



INSIGHTS IAS

SIMPLIFYING IAS EXAM PREPARATION

- I A S S E L F S T U D Y G U I D E -

CURRENT AFFAIRS

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GS PAPER - I

Paper 1 Topic: Indian culture will cover the salient aspects of Art Forms, Literature and Architecture from ancient to modern times.

1. 11TH WORLD HINDI CONFERENCE

What to study?

- For Prelims and Mains: Key facts on World Hindi Conference and its significance.
- Context:** 11th World Hindi Conference is being held at Mauritius.
- Theme:** "Vaishvik Hindi Aur Bharatiy Sanskriti".

About the conference:

- The event, **held once in three years**, is dedicated to Hindi language. It sees participation from Hindi scholars, writers and laureates from different parts of the world who contribute to the language.

Key facts for Prelims:

- The decision to organize the 11th edition of the Conference in Mauritius was taken at the 10th World Hindi Conference held in Bhopal, India in September 2015.
- The first World Hindi Conference was held in 1975 in Nagpur, India.** Since then, ten such Conferences have been held in different parts of the world.
- The MEA has also set up **the World Hindi Secretariat in Mauritius**. The main objective of the WHS is to promote Hindi as an international language and further its cause for recognition at the United Nations as an Official Language.

Sources: the hindu.

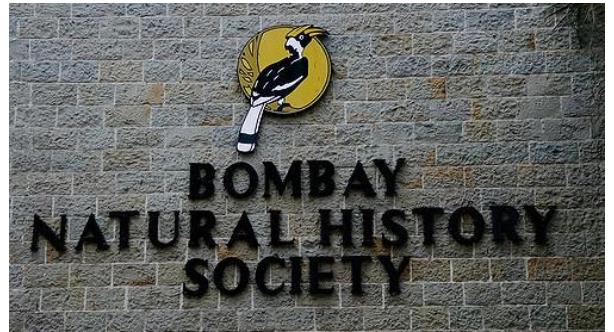
2. BOMBAY NATURAL HISTORY SOCIETY (BNHS)

What to study?

- For Prelims and Mains: Brief overview of BNHS, about Chilika.
- Context:** The Bombay Natural History Society (BNHS), one of India's premier avian research institutes, has started operating its **first regional centre on the campus of Wetland Research and Training Centre near Chilika Lake**.

Key facts:

- With opening up its branch in Odisha, the BNHS would be engaged in identifying the air route of the foreign birds flocking the Chilika lake during winter, sample collection, training related to bird census, publishing bird migration atlas books, examining various diseases among the birds and to review the condition of the Nalabana bird sanctuary along with counting the birds.



About Chilika Lagoon:

- It is the largest coastal lagoon in India and the second largest lagoon in the world after The New Caledonian barrier reef in New Caledonia.
- It is the largest wintering ground for migratory waterfowl found anywhere on the Indian sub-continent.
- It is one of the hotspot of biodiversity in the country, and some rare, vulnerable and endangered species listed in the IUCN Red List of threatened Animals inhabit in the lagoon for atleast part of their life cycle.
- On account of its rich bio-diversity and ecological significance, Chilika was designated as the 1st "Ramsar Site" of India.

- The Nalaban Island within the lagoon is notified as a Bird Sanctuary under Wildlife (Protection) Act, the National Wetlands, mangroves and coral reefs Committee of Ministry of Environment & Forests, Government of India, have also identified the lagoon as a priority site for conservation and management.
- Chilika Lagoon lies in the districts of Puri, Khurda and Ganjam of Odisha State along the eastern coast of India. It is well connected to the Chennai and Kolkata through National Highway No 5, and the Chennai-Kolkata rail line passes along the western bank of the Lagoon Balugaon, with Balugaon, Chilika and Rambha being the main stations along the Western shoreline of the lagoon.

About BNHS:

- The Bombay Natural History Society, founded on 15 September 1883, is one of the largest non-governmental **organisations** in India engaged in conservation and biodiversity research.
- BNHS is the partner of **BirdLife International in India**. It has been designated as a '**Scientific and Industrial Research Organisation**' by the Department of Science and Technology.
- Logo:** The BNHS logo is the great hornbill.
- Internet of Birds:** IT consultancy firm Accenture and the Bombay Natural History Society have developed Internet of Birds platform that identifies bird species found in India using Artificial Intelligence technology, including machine learning and computer vision, from digital photos that are uploaded by the public.

Sources: the hindu.

3. HERITAGE CIRCUIT AND NORTH EAST CIRCUIT

What to study?

- For Prelims and Mains: Various circuits covered under Swadesh Darshan scheme and key features of the scheme.
- Context:** The Ministry of Tourism has sanctioned two new projects under **Heritage and North East Circuits of Swadesh Darshan Scheme** for Rs. 164.95 Crores in Punjab and Tripura.

Heritage Circuit:

- Under **Heritage Circuit in the state of Punjab**, the project covers sites of Anandpur Sahib – Fatehgarh Sahib – Chamkaur Sahib – Ferozpur – Amritsar – Khatkar Kalan – Kalanour – Patiala at the cost of Rs. 99.95 crores.
 - The project includes development of Jallianwala Bagh in Amritsar for Rs. 8 Crores, development of Tourist Infrastructure and Heritage Path at Anandpur Sahib for Rs. 28.99 crores, development of Tourist Infrastructure at Fatehgarh Sahib among others.
 - The facilities being developed include Virtual Reality Shows (Jallianwala and Hussainiwala Border), beautification and landscaping, interpretation centres, façade development, wayside amenities, parking, CCTV and Wi-Fi facilities, Cafeterias, Open Air Theatre, drinking water facility etc.

North East Circuit:

- Under **North East Circuit in Tripura**, the sites of Surma Cherra- Unakoti- Jampui Hills- Gunabati- Bhunaneshwari- Matabari- Neermahal- Boxanagar- Chotta khola- Pilak- Avangchaarra are covered with total project cost of Rs. 65 Crores.
- The project envisaged infrastructural development of the sites with special emphasis on developing an Interpretation Centre, Tourist Visitor Centres, Cafeteria, Last Mile Connectivity, Illumination of sites and monuments, Wayside Amenities, Floating Jetties, Camping Grounds, Parking Facilities, Adventure Activities, Ghat Development at above sites.

About Swadesh Darshan Scheme:

- The Tourism Ministry had launched 'Swadesh Darshan' scheme with **an objective to develop theme-based tourist circuits in the country**. These tourist circuits will be developed on the principles of high tourist value, competitiveness and sustainability in an integrated manner.

Features of Swadesh Darshan Scheme:

- The scheme is **100% centrally funded** for the project components undertaken for public funding.
- To leverage the voluntary funding available for **Corporate Social Responsibility (CSR)** initiatives of Central Public Sector Undertakings and corporate sector.

- Funding of individual project will vary from state to state and will be finalised on the basis of detailed project reports prepared by **PMC (Programme Management Consultant)**.
- A **National Steering Committee (NSC)** will be constituted with Minister in charge of M/O Tourism as Chairman, to steer the mission objectives and vision of the scheme.
- A **Mission Directorate headed by the Member Secretary, NSC** as a nodal officer will help in identification of projects in consultation with the States/ UTs governments and other stake holders.
- **PMC will be a national level consultant** to be appointed by the Mission Directorate.

Sources: pib.

4. PROJECT NAVLEKHA

What to study?

