focusing simply on police reforms.
- The thrust of the existing directives of the Supreme Court is limited to postings, transfers, personnel, policies, creation of security commissions at the state and the national levels, the separation of investigation from law and order, and, the constitution of a police complaints authority at various levels.
- As such, these reforms can be taken to be only the first step towards the larger goal of reforming the entire criminal justice system.

Mains Question:

1. Describe the policing System of India; also explain the issues related to the policing system in India with the need of reforms associated with it.

SPOTLIGHT MAMALLAPURAM

Introduction:

- The **second informal summit between PM of India and President of China is being held in the ancient city of Mamallapuram**, a major seaport during the ancient Chola and Pallava dynasties and home to World Heritage-listed rock-cut temples and caves.
- During **the first informal summit in Wuhan (in China) in April 2018**, the leaders had made a visit to the Hubei provincial museum.
- Recently, **Mamallapuram had also hosted the Defence Expo 2018, an annual event of the Union Defence Ministry.**

Mamallapuram:

- Mamallapuram, also called **Mahabalipuram or Seven Pagodas, is a town that lies along the Coromandel Coast of the Bay of Bengal**, 60 km south of Chennai.
- The town's religious centre was **founded by a 7th-century Hindu Pallava King Narasimhavarman, also known as Mamalla**, for whom the town was named.
- It contains many surviving 7th- and 8th-century Pallava temples and monuments, chief of which are the **sculptured rock relief popularly known as "Arjuna's Penance," or "Descent of the Ganges,"** a series of sculptured cave temples, and a Shiva temple on the seashore.
- The town's **Five Rathas, or monolithic temples**, are the remnants of seven temples, for which the town was known as Seven Pagodas.
- The entire assemblage collectively was **designated a UNESCO World Heritage Site in 1984.**

Mamallapuram monuments closed to tourists:

- Archaeological Survey of India (ASI) has closed a group of Monuments in the coastal town of Mamallapuram for tourists.
- While the entire coastal town is **under a thick blanket of security, the ASI has issued a notice on temporarily closing down the monuments to facilitate the visit** of PM of India and President of China.
- The group of monuments includes Arjuna's Penance, Krishna's Butterball, Shore Temples and Five Rathas, The Visiting leaders are likely to take a round of all the four monuments.
- "In exercise of power conferred under Rule 5 of the Ancient monuments and Archaeological sites and remains rules, 1959, entry to public is suspended from 8 October 2019 to till the completion of VVIP visit due to security reasons" an order issued by the ASI.

Historical Connection between India and China:

- Historians said that the **ancient port town of Mamallapuram** was used effectively **by the Pallavas to trade with China**.
- More importantly, **Buddhist monk Bodhidharma**, who was an icon in China, was the third prince of a Pallava king who travelled to China from Kancheepuram via Mamallapuram in 527AD.
- Mamallapuram and the Pallava dynasty are also historically relevant, for the **earliest recorded security pact between China and India** (in the early 8th century) involved a Pallava king (Rajasimhan, or Narasimha Varma II), from whom the **Chinese sought help to counter Tibet**, which had by then emerged as a strong power posing a threat to China.

Significance of the informal Summit:

- Informal meet at Wuhan resulted in **invoking of Wuhan Spirit**, which sought to reset ties between India and China.
- Wuhan Spirit is in line with the **five principles of peaceful coexistence (Panchsheel)** jointly advocated by China and India in the 1950s. Under Wuhan Spirit:
- Both countries agreed that **they form the "backbone" of economic globalisation**, and they should jointly make positive contributions to **global peace and development**.
- The two nations have agreed to cooperate, for the first time ever, on a **joint project in Afghanistan**.
- China has indicated that India's refusal to join the Belt and Road Initiative will not come in the way of economic cooperation.

Conclusion:

- The meeting is likely to help Mamallapuram become a **must visit place for Chinese tourists**, who mostly visit Bodhgaya.
- **Informal summits** have their use as **trust-building exercises**.
- Hopes raised at the **Wuhan Summit** that the two countries would jointly work together on an **economic project in Afghanistan** have proved to be evanescent.
- With **preparations and proper handling**, the forthcoming meet could, on the other hand, provide India's leaders with a **realistic estimate** as to where India-China relations are headed.

Mains Question:

1. Discuss the importance of Mamallapuram for both the countries India and China. Also Explain the Significances of the informal Summit between India and China.

SYRIA CRISIS - US BACKS OUT

Introduction:

- **US President has decided to abandon Kurdish fighters in Syria as fulfilling a Poll-campaign promise to withdraw from "endless war" in the Middle East**; even as Republican critics and others said he was sacrificing a US ally and undermining American credibility.
- President declared US troops would step aside for an expected Turkish attack on the Kurds, who have fought alongside Americans for years, but he then threatened to destroy Turkey's economy if they went too far.
- US President said he understood criticism from fellow GOP leaders but disagreed. **Pentagon and State Department officials held out the possibility of persuading Turkey** to abandon its expected invasion.

Background:

- **Unemployment, corruption and a lack of political freedom rocked Syria in 2000**.
- In March 2011, **pro-democracy demonstrations erupted in Syria**, inspired by the "Arab Spring" in neighbouring countries.

- **Many groups and countries, each with their own agendas, are involved**, making the situation far more complex and prolonging the fighting in Syria.
- **Russia**, which already had military bases in Syria, launched an air campaign that has been crucial in turning the tide of the war in the government's favour.
- **Iran** is believed to have deployed hundreds of troops and spent billions of dollars to help Syria.
- The US, UK and France coalition has carried out air strikes on IS militants in Syria since 2014 and helped an alliance of Kurdish and Arab militias called the Syrian Democratic Forces (SDF) capture territory once held by the jihadists in the east.
- **Turkish-backed rebels** have controlled territory along the border in north-western Syria since 2016.
- **Saudi Arabia**, which is keen to counter Iranian influence, has armed and financed the rebels, as has the kingdom's Gulf rival, Qatar.
- **Israel**, meanwhile, has been so concerned by what it calls Iran's "military entrenchment" in Syria and shipments of Iranian weapons to Hezbollah that it has conducted hundreds of air strikes in an attempt to thwart them.

Implications of Withdrawal of US from Syria:

- **Turkey wants to establish a peaceful corridor along the Syrian border** so that it can build housing for two million Syrian refugees to relocate them inside Syria.
- Turkey actually has been planning to enter Syria to flush out the PKK, a Kurdish terrorist organization.
- Turkish invasion will be met with Kurdish resistance and there will be another flare-up which will further disturb the already disturbed area.
- **Now the US wants Turkey to be in a quagmire (Vietnam-sort of)** so that Turkey to get embroiled not only with Kurds but other Syrian elements including Syrian Government which is waiting to take over entire Idlib (City of Syria) area.
- With the exit of US forces a larger role has been carved out for Russia to play for the stability of Syria and the Arab region.

US troops to wipe out ISIS from the region:

- **Regime change in Arab region** was the part of the **American foreign policy**.
- Syria was part of that regime change policy that US had been implementing whether it is Arab spring or followings of Arab spring in Iraq, Syria, Libya, Yemen and rest of the Arab.
- **US is looking for military bases throughout the world and not foothold on the ground.**
- US President is not implementing personal policy but the **policy of deep state of instability and fragmenting Syria**.
- Both **Turks and Americans are partners in crime for the Syrians** as both are the occupational and unwanted forces.
- They have not been invited by the Syrian government unlike Russia and Syrian Government has been trying to push them out.

US President to move US troops out of Syria:

- US President has promised people of US that US troops will not be allowed to wage and fight other countries wars.
- Later, he introduced America First doctrine. He promised to bring back US troops from Afghanistan and Syria.
- He is just fulfilling his election promise and eyeing re-election in 2020.
- To put Turkey in a quagmire so that it will fight against Kurds in entire Syria now.
- Trump does not want a war with Iran this time.