- For Prelims and Mains: Key features and significance of the project.
- **What? Google has unveiled Project Navlekha** to make online content relevant for more Indian users especially in local languages.

About Project Navlekha:

- Navlekha in Sanskrit means "**a new way to write.**"
- **Google is using its expertise in artificial intelligence for Project Navlekha**, using which, it will quickly render any PDF with Indian language content into editable text, overcoming issues that usually occur when you try to copy text in Indian languages from a PDF.
- The project **aims to bring 135,000 local language publishers online** by making web hosting smooth and simple.
 - It will allow local publishers who do not have websites to make their offline content fit for online publishing in less than a minute. It also comprises tool that uses Artificial Intelligence (AI) to allow publishers to simply scan documents or PDFs and create instant web pages on the platform.
 - The project will provide a handy online publishing tool for local language newspapers and content companies—90% of which do not have a website.
 - The registered publishers on Navlekha will also be provided with free web hosting, along with a branded domain for three years. They'll also have AdSense support to begin monetising their content.
 - Under Navlekha project, Google will help these publishers to receive training and support and a branded page domain for the first three years.

Significance of the project:

- At present, amount of online content in Indian languages is only 1% of what is available in English. India is important market for Google as it has second largest population of internet users in the world. Hence, with the new project the amount of resources available for Indians in local languages will increase.

Sources: the hindu.

Paper 1 Topic: Modern Indian history from about the middle of the eighteenth century until the present-significant events, personalities, issues.

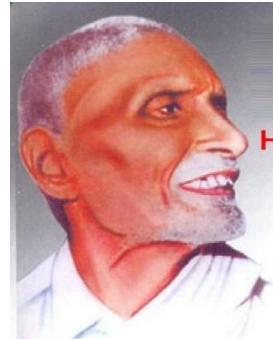
1. PINGALI VENKAYYA

What to study?

- **For Prelims:** Contributions of Pingali Venkayya, adoption of Indian flag.
- **For Mains:** Flag code of India- overview.
- **Context:** 141st birth anniversary of freedom fighter and designer of Indian National Flag Pingali Venkayya was observed on August 2, 2018.

Who was Pingali Venkayya?

- Pingali Venkayya was a **freedom fighter and the designer of the Indian National Tricolour**. The national flag that we see today was based upon his design.
- Early life:** Born on August 2, 1876 in Krishna district of Andhra Pradesh, Venkayya served as a soldier in the British Army in South Africa during the Anglo Boer war in Africa. A firm believer in Gandhian principles and an ardent nationalist, Venkayya met the Mahatma during the war.



This person had a **Ph.D.** in **Geology** and was an **expert** in mining.

He is the designer of Indian Flag.

He led a humble life and died as a poor person as no one **recognized** his contribution.

The evolution of Indian National Flag:

- Between 1918 and 1921, Venkayya raised the issue of having an own flag in every session of the Congress. Back then, he was working as a lecturer in the Andhra National College in Machilipatnam.
- He met the Mahatma once again in Vijayawada and showed him his publication with the various designs of the flag. Acknowledging the need for a national flag, Gandhi then asked Venkayya to design a fresh one at the national congress meeting in 1921.
- Initially, Venkayya came up with saffron and green colours, but it later evolved with a spinning wheel at the centre and a third colour-white. (LALA HANS RAJ SONDHI SUGGESTED ADDING A SPINNING WHEEL — SHOWING THE INDEPENDENT INDIANS WHO CAN SPIN THEIR OWN CLOTHING FROM LOCAL FIBRES.)
- The flag was officially **adopted by the Indian National Congress in 1931**.

Sources: the hindu.

Paper 1 Topic: The Freedom Struggle – its various stages and important contributors /contributions from different parts of the country.

1. QUIT INDIA MOVEMENT

What to study?

- For Prelims and Mains: Quit India Movement- reasons, key features and outcomes.
- Context:** 76th anniversary of Quit India movement was observed on August 8th, 2018.

What is Quit India Movement?

- It was in 1942 when the world was going through the havoc caused by World War II. India too was facing the heat and after the Cripps Mission had failed, and on 8 August 1942, Mahatma Gandhi made a Do or Die call through the Quit India movement.
- Large protests and demonstrations were held all over the country. However, as the movement didn't get too much support from the outside, it was crushed and the British refused to grant immediate Independence, saying that it could happen only after the war had ended.

Who started Quit India Movement?

- The Quit India movement was started by Mahatma Gandhi in 1942 but drew protests from the All-India Congress Committee demanding what Gandhi called was "An Orderly British Withdrawal" from India.
- This forced the British to act immediately and soon all the senior INC leaders were imprisoned without trial within hours of Gandhi's speech.

Where was the Quit India Speech given?

- On 14th July 1942, the Congress Working Committee at Wardha had passed a resolution demanding complete independence from the British government.
- On August 8, 1942, Mahatma Gandhi made a Do or Die call in his Quit India speech which was delivered in Bombay at the Gowalia Tank Maidan.
- Even though the speech caused some turmoil within the party and even leaders like Jawaharlal Nehru and Maulana Azad were apprehensive and critical of the call, but backed it and stuck with Gandhi's leadership until the end.

Other key facts:

- Several national leaders like Mahatma Gandhi, Abdul Kalam Azad, Jawaharlal Nehru and Sardar Vallabhbhai Patel were arrested.
- The Congress was declared an unlawful association, leaders were arrested and its offices all over the country were raided and their funds were frozen.
- The first half of the movement was peaceful with demonstrations and processions. The peaceful protest was carried till Mahatma Gandhi's release.
- The second half of the movement was violent with raids and setting fire at post offices, government buildings and railway stations. Lord Linlithgow adopted the policy of violence.
- The Viceroy's Council of Muslims, Communist Party and Americans supported Britishers.

Sources: the hindu.

Paper 1 Topic: History of the world will include events from 18th century.

1. INTERNATIONAL DAY FOR THE REMEMBRANCE OF THE SLAVE TRADE AND ITS ABOLITION

What to study?

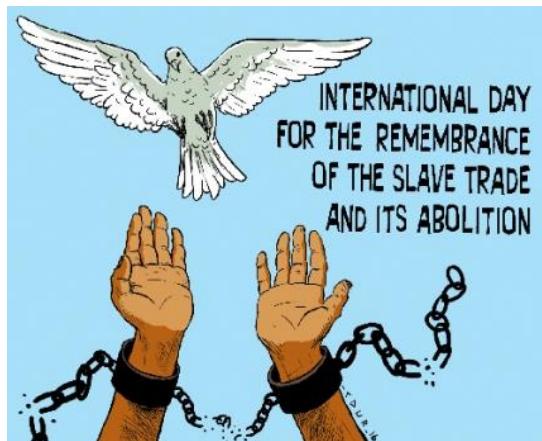
- For Prelims: What is Haitian revolution?
- For Mains: Causes, significance, impact and outcomes of the revolution.
- **Context:** The United Nations' *International Day for the Remembrance of the Slave Trade and its Abolition* is observed every year on **August 23** to remind people of the tragedy of the transatlantic slave trade, the largest deportation in history.
- The International Day for the Remembrance of the Slave Trade and its Abolition was first celebrated in many countries, in particular in Haiti, on August 23, 1998, and in Senegal on August 23, 1999.