Implications of this decision on India:

- India is having its own problems as India is dependent on the region for its energy security apart from its nationals living in several countries there.

- There could be a lot of turmoil for them and therefore any further escalations in Middle East are a concern for India.
- India should friendly counsel to all these countries in the involved in the Syrian war. India does not want any conflagrations in the region.

Conclusion:

- The Syrian government should be ready for a dialogue on **Syria's future with the non-jihadist opposition groups**.
- Considering the large scale devastation which happened in Syria, rebuilding its human and social capital will be an insurmountable task for the government.
- Therefore the international community should come forward with a helping hand to bring the war-torn nation into normalcy. India can also play a constructive humanitarian role to establish peace and stability in the region.

Mains Question:

1. With the exit of US troops from Syria, Turkey has started military campaign in northern Syria which can lead to further conflagrations in the Arab region. In this context what are the concerns for India and also suggest some ways to mitigate them?

TOWARDS BETTER LIVING

Introduction:

- **October 7, 2019 marked the World Habitat Day.**
- Observed on the first Monday of October every year since 1985, the day reflects on the state of human settlements and the basic right to sufficient shelter worldwide.
- **World Habitat Day supports the United Nations' Habitat mission towards transformative change in cities and human settlements**, i.e. to leave no one and no place behind.
- This year's Global Observance of World Habitat Day is being held in Mexico. The theme this time is "Frontier Technologies as an innovative tool to transform waste to wealth".

World Habitat Day:

- **2019 Theme:** Frontier Technologies as an **innovative tool to transform waste to wealth**.
- Promoting contribution of innovative frontier technologies to sustainable waste management to **achieve Sustainable Development Goal 11**.
- Technology has **great potential to improve how people work and live**, to significantly accelerate efforts to achieve the Sustainable Development Goals and address climate change.
- Frontier technologies, such as automation, robotics, electric vehicles, renewable energy technologies, biotechnologies, and artificial intelligence can transform the social, economic and environmental spheres.
- This year's **Global Observance of World Habitat Day will be held in Mexico City on Monday, 7 October**.
- Celebrations will also be held across the world, including in the capital of Cameroon - Yaounde, Nakuru in Kenya, and Vancouver in Canada.

Challenges of Waste Management:

- Large quantities of waste accumulating in world's ocean. Sustainable waste management present opportunities.
- **Innovating waste management through 5 Rs-Reduce, Reuse, Recycle, Recover and residual management.**
- **Waste management rules in India are based on the principles of "sustainable development", "precaution" and "polluter pays".**
- In some urban centres, people working in the informal sector collect solid waste for each doorstep to get a collection fee and derive additional income from sale of recyclables.
- **The informal recycling industry plays a major role in waste management.** It also ensures that less waste reaches landfills.

Initiatives for Better Living by the Government of India:■ **Pradhan Mantri Awas Yojana -Urban:**

- The Pradhan Mantri Awas Yojana (Urban) Programme launched by the Ministry of Housing and Urban Poverty Alleviation (MoHUPA), in **Mission mode envisions provision of Housing for All by 2022, when the Nation completes 75 years of its Independence.**
- Slum rehabilitation of Slum Dwellers with participation of private developers using land as a resource.
- Promotion of Affordable Housing for weaker section through credit linked subsidy.
- Affordable Housing in Partnership with Public & Private sectors.
- Subsidy for beneficiary-led individual house construction /enhancement.

■ **Pradhan Mantri Awas Yojana-Rural:**

- The erstwhile rural housing scheme Indira Awas Yojana (IAY) has been restructured into Pradhan Mantri Awas Yojana –Gramin (PMAY-G) from 01.04.2016.
- **PMAY-G aims at providing a pucca house, with basic amenities, to all houseless** householder and those households living in kutchra and dilapidated house, by 2022.
- The cost of unit assistance in this scheme is shared between Central and State Governments in the ratio 60:40 in plain areas and 90: 10 for North Eastern and Himalayan States.
- The scheme envisages training of Rural Masons with the **objective of improving workmanship and quality of construction of houses** while at the same time, increasing availability of skilled masons and enhancing employability of such masons.

Conclusion:

- World Habitat Day supports the United Nations' Habitat mission towards transformative change in cities and human settlements, i.e. to leave no one and no place behind.
- Building on last year's theme of "Municipal Solid Waste Management", the purpose this year is to shift focus beyond solid waste and encompass all kinds of waste that have a devastating impact on climate change, public health and the environment.
- The significance of World Habitat Day is the global efforts to achieve the Sustainable Development Goals and address climate change.

Mains Question:

1. Explain the Various Initiatives taken by the Government of India towards the Better Living for the people of India.

TACKLING DRONE THREATS**Introduction:**

- Drones are versatile multi role Platforms. Several Drone Attacks reported World over.
- Drones pose a serious Security Threat. **Tackling Drone Threat is a big challenge for Security Agencies.**
- **Pakistan-origin drones dropping heavy arms and ammunition in Punjab** have alarmed security agencies not just in the border state but also in the national capital.
- Intelligence inputs suggest that terror outfits such as **Jaish-e-Mohammed (JeM) and Lashkar-e-Taiba (LeT) can use unmanned aerial vehicles (UAVs)** not just to drop payloads but also to carry bombs and target crowded areas, dignitaries and vital installations.

Drones:

- **A drone, in a technological context, is an unmanned aircraft.** Drones are more formally known as **Unmanned Aerial Vehicles (UAVs)** or **Unmanned Aircraft Systems (UAS).**

- Essentially, a drone is a flying robot. The aircrafts may be remotely controlled or can fly autonomously through software-controlled flight plans in their embedded systems **working in conjunction with onboard sensors and GPS**.
- Drones are now also used in a wide range of civilian roles ranging from **search and rescue, surveillance, traffic monitoring, weather monitoring** and firefighting to personal drones and business drone-based **photography, as well as videography, agriculture** and even delivery services.

Different Categories of Drone:

The **Director General of Civil Aviation (DGCA)** has segregated drones into five different categories:

- Nano: Less than or equal to 250 grams.
- Micro: From 250 grams to 2kg.
- Small: From 2kg to 25kg.
- Medium: From 25kg to 150kg.
- Large: Greater than 150kg.

Working of Drones:

- Drones are equipped with **different state of the art technology such as infra-red cameras (military UAV), GPS and laser (military UAV)**. Drones are controlled by remote control system also sometimes referred to as ground cockpit.
- An unmanned aerial vehicle system has two parts, the drone itself and the control system. The nose of the unmanned aerial vehicle is where all the sensors and navigational systems are present. The rest of the body is full of drone technology systems since there is no need for space to accommodate humans.

Unmanned Aircraft Operator Permit (UAOP):

- Operators of civil drones will need to get a permit from the DGCA.
- **There are exceptions for:**
 - Nano RPA operating below 50 feet (15 m) in uncontrolled airspace / enclosed premises.
 - Micro RPA operating below 200 feet (60 m) in uncontrolled airspace / enclosed premises – but shall inform local police 24 hours prior to such flight.
- **Remotely piloted Aircraft (RPA)** owned and **operated by National Technical Research Organisation (NTRO), Defence and Civilian Air Traffic Controllers (ATCs) and Central Intelligence Agencies** but after intimating local police.
- The **DGCA has to issue the UAOP within seven working days** provided all the documents are complete. This UAOP shall be valid for five years and non transferrable in nature.

Restricted Areas for Drones in India:

- RPAs **cannot be flown within 5km of the perimeters of the airports in Mumbai, Delhi, Chennai, Kolkata, Bengaluru and Hyderabad** and within 3km from the perimeter of any other airport.
- It cannot fly **within “permanent or temporary Prohibited, Restricted and Danger Areas”** and within 25km from international border which includes the **Line of Control (LoC), Line of Actual Control (LAC) and Actual Ground Position Line (AGPL)**.
- It cannot fly beyond 500 m into sea from the coast line and within **3 km from perimeter of military installations**.
- It cannot fly within a **5 km radius of the Vijay Chowk in Delhi**, within 2 km from perimeter of strategic locations/ vital installations notified by Ministry of Home Affairs and within 3 km from radius of State Secretariat Complexes.
- It also **cannot be operated from a mobile platform such as a moving vehicle, ship or aircraft**.
- **Eco-sensitive zones around National Parks and Wildlife Sanctuaries** are off-limits without prior permission.