Significance of the day:

- The day is commemorated to pay tribute to all those who fought for freedom and worked hard to abolish the slave trade and slavery throughout the world. This commitment and the actions used to fight against the system of slavery had an impact on the human rights movement.

Steps taken by the UNESCO:

- To honour the history of the slave trade and its abolition, UNESCO (United Nations Educational, Scientific and Cultural Organization) in 2017, added to *its World Heritage List the Mbanza Kongo, Vestiges of the Capital of the former Kingdom of Kongo (Angola) and the Valongo Wharf Archaeological Site (Brazil), as an acknowledgement of their "outstanding universal value."*
- **UNESCO also started an initiative in 1994 known as the 'Slave Route' project** to contribute to a better understanding of the causes, forms of operation, issues and consequences of slavery in the world.

**The Haitian revolution:**

- The night of August 22-23, 1791, in Saint-Domingue, in what is Haiti and the Dominican Republic today, saw the beginning of the uprising that would play a crucial role in the abolition of the transatlantic slave trade.
- Men and women sold into slavery, revolted against the slave system to obtain freedom and independence for Haiti. The rebellion weakened the Caribbean colonial system, sparking an uprising that led to abolishing slavery and giving the island its independence.
- It marked the beginning of the destruction of the slavery system, the slave trade, and colonialism. **The large and well-organized uprising, better known as the Haitian Revolution, lasted 13 years and ended with the independent nation of Haiti.**
- In 1888, nearly 85 years later, Brazil became the last nation in America to abolish slavery.

Outcomes and impact:

- The success of the rebellion, led by the slaves is a deep source of inspiration today for the fight against all forms of servitude, racism, prejudice, racial discrimination and social injustice that are a legacy of slavery.

Sources: the hindu.

Paper 1 Topic: Indian society and Diversity; Social empowerment

1. CABINET CLEARS BILL TO RESTORE THE PROVISIONS OF SC/ST ACT

What to study?

- For Prelims:** Key features of SC/ST Act.
- For Mains:** Controversy over its dilution and the need for protection.
- Context:** The cabinet has given its nod to introduce a Bill to restore the original provisions of *the Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989*, which the Supreme Court had struck down in a March ruling.

The Amendment Bill seeks to insert three new clauses after Section 18 of the original Act:

- The first stipulates that for the purposes of the Act, "preliminary enquiry shall not be required for registration of a First Information Report against any person."
- The second stipulates that the arrest of a person accused of having committed an offence under the Act would not require any approval.
- The third says that the provisions of Section 438 of the Code of Criminal Procedure — which deals with anticipatory bail — shall not apply to a case under this Act, "notwithstanding any judgment or order of any Court."

What necessitated this?

- On March 20, the Supreme Court issued a slew of guidelines to protect people against arbitrary arrests under the Act, directing that public servants could be arrested only with the written permission of their appointing authority, while in the case of private employees, the Senior Superintendent of Police concerned should allow it. A preliminary inquiry should be conducted before the FIR was registered to check if the case fell within the ambit of the Act, and whether it was frivolous or motivated, the court ruled.
- The ruling was greeted by a storm of protest from Dalit groups, which said the order diluted the law. However, the court refused to stay its ruling, leading to the demand from Dalit groups that the government introduce an ordinance or an Amendment Bill to restore the provisions.

About SC/ST Act:

- The Scheduled Castes and Tribes (Prevention of Atrocities) Act is popularly known as POA, the SC/ST Act, the Prevention of Atrocities Act, or simply the Atrocities Act. The SC/ST Act was enacted on September 9, 1989. The rules for the Act were notified on March 31, 1995.
- The SC/ST Act lists 22 offences relating to various patterns or behaviours inflicting criminal offences and breaking the self-respect and esteem of the scheduled castes and tribes community. This includes denial of economic, democratic and social rights, discrimination, exploitation and abuse of the legal process.
- According to the SC/ST Act, the protection is provided from social disabilities such as denial of access to certain places and to use customary passage, personal atrocities like forceful drinking or eating of inedible food sexual exploitation, injury etc, atrocities affecting properties, malicious prosecution, political disabilities and economic exploitation.

Back to the basics

A synopsis of the SC/ST Act's fate in the Supreme Court



File photo of a protest against the Act's dilution in April 2018.

MARCH 20, 2018: Justices

A.K.Goel and U.U. Lalit of the Supreme Court hold that the SC/ST Act has become an instrument for "blackmail" of citizens and public servants. The SC reads down Section 18, which bars anticipatory bail to suspects

APRIL 3: The Centre files a review

petition. The same Bench hears the review and observes that its March 20 judgment is to protect innocents from arbitrary arrest, and not an affront to Dalit rights

MAY 3: SC clarifies that the police need to conduct an enquiry before arrest in cases where they feel a complaint filed about an atrocity committed on Dalits is outright "absurd" or "absolutely" frivolous

JULY 6: Justice A.K. Goel, in his retirement speech, justifies the March 20 judgment

AUGUST 1: Union Cabinet gives its nod to a bill to restore the original provisions of the SC/ST Act

- For speedy trial, Section 14 of the SC/ST Act provides for a Court of Session to be a Special Court to try offences under this Act in each district.
- The prime objective of the SC/ST Act is to deliver justice to marginalised through proactive efforts, giving them a life of dignity, self-esteem and a life without fear, violence or suppression from the dominant castes.

Sources: pib.

Paper 1 Topic: Role of women and women's organization.

1. ANGANWADI CENTRES (AWCS)

What to study?

- For Prelims: AWCs and ICDS- features.
- For Mains: Significance of AWCs in fighting child hunger and malnutrition.
- Context:** A total of 14 lakh AWCs have been sanctioned to various States/UTs across the country which consists of about 1.36 lakh AWCs located in the urban areas. As on 01.06.2018, 13.63 lakh AWCs (rural and urban) are operational.
- As per the data captured through the ICDS Monitoring Information System, about 24.3% AWCs out of 13.63 lakh operational AWCs (rural and urban) are running in rented buildings.

What are Anganwadi Centres (AWCs)?

- Anganwadi is a type of rural mother and child care centre in India. They were started by the Indian government in 1975 **as part of the Integrated Child Development Services program** to combat child hunger and malnutrition.
- They provide **a package of six services**—supplementary nutrition, referral services, immunisation, health check-up, pre-school non-formal education and health and nutrition education—to women and children.

Challenges faced by AWCs?

- About a third of total 13.6 lakh anganwadi centres have **neither toilets nor drinking water facilities**.
- In Manipur only 21 per cent AWCs have drinking water facilities followed by Arunachal Pradesh (28.51 per cent), Uttarakhand (29.04 per cent), Karnataka (38.76 per cent), Telangana (40.21 per cent), Jammu and Kashmir (48.18 per cent) and Maharashtra (53.47 per cent).
- Similarly, in Telangana only 21.30 per cent AWCs have toilets, followed by Manipur (27.05 per cent), Jharkhand (38.74 per cent), Andhra Pradesh (43.93 per cent), Jammu and Kashmir (44.11 per cent), Assam (47.51 per cent), Arunachal Pradesh (48.73 per cent) and Odisha (52.64 per cent).

Integrated Child Development Service (ICDS):

- ICDS is one of the flagship initiatives of Govt. of India that is being implemented in the state by WCD Dept.
- ICDS seeks to provide young children with an integrated package of services such as supplementary nutrition, health care and pre-school education.
- ICDS programme seeks to provide all basic essential services to children and mothers in an integrated manner right in their villages or wards. Gradually, the scheme has been expanded to urban slums and to rural and tribal blocks.