Various uses of Drones:

- **Defense:** They can be put to use for different missions such as **surveillance, battlefield reconnaissance, artillery correction, target tracking** etc. Important drones in India include Lakshya, Daksh, and Rustom.
- **Agriculture:** Drones are able to **provide live data from a range of sensors and help in precision agriculture**. In supporting precision farming, drones can do **soil health scans, monitor crop health, assist in planning irrigation schedules, apply fertilizers**, estimate yield data and provide valuable data for weather analysis.
- **Wildlife Conservation:** Drones fitted with high definition **thermal cameras are used to track, inspect and monitor livestock remotely**. The government of Assam has partnered with Tata Consulting Services (TCS) to use drones to conduct surveillance, identify unauthorized settlements and **to deter poachers in Kaziranga National Park**.
- **Mining:** Drones have helped in solving challenges in the mining industry which include **better blast optimization, improved safety, faster surveying**, and construction of the comprehensive and continuous project data sets.
- **Rescue and Search during disasters:** Drones can scan affected areas with their **thermo-graphic cameras to locate missing persons**. Their reduced dimensions allow them to go to places that are hard to reach and find isolated persons; they **can also deliver food and water to survivors**.
- **Urban Planning:** Drones provide **instant mapping and ready to use data which aid in urban planning**.
- **Healthcare:** Drones can help in **quick access to drugs, blood, and medical technology in remote areas**. Companies like Zip line International have especially designed drones to deliver medical services in rural areas.
- **Weather Forecasting:** Drones can help **provide real time data of weather events**. A company called Saildrone has developed autonomous sailboat drone that can collect oceanic and atmospheric data from the ocean surface which can be used to understand the environment and imminent weather trends.
- **Surveillance:** A drone **allows recording and monitoring from the sky**, and therefore, they are suitable to monitor public events, protests, or any suspicious happening without being heard and seen.
- **Science & research:** They help scientists a lot in **research works to observe different occurrences in nature or a particular environment from the sky**. For example, drones are used to document the archaeological excavations, in nuclear accidents in glacier surveillance, to observe a volcanic eruption, etc.

Drones Threat from Anti-national elements and criminals:

- In our country, the security establishment is alive to the **potential drone threat to the public security**.
- During Independence Day or similar celebrations, detection devices are deployed to detect the drones or any other airborne threat to the VIP's or congregated public at large.
- West too is conscious of this threat. The common fear is that **drones could be weaponized and converted to an autonomous flying Improvised Explosive Devices (IEDs)** by the terrorists /terror groups with intent of harm the population.
- The threat is viable as the UAV's / Drones can be procured off the shelf by anyone interested.

Measures to deal with unauthorized civil drone operations:

- The standard defense against the illegal use of drone by a criminal or a terrorist is very difficult to **prevent and neutralize for the following reasons:-**
 1. The deployment and glitch free operation of the detection devices such as radars is difficult firstly, due to the **non-availability of ideal deployment sites and due to screening in the built up areas**.
 2. To avoid detections the terrorists/criminals are likely to use **small UAV such as a Quad-copter which will have very small radar cross-section**, inhibiting its radar detection.
 3. The terrorists could remain incognito by remaining in populated areas.

Conclusion:

- **Drones/UAVs are the emerging threats not only for the military** but, also for also for the civil society.

- This could attain threatening dimensions when these carry out unregulated indiscriminate flying in the air space while being used by the civil government, businesses and hobby enthusiasts.
- Today, their destructive capability and threatening potential has become a challenge for the security providers.
- There is a **need to regulate their use and identify and neutralize/ground those which threat.**

UN'S FINANCIAL CRISIS

Introduction:

- The United Nations is running a deficit of \$230 million, Secretary-General has said, and may run out of money by the end of October.
- In a letter for the 37,000 employees at the UN secretariat, said unspecified "additional stop-gap measures" would have to be taken to ensure salaries and entitlements are paid.
- To cut costs, UN secretariat mentioned postponing conferences and meetings and reducing services, while also restricting official travel to only essential activities and taking measures to save energy.

The Scenario:

- On October 9, 2019, the United Nations called its member states to pay their outstanding dues.
- As the organization is facing severe financial crisis, there may not be enough funds to pay staff salaries next month.
- According to the United Nations, out of 193 members, 129 had paid their regular budget. The regular budget for the UN for a year is 5.4 billion USD. This is separate from the peace keeping budget of 6.3 billion USD.
- India paid its regular contributions of 230 million USD on January 30, 2019 and India was one of the few countries to pay on time.
- There are around 37,000 employees in the UN secretariat. The member states have so far paid only 70% of total amount needed till September 2019.
- This has created a cash shortage of 280 million USD. In order tackle the crisis the UN is reducing services, postponing conferences and meetings and restricting official travel.

Role of United States and Other Countries in United Nations Funding:

- The US funding covers 22% of UN regular budget. It is more than any other nation.
- The US is to obligated to contribute 674 million USD for the budget 2018-19. Cumulatively, since the previous year, US owes 1.055 billion USD.
- The US had been withdrawing from number of international commitments. Soon US is also planning to exit the "Open Skies treaty".
- According to the treaty, it allows 34 member states to conduct unarmed surveillance flights over one another's territories. It was signed in 1992.
- Next USA, China is the largest contributor paying 12% of UN budget.
- This is 15 times to what India pays.
- Japan is the third largest contributor with paying 3% of UN funding.
- Following Japan there are other European countries that contribute to the UN funding.

The Concern:

- UN was established to provide security and prevent war situations in the world. Slowly it gained its momentum towards providing social and economic security to the world nations.
- The security decisions in the UN are controlled by the 5 major permanent members of the UN namely USA, China, UK, France and Russia.
- They are the major contributors of the funding as well. The UN wants its member nations to pay their contributions by the end of January every year.

- None of these contributors paid on time this year. As the countries want to push their individual strategic interests.
- For instance, the US voted for declaring Jerusalem as Israel's capital while the resolution was opposed by its own allies.

Reasons for the shortfall:

- India is among a handful of only 34 UN member states which paid their regular budget dues in full and on time to the world organisation.
- India paid 23.25 million dollars in regular budget assessments by January 31, 2019, the 30-day due period specified as per UN's Financial Regulation rules.
- Only 33 other nations paid their regular budget assessments in full within this 30 day due period. Subsequent to the end of the 30 day due period (January 31), 95 additional member states paid their 2019 regular budget assessment in full.
- As of October 8, 2019, 129 Member States have paid their regular budget dues in full, according to UN sources. Member states have paid USD 1.99 billion towards the 2019 regular budget assessment, while the outstanding amount for 2019 for regular budget is USD 1.386 billion.
- However, 64 states are yet to pay their regular budget dues in full for 2019. These include Afghanistan, Bangladesh, Brazil, Central African Republic, North Korea, Iran, Israel, Mexico, Oman, the Philippines, South Korea, Saudi Arabia, Sri Lanka, US and Venezuela.

Conclusion:

- The UN is facing a severe liquidity crisis, reaching its deepest deficit of the decade; UN Secretary warned that the world organisation will not have enough cash by next month to cover payrolls.
- UN Secretary warned that in the current month, the organization will reach the deepest deficit of the decade. We risk exhausting the closed peacekeeping cash reserves, and entering November without enough cash to cover payrolls.

Mains Question:

1. UN is facing a severe liquidity crisis, reaching its deepest deficit of the decade. Analyze