Sources: pib.

2. CRIMINAL LAW (AMENDMENT) BILL, 2018

What to study?

- For Prelims: Highlights of the Bill.
- For Mains: Need for such harsh penalties- issues associated.
- Context:** Parliament has passed the **Criminal Law (Amendment) Bill, 2018**. The main highlight of the bill is that it seeks to amend the Indian Penal Code (IPC), the Evidence Act, the Code of Criminal Procedure (CrPC) and the Protection of Children from Sexual Offences (POCSO) Act to introduce a new provision to sentence convicts of such crimes punishment of death.

Highlights of the Bill:**Punishment:**

- It provides for ***stringent punishment*** including death penalty for those convicted of raping girls below the age of 12 years.
- The minimum punishment in case of rape of women has been increased from rigorous imprisonment of seven years to 10 years, extendable to life imprisonment.
- In case of rape of a girl under 16 years, the minimum punishment has been increased from 10 years to 20 years, extendable to imprisonment for rest of life, which means jail term till the convicts' "natural life".
- The punishment for gang rape of a girl below 16 years will invariably be imprisonment for the rest of life of the convict.
- Stringent punishment for rape of a girl under 12 years has been provided with the minimum jail term being 20 years which may go up to life in prison or death sentence. Gang rape of a girl under 12 years of age will invite punishment of jail term for the rest of life or death.

Speedy investigation:

- The measure also provides for speedy investigations and trial. The time limit for investigation of all cases of rape has been prescribed, which has to be mandatorily completed within two months.
- The deadline for the completion of trial in all rape cases will be two months. A six-month time limit for the disposal of appeals in rape cases has also been prescribed.

Bail related provisions:

- There will also be no provision for anticipatory bail for a person accused of rape or gang rape of a girl under 16 years. It has also been prescribed that a court has to give notice of 15 days to a public prosecutor and the representative of the victim before deciding bail applications in case of rape of a girl under 16 years of age.

Need for a stringent law:

- The number of reported cases of rapes of children increased in India by 82% in 2016 compared to 2015. A climate of violence, social and economic insecurity, alienation, and a progressive undermining of the status of women and children seem to have given an impetus to carry out crimes against women and children.
- Therefore, the legal system must give a clear signal that we as a nation consider the rape of children below the age of 12 as among the most heinous of offences. Making such crimes punishable by capital punishment certainly gives such a signal.

Is it sufficient?

- Statistics have not been able to prove or disprove the efficacy of capital punishment as a deterrent. While the U.K. has seen an increase in murders since 1965 when capital punishment for murder was removed from the statute book, Canada has not seen any such impact since it abolished the death penalty in 1976.
- The underlying socio-economic conditions in a society that cause crimes seem to have as much of an impact on the increase or decrease of crimes as the law does.

What is needed?

- It is not the severity of the punishment but the certainty and uniformity of it which will reduce crime. Even for capital punishment to work as a deterrent, the fairness of the investigation, the certainty of conviction, and the speed of the trial are vital.
- With the police and judicial independence being under a cloud, especially after the incidents in Kathua and Unnao, the deterrent value of capital punishment seems diminished unless police reforms and fast-track courts are a part of the package.

Facts for Prelims:

- Rajasthan and Madhya Pradesh have passed a Bill providing for death penalty to those convicted of raping girls of 12 years and below.

Sources: the hindu.

3. ALL-WOMEN EXPEDITION TO MT. MANIRANG

What to study?

- For Prelims: Mt. Manirang- location and other key facts.
- For Mains: Related to women empowerment.
- Context:** An all-women expedition team has begun its journey to Mt. Manirang from Himachal Pradesh. The expedition commemorates the silver jubilee of 1993 Women Everest expedition.

The 1993 Women Everest expedition:

- The Indo-Nepalese women's Everest expedition in 1993 was the first all women expedition, launched by Indian Mountaineering foundation.
- It was **funded by the Ministry of Youth Affairs and Sports.**
- The 21-member team was **led by Ms. Bachendri Pal.**
- The historic expedition set up several world records at the time which included the largest number of persons (18) of a single expedition to climb Mount Everest, largest number of women (six) from a single country to climb Mount Everest.
- Santosh Yadav, member of the team, became the first woman in the world to climb Mount Everest, while Miss Dicky Dolma became the youngest women (19) years in the world to climb the highest peak in the world.

About Mt. Manirang:

- Manirang is one of the highest mountains in the Indian state of Himachal Pradesh. It lies on **the border between Kinnour and Lahaul and Spiti district.**
- Mount Manirang (Altitude: 6593 mtr. / 21625.04 ft) is known as the crown of the Spiti valley.
- The whole region is situated in the rain shadow area and more or less lies dry other than winter.

Sources: pib.

4. INDECENT REPRESENTATION OF THE WOMEN (PROHIBITION) ACT, 1986

What to study?

- For Prelims: Key features of the Act.
- For Mains: Need for amendments.
- Context:** After taking into account of the recent technological advancement in the field of communications such as social media platforms, etc, the Ministry of Women and Child Development has decided to move fresh Bill to broaden the scope of **the Indecent Representation of the Women (Prohibition) Act, 1986** to cover the audio-visual media and content in electronic form.

The reformulated Bill proposes following amendments in the parent Act:

- Amendment in definition of term advertisement** to include digital form or electronic form or hoardings, or through SMS, MMS etc.
- Amendment in definition of distribution** to include publication, license or uploading using computer resource, or communication device or in.
- Insertion of **a new definition to define the term publish.**
- Amendment in section 4** to include that No person shall publish or distribute or cause to be published or cause to be distributed by any means any material which contains indecent representation of women in any form.
- Penalty** similar to that provided under the Information Technology Act, 2000
- Creation of a Centralised Authority** under the aegis of National Commission of Women (NCW). This Authority will be headed by Member Secretary, NCW, having representatives from Advertising Standards Council of

THE INDECENT REPRESENTATION OF WOMEN (PROHIBITION) ACT 1986

INTRO :

This Act is different than the Act of obscenity (S. 292). Exploitation of body of women is resorted by advertisers, magazine and other frequently but not coming under law of obscenity. Therefore this provision has been made.

Provision :

- No person shall publish or arrange or take part in the publication or exhibition of any advertisement containing indecent representation of women in any form.
- No person shall produce, sell, hire, distribute, circulate or send by post any book, pamphlet, slide, film, writing, drawing, painting, photograph which contain indecent representation of women.

- India, Press Council of India, Ministry of Information and Broadcasting and one member having experience of working on women issues.
- Functions:** This Centralised Authority will be authorized to receive complaints or grievances regarding any programme or advertisement broadcasted or publication and investigate/ examine all matters relating to the indecent representation of women.

Need for revisiting the law:

- The Government of India has enacted the Indecent Representation of Women (Prohibition) Act (IRWA), 1986 to prohibit indecent representation of women through advertisements, publications, writings, paintings, figures or in any other manner.
 - Since the enactment of the Act, **technological revolution has resulted in the development of new forms of communication**, such as internet, multi-media messaging, cable television, over-the-top (OTT) services and applications e.g. Skype, Viber, WhatsApp, Chat On, Snapchat, Instagram etc.
 - Therefore, these technological advancements make it necessary to widen the scope of the law so as to cover such forms of media on one hand and to strengthen the existing safeguards to prevent indecent representation of women through any media form on the other.

Sources: pib.

5. TRIPLE TALAQ BILL

What to study?

- For Prelims: What is Triple Talaq, Important provisions of the Bill.
- For Mains: Issues related to Triple talaq and observations made by the Supreme Court.
- Context:** The Union Cabinet has approved a few amendments in the instant triple talaq bill. The amended triple talaq bill will be tabled in Rajya Sabha for its approval.

Background:

- In December, the Lok Sabha passed the Muslim Women (Protection Bill, 2017), which criminalises the practice of talaq-e-bidda. This came after the Supreme Court on August 22, 2017, struck down triple talaq, calling the Islamic practice unconstitutional.

Changes in the triple Talaq Bill- The Cabinet made three amendments to the triple talaq law:

One: provision for bail:

- While the proposed law will remain “non-bailable” offence, the accused can approach a magistrate even before the trial to seek bail. Under a non-bailable offence, bail cannot be granted by police at the police station. A provision has been added to allow the magistrate to grant bail ‘after hearing the wife’. “But the offence of instant triple talaq under the proposed law remains non-bailable.
- The magistrate would ensure that bail is granted only after the husband agrees to grant compensation to the wife as provided in the bill. The quantum of compensation will be decided by the magistrate, as per the bill.

Two- check misuse:

- Another amendment makes it clear that the police would lodge FIR only if approached by the victim (wife), her blood relations or people who become her relatives by virtue of her marriage. This would settle fears that even a neighbour can file FIR as is the cases in any cognisable offence. This would check misuse.

Third- A compoundable offence:

- The third amendment makes the offence of instant triple talaq “compoundable”. Now, a magistrate can use his powers to settle the dispute between a husband and his wife. Under a compoundable offence, both parties have the liberty of withdrawing the case. However, the jail term for a Muslim man who resorts to triple talaq remains three years and only a magistrate, and not a local police officer, can release the accused on bail.

What did the original Bill include?

- If a Muslim man resorts to triple talaq then he will face a jail term of three years, as instant triple talaq will now be considered a non-bailable, cognisable offence.

- Opting for triple talaq could also attract fine and the amount would be the magistrate's call who would be hearing the case.
- A Muslim wife can also approach a magistrate and ask for subsistence allowance for herself and her minor children.
- A victim of triple talaq can seek the custody of her minor children from the magistrate who will take the final decision on the issue. Only Jammu and Kashmir will be out of the ambit of the proposed law.

What is instant triple talaq?

- There are three forms of talaq (divorce) in Islam: Ahsan, Hasan and Talaq-e-Biddat (triple or instant talaq). Ahsan and Hasan are revocable but Biddat is irrevocable. Biddat is considered sinful but is permissible in Islamic law. It has been banned in more than 20 Muslim countries, including Pakistan and Bangladesh.

Sources: the hindu.

6. DELHI POLICE GETS INDIA'S FIRST ALL-WOMEN SWAT TEAM

What to study?

- For Prelims: India's first all- women SWAT.
- For Mains: Significance of such initiatives and how they help in empowering women.
- **Context:** Delhi will be the first police force in the country to have an all-women SWAT team.

Key facts:

- Trained by specialists from India and abroad, 36 women constables from northeastern states have been inducted into the squad after rigorous, 15-month training.
- The maximum numbers of members (13) are from Assam and five each from Arunachal Pradesh, Sikkim and Manipur.
- These commandos will be stationed at strategic locations in central and south Delhi. Amidst intel inputs of women fidayees planning to target the capital, this all-women unit would helm the security apparatus around Red Fort and India Gate as well. Many of them would be posted in anti-terror vans called **Parakram**.
- The women are trained to handle challenges unique to the capital—like climbing multi-storey buildings or carrying out hostage rescue operations at hotels, buses or metro.
- The formation of this team is being considered a big achievement as most western countries do not have all-women SWAT teams due to the kind of training required to become one.

Sources: the hindu.

7. SEXUAL HARASSMENT OF WOMEN AT WORKPLACE ACT

What to study?

- For Prelims: Features of the Act.
- For Mains: Significance and the need for this legislation.
- **Context:** As per the latest amendment to the Companies (Accounts) Rules, 2014, it is now mandatory to disclose compliance under the Sexual Harassment of Women at Workplace Act in the Annual Reports of Private companies.

Significance of the move:

- This is a major step towards making the workplace safe for the women in the private sector. This will cast as ever higher responsibility on the Directors of the Companies for implementation of the Act.

THE SEXUAL HARASSMENT OF WOMEN AT WORKPLACE (PREVENTION, PROHIBITION AND REDRESSAL) ACT 2013:

- The Act seeks to cover all women, irrespective of their age or employment status and protect them against sexual harassment at all workplaces both in public and private sector, whether organized or unorganized. It came into force on December 9, 2013.

Some important provisions of the Act:

- The Act defines sexual harassment at the work place and creates a mechanism for redressal of complaints. It also provides safeguards against false or malicious charges.
- **The definition of “aggrieved woman”**, who will get protection under the Act is extremely wide to cover all women, irrespective of her age or employment status, whether in the organized or unorganized sectors, public or private and covers clients, customers and domestic workers as well.
- **Definition of workplace:** While the “workplace” in the Vishaka Guidelines is confined to the traditional office set-up where there is a clear employer-employee relationship, the Act goes much further to include organisations, department, office, branch unit etc. in the public and private sector, organized and unorganized, hospitals, nursing homes, educational institutions, sports institutes, stadiums, sports complex and any place visited by the employee during the course of employment including the transportation.
- **Every employer is required to constitute an Internal Complaints Committee** at each office or branch with 10 or more employees. The District Officer is required to constitute a Local Complaints Committee at each district, and if required at the block level.
- **Functions of the committee:** The Committee is required to complete the inquiry within a time period of 90 days. On completion of the inquiry, the report will be sent to the employer or the District Officer, as the case may be, they are mandated to take action on the report within 60 days.
- **Powers:** The Complaints Committees have the powers of civil courts for gathering evidence. The Complaints Committees are required to provide for conciliation before initiating an inquiry, if requested by the complainant.
- **Penalties have been prescribed for employers.** Non-compliance with the provisions of the Act shall be punishable with a fine of up to 50,000. Repeated violations may lead to higher penalties and cancellation of licence or registration to conduct business.

Facts for Prelims:

- Companies Act, 2013 provides the disclosure framework which the Directors of every company are required to comply with in the Annual Reports. It also includes the penal provisions for non-disclosure.

Sources: Pib.

8. KANYASHREE SCHEME

What to study?

- For Prelims: Key features of the Scheme, UN Public awards.
- For Mains: Significance and performance of the scheme.
- **Context:** West Bengal government has announced that there would not be any ceiling for a family's annual earnings to be a beneficiary under the **UN award winning Kanyashree scheme. Currently, girls who belong to families with annual family income not more than Rs 1.20 lakh is entitled to get the benefits.**
- The state government would also be coming up with a “Kanyashree University” for girls soon.

About Kanyashree scheme:

- **What is it?** Kanyashree is a conditional cash transfer scheme aiming at improving the status and well being of the girl child by incentivising schooling of teenage girls and delaying their marriages until the age of 18. It received the United Nations Public Service Award last year.
- **Performance of the scheme:** Through the initiative, cash was deposited into the bank account of girls for every year they remained in school and were unmarried. This initiative led to a “drastic reduction in child marriage, increase in female education and female empowerment.”

UN Public Service Awards:

- The UN Public Service Awards are given by the world body to institutions from across the world for their innovation and excellence in providing public services.
 1. It highlights the pivotal role of public services in the implementation of the Sustainable Development Goals (SDGs).
 2. The Awards aim at discovering innovations in governance; reward excellence in the public sector; motivate public servants to further promote innovation; enhance professionalism in the public service; raise the

image of public service; enhance trust in government; and collect and disseminate successful practices for possible replication.

Sources: the hindu.

9. NCRB TO TRACK COMPLAINTS ON SEXUAL VIOLENCE

What to study?

- For Prelims: about NCRB.
- For Mains: Ways to curb sexual violence, efforts by government in this regard.
- **Context:** A high-level meeting was recently convened to discuss recommendations on ways to curb “sexual violence” videos involving women and children.

Outcomes of the meeting:

- It was decided in the meeting that the ***National Crime Records Bureau (NCRB) would be the designated nodal agency for monitoring the complaints received*** on a government portal that records child pornography and sexual violence videos.
- The NCRB would ***coordinate with service providers*** such as Facebook, YouTube and WhatsApp and ask them to ***block malicious videos and contents***.

Impact:

- NCRB is only ***a crime record agency***. Therefore, a government notification has been issued ***under the Information Technology Act, 2000*** to enable it to take action against such videos. Now, whenever such incidents are reported, it can write to service providers and ask them to block the content.

About NCRB:

- NCRB is the ***Nodal Agency for authentic source of Data*** on crime, accidents, suicides, and prisons for policy matters and research.
- It was set-up in 1986 to function as a repository of information on crime and criminals so as to assist the investigators in linking crime to the perpetrators.
- It was set up based on the recommendations of the ***National Police Commission (1977-1981) and the MHA's Task force (1985)***.
- It was set up by merging the Directorate of Coordination and Police Computer (DCPC), Inter State Criminals Data Branch of CBI, Central Finger Print Bureau of CBI, and Statistical Branch of BPR&D.

Important functions:

- Bureau is implementing & monitoring agency for implementation of Crime & Criminal Tracking Network System (CCTNS), a Mission Mode Project under the National e-Governance Plan of Government of India. The project aims at creating a comprehensive and integrated system for enhancing the efficiency and effectiveness of policing in the country.
- NCRB also imparts training in Information Technology (IT) and Finger Print Science for Indian Police Officers as well Foreign Police officers. Central finger print bureau is under the administrative control of NCRB.

Important publications:

- ***NCRB publishes 4 annual publications*** on Crime, Accidental Deaths & Suicides, Prison Statistics and Finger Prints. These publications serve as principal reference points on crime statistics not only police officers but also for criminologists, researchers, media and policy makers not only in India but abroad well.

Background:

- In 2015, as many as 34,651 cases of rape were registered. The number increased to 38,947 in 2016. Overall crimes against women rose from 3,29,243 in 2015 to 3,38,954 in 2016, according to the NCRB data.
- A majority of cases categorised as crimes against women were reported under “cruelty by husband or his relatives” (32.6 per cent), followed by “assault on woman with intent to outrage her modesty” (25 per cent), “kidnapping and abduction of women” (19 per cent) and “rape” (11.5 per cent).
- The highest number of rapes have been reported from Madhya Pradesh (4,882), followed by Uttar Pradesh (4,816) and Maharashtra (4,189) in 2016, according to the NCRB data.

10. SWEDEN LAUNCHES 'FEMINIST FOREIGN POLICY' MANUAL

What to study?

- For Prelims: The launch of feminist foreign policy.
- For Mains: Significance of the policy and what other countries can learn from this?
- Context:** Sweden has released a handbook of its "**feminist foreign policy**" for rights groups and foreign governments, showcasing lessons from the Scandinavian nation's flagship approach to promoting women's rights globally.

Highlights of the manual:

- The manual is derived from four years of work to place gender equality at the heart of the country's international agenda.
- Sweden began its feminist foreign policy "in response to the discrimination and systematic subordination that still mark the daily lives of countless women and girls around the world".
- Its goals include the promotion of economic emancipation, fighting sexual violence and improving women's political participation.
- Projects cited in the manual include an action plan for five war-torn and post-conflict nations — Afghanistan, Colombia, Democratic Republic of Congo, Liberia and the Palestinian Territories — building in targets for women's rights and empowerment for the first time.
- The handbook highlights Sweden's work in Congo to promote "positive masculinity" in the country, where it has run initiatives such as promoting social media debate on men's role in society.

Way ahead:

- It's "too early" to draw any conclusions about whether the feminist approach leads to significant change. While gender equality was "an object in itself", it is "essential" in achieving more general government objectives, like peace, security and sustainable development.

Sources: toi.

11. MARRIAGE CERTIFICATE MUST FOR OFFICIAL WORK IN MEGHALAYA

What to study?

- For Prelims: Which state has made it mandatory to produce marriage certificate for official works?
- For Mains: Need, significance and outcomes of this move.
- What?** The State government in matrilineal Meghalaya has made it mandatory for married people to produce marriage certificates for all official purposes.
- The government has also decided to deny government jobs and benefits to men who have abandoned their families and are not providing for maintenance of their children. Some of these men live with other women.

What necessitated this?

- The step has been taken in view of increasing cases of broken marriages and women being forced to fend for themselves and their children. The abandonment of families by men lead to a spike in school dropouts and juvenile crimes. Also, most marriages in the Khasi society are not registered, and this makes it difficult for abandoned women to fight for the maintenance of their children.

Significance of the move:

- The government's order cannot stop divorce, but marriage certificates will help abandoned women fight for the maintenance of their children after their husbands abandon them.

Sources: the hindu.

Paper 1 Topic: Population and associated issues, poverty and developmental issues, urbanization, their problems and their remedies.

1. EASE OF LIVING INDEX

What to study?

- For Prelims: Performance of various cities.
- For Mains: Ease of Living index and its significance.
- **Context:** Ministry of Housing and Urban Affairs has released Ease of Living Index.

About the index:

- The index has been developed to allow city managers to get a grip on the city's baseline and compare its performance across key indicators.
- The index covers 111 cities that are smart city contenders, capital cities, and cities with population of 1 million plus.
- The index captures the quality of life based on the data collected from the urban local bodies on four parameters, which were further broken down into 15 categories.
- The four parameters include institutional (governance), social (identity, education, health, security), economic (economy, employment) and physical factors (waste water and solid waste management, pollution, housing/inclusiveness, mixed land use, power and water supply, transport, public open spaces).
- Institutional and social parameters carry 25 points each, physical factors have a weightage of 45 points and economic factors five points totalling to a 100 mark scale on which cities were evaluated.

Performance of states:

- Pune has ranked first while two more Maharashtra cities — Navi Mumbai and Greater Mumbai — figure in the second and third spots.
- Tirupati, Chandigarh, Thane, Raipur, Indore, Vijaywada and Bhopal also figure in the top 10 list in that order. Among other major cities, Chennai holds 14th rank, Ahmedabad 23rd, Hyderabad 27th, and Bengaluru 58th.
- Rampur in Uttar Pradesh has ranked the worst on the scale with Kohima and Patna on the bottom two and three ranks while Varanasi stands at 33.
- Kolkata is excluded from the index.

Sources: the hindu.

2. GLOBAL LIVEABILITY INDEX

What to study?

- For Prelims: Features of the Global Liveability Index, rankings of various countries, Indian Cities in the list.
- For Mains: Significance of the index and what makes cities more liveable?
- **Context:** The Economist Intelligence Unit (EIU) has released the Global Liveability Index 2018. The index ranks 140 global cities based on their living conditions.
- The liveability index quantifies the challenges that might be presented to an individual's lifestyle in 140 cities worldwide, and assesses which locations provide the best living conditions.

PARAMETERS OF THE GLOBAL LIVEABILITY INDEX:

- The list ranks 140 cities on a range of factors, including:
 - Political and social stability.
 - Crime
 - Education
 - Access to healthcare.

GLOBAL LIVEABILITY INDEX 2018

Which locations around the world provide the best or worst living conditions?



The Index ranks **140** cities worldwide



It uses **New York** as a baseline to measure each city against

Each city is assigned a score over **30** factors across **5** broad categories:

Stability
Healthcare
Culture and Environment
Education
Infrastructure



The Index has been running for **over a decade**

It quantifies the potential challenges to an individual's lifestyle in each city, allowing for direct comparison



The survey rates cities worldwide based on 30 qualitative and quantitative criteria, which fall into five general categories:

1. Stability
2. Health care
3. Culture and environment.
4. Education
5. Infrastructure

As per Economist Intelligence Unit's (EIU) Global Liveability Index, 2018, the top 10 cities to live in the world are:

1. Vienna
2. Melbourne
3. Osaka
4. Calgary
5. Sydney
6. Vancouver
7. Tokyo
8. Toronto
9. Copenhagen
10. Adelaide

EIU's Global Liveability Index, 2018, puts the following cities at the bottom of the list:

1. Senegal's Dakar at 131.
2. Algeria's Algiers at 132.
3. Cameroon's Douala at 133.
4. Libya's Tripoli at 134.
5. Zimbabwe's Harare at 135.
6. Papua New Guinea's Port Moresby at 136.
7. Karachi at 137.
8. Nigeria's Lagos at 138.
9. Dhaka at 139.
10. Damascus at 140.

Key facts:

- This year too, not a single US city could make it into the top 10 cities.
- It is the first time that a European city has topped the rankings.
- Security has improved in "several western European cities" and Vienna's top place reflects "a relative return to stability across much of Europe".
- South Asian countries including India have fared poorly in the ranking of the world's most liveable cities.
- Pakistan's financial capital Karachi and Bangladesh's capital Dhaka are among the world's least liveable cities.

For India, only New Delhi and Mumbai could make it to the list with:

- New Delhi at 112th position.
- Mumbai at 117th position.

Sources: the hindu.

3. CHINA MAY SCRAP LIMIT ON NUMBER OF CHILDREN

What to study?

- For Prelims: Key facts on one- child and two- child policies of China.
- For Mains: Need, concerns associated with such policies, can such policies be adopted by India?
- **Context:** China is planning to scrap the limit on the number of children couples can have. A draft civil code that would end decades of controversial family planning policies has been prepared.

Highlights:

- The code would get rid of a policy that has been enforced through fines but was also notorious for cases of forced abortions and sterilisation in the world's most populous country.
- The code omits any reference to "family planning" — the current policy which limits couples to having no more than two children.
- Other proposed changes include a one-month cooling off period before a divorce, during which either party can withdraw their application.

The long history of limits on the number of children a couple can have:

- The Communist Party began enforcing a one-child policy in 1979 to slow population growth. The limit was raised to two children in 2016 as the nation scrambled to rejuvenate its greying population of some 1.4 billion.

The need for removal of restrictions:

- Concerns are mounting that an ageing and shrinking workforce could slow down its economy, while gender imbalances could lead to social problems. Also, childbirths have not increased as much as forecast since the two-child policy came into force.

Why One Child Policy was adopted by China?

- One child policy was adopted by China in 1979 out of the Malthusian fears that unchecked population growth would lead to economic and environmental catastrophe.
- It was also a response to concerns about food shortages.

What is Malthusian theory all about?

- Thomas Robert Malthus was the first economist to propose a systematic theory of population. He articulated his views regarding population in his famous book, *Essay on the Principle of Population* (1798), for which he collected empirical data to support his thesis.
- He argued that if left unchecked, a population will outgrow its resources, leading to a host of problems.

Why China changed its policy?

- China has a population of over 1.4 billion, 30% of which is over the age of 50. There is also huge gender imbalance. Now, China needs more people for joining workforce.
- The working population in China is coming down and elderly population is going up. So Communist Party of China has changed one-child policy to a two-child policy as the country is looking further ahead that China to have larger families.

What's good about One Child Policy?

- Helps to ease the over population problems.
- It is seen as practical by some families.
- Lowers the poverty rate.

Why it isn't a good idea?

- The enforcement is unequal.
- It is a human rights violation.
- Shrinking work population.
- Gender imbalance due to the strong cultural preference of boys for labor and work.
- Increase in abortions and female infanticide.
- Extra babies end up being illegal and never becoming a citizen, due to fines.
- Intrudes on people's personal values and opinions.

Why such policies are not suitable for India?

- The implications of such a policy being enforced in India would surely have been more disastrous than it did in China.
 - ***India is way behind China in basic development indicators like life expectancy, IMR and maternal mortality rate.*** The preference of a male child, the regional disparities in development, and the growing intolerance against minorities in the present milieu would be further magnified with the state entering homes and enforcing such strict norms.
 - ***The fact that women are at the receiving end of such policies in a patriarchal society is another story in itself.*** The burden of limiting family size falls on the woman, and most often female sterilisations are promoted rather than giving the couple the choice of contraception.
 - ***Limiting family size cannot be an end in itself at the neglect of basic needs*** and services like food security, housing, education, and health. It is important for a state to universalise these basic services than to impose a diktat of population control. When China imposed a one-child policy, it had already created a strong base for its population, despite which the consequences were severe. Therefore, it would be disastrous for India to even walk that path.

Sources: the hindu.

A CUT ABOVE

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GS PAPER - II

Paper 2 Topic: Separation of powers between various organs dispute redressal mechanisms and institutions.

1. UTTARAKHAND HIGH COURT APPOINTS ITSELF LEGAL GUARDIAN OF COWS IN STATE

What to study?

- For Prelims: Highlights of the verdict and the directions issued, what is parens patriae doctrine?
- For Mains: Significance and implications of the judgment.
- **Context:** The Uttarakhand high court would henceforth act as **the legal guardian of cows in the state**. It has also issued some directions to the state government in this regard.

Significance of the judgment:

- This is the first time in India that a court has had invoked the ‘parens patriae’ doctrine for cow protection.
- Parens patriae: The court did this by invoking the ‘parens patriae’ doctrine. Parens patriae in Latin means ‘parent of the country’ and is a doctrine that grants the court inherent power and authority to act as guardian for those who are unable to take care for themselves.

Implications of the judgment:

- The court can now act as the legal guardian of the cows in the state and keep a tab on all issues related to cows especially its directions with regard to their protection.
- If there are any violations in laws and rules regarding cows, the court can take suo moto cognisance and issue directions to the state.

Background:

- The judgment came as a response to a public interest litigation claiming that stray cattle were being slaughtered and waste from a slaughter house was flowing into water bodies , posing a health threat to the villagers.
- The court cited animal welfare law, national and international documents and Hindu religious texts to say that animal welfare was part of “moral development of humanity”.

Important Directions issued by the Court:

- All civic bodies in the state shall construct “gaushalas/gausadans” or shelters/homes for housing cows and other stray cattle within one year.
- No commercial charges shall be levied for supplying the electricity and water connections to gaushalas/shelters.
- The state government shall register cases against people who abandon cows and owners of cattle found on the streets, roads and public places under the Indian Penal Code, Prevention of Cruelty to Animals Act, 1960 and Uttarakhand Protection of Cow Progeny Act, 2007.
- The state government shall also set up a special squad to be headed by an officer not below the rank of deputy superintendent of police in both the Kumaon and Garhwal regions with one veterinary doctor to protect cows.
- The court banned slaughter of cows, bulls, bullocks, heifers or calves in the state and ruled that no person shall sell beef or beef products in any form in Uttarakhand.

Sources: the hindu.

Paper 2 Topic: Parliament and State Legislatures – structure, functioning, conduct of business, powers & privileges and issues arising out of these.

1. ODISHA APPROVES PROPOSAL FOR LEGISLATIVE COUNCIL

What to study?

- For Prelims: Features, composition and formation of legislative councils.
- For Mains: Significance and issues related.
- **Context:** The Odisha government has approved a proposal for setting up a legislative council in the state. A resolution will be brought in the monsoon session of the Odisha legislative Assembly.
- The proposed legislative council will have 49 members. The members of the proposed council will get salary and allowance as given to the members of the legislative Assembly.

What are the Legislative Councils, and why are they important?

- India has a bicameral system i.e., two Houses of Parliament. At the state level, the equivalent of the Lok Sabha is the Vidhan Sabha or Legislative Assembly; that of the Rajya Sabha is the Vidhan Parishad or Legislative Council.
- A second House of legislature is considered important for two reasons: one, to act as a check on hasty actions by the popularly elected House and, two, to ensure that individuals who might not be cut out for the rough-and-tumble of direct elections too are able to contribute to the legislative process.

Why do we need a second house?

- Opposition to the idea of Legislative Councils is centred on three broad arguments. One, they can be used to park leaders who have not been able to win an election. Two, they can be used to delay progressive legislation. Three, they would strain state finances.
- Opinion in the Constituent Assembly was divided on the question of having a Legislative Council. The idea was backed on the above grounds; it was also suggested that having a second chamber would allow for more debate and sharing of work between the Houses.

Creation of a legislative council:

- **Under Article 169 of the constitution,** Parliament may by law create or abolish the second chamber in a state if the Legislative Assembly of that state passes a resolution to that effect by a special majority.

Strength of the house:

- **As per article 171 clause (1)** of the Indian Constitution, the total number of members in the legislative council of a state shall not exceed one third of the total number of the members in the legislative Assembly of that state and the total number of members in the legislative council of a state shall in no case be less than 40. (The exception is J&K, where the Legislative Council has 36 members vide Section 50 of the constitution of the state.)

How are members of the Council elected?

- About 1/3rd of members are elected by members of the Assembly, another 1/3rd by electorates consisting of members of municipalities, district boards and other local authorities in the state, 1/12th by an electorate consisting of teachers, and 1/12th by registered graduates.
- The remaining members are nominated by the Governor from among those who have distinguished themselves in literature, science, art, the cooperative movement, and social service. Legislative Councils are permanent Houses, and like Rajya Sabha, one-third of their members retire every two years.

Do Rajya Sabha and Vidhan Parishads have similar powers?

- Not really. The constitution gives Councils limited legislative powers. Unlike Rajya Sabha which has substantial powers to shape non-financial legislation, Legislative Councils lack the constitutional mandate to do so. Legislative Assemblies have the power to override suggestions/amendments made to a legislation by the Council.
- Also, while Rajya Sabha MPs can vote in the election of the President and Vice-President, members of Legislative Councils can't. MLCs also can't vote in the elections of Rajya Sabha members.

Sources: the hindu.

Paper 2 Topic: Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure, devolution of powers and finances up to local levels and challenges therein.

1. ARTICLE 35A

What to study?

- For Prelims: Features of Article 35A.
- For Mains: Controversies and issues associated, is it discriminatory in nature? do we need to scrap Article 35A? other alternatives.
- Context:** Article 35A of the Constitution is now being vigorously contested with its constitutional validity being challenged before the Supreme Court. It has managed to create widespread legal and political controversy, despite it not even finding a mention in the regular sequential text of the Constitution.

What is Article 35A?

- Article 35A is a provision incorporated in the Constitution giving the Jammu and Kashmir Legislature a carte blanche to decide who all are '**permanent residents**' of the State and confer on them special rights and privileges in public sector jobs, acquisition of property in the State, scholarships and other public aid and welfare.
- The provision mandates that ***no act of the legislature coming under it can be challenged for violating the Constitution or any other law of the land.***

The genesis

A look at Article 35A, whose constitutional validity has been challenged in the Supreme Court

▪ Article 35A was incorporated into the Constitution by a Presidential order on the advice of the Cabinet in 1954

▪ The order of 1954 followed the 1952 Delhi Agreement between Jawaharlal Nehru and the then J&K Prime Minister Sheikh Abdullah, which extended Indian citizenship to the 'State subjects' of J&K

▪ Article 35A bars a non-J&K resident from buying property in the State and ensures job reservation; State decides permanent residents



How did it come about?

- Article 35A was incorporated into the Constitution in 1954 by an order of the then President Rajendra Prasad on the advice of the Jawaharlal Nehru Cabinet.
 - The controversial **Constitution (Application to Jammu and Kashmir) Order of 1954 followed the 1952 Delhi Agreement** entered into between Nehru and the then Prime Minister of Jammu and Kashmir Sheikh Abdullah, which extended Indian citizenship to the 'State subjects' of Jammu and Kashmir.
 - **The Presidential Order was issued under Article 370 (1) (d) of the Constitution.** This provision allows the President to make certain "exceptions and modifications" to the Constitution for the benefit of 'State subjects' of Jammu and Kashmir.
 - So Article 35A was added to the Constitution as a testimony of the special consideration the Indian government accorded to the 'permanent residents' of Jammu and Kashmir.

Need for review:

- The 'classification' created by Article 35A has to be tested on the principle of equality **as it treats non-permanent residents of J&K as 'second-class' citizens.** Such persons are not eligible for employment under the State government and are also debarred from contesting elections. Meritorious students are denied scholarships and they cannot even seek redress in any court of law.
- The major sufferers are women who marry outside J&K. Though they retain their Permanent Resident Certificate, their children cannot be permanent residents. **This restricts their basic right of inheritance.** Further, the issues of refugees who migrated to J&K during Partition are still not treated as 'State subjects' under the J&K Constitution.

Way ahead:

- This matter requires the active participation of all stakeholders. It is necessary to give confidence to the residents of J&K that any alteration in status quo will not take away their rights but will boost J&K's prosperity as it will open doors for more investment, resulting in new opportunities.

- Article 35A, which was incorporated about six decades ago, now requires a relook, especially given that J&K is now a well-established democratic State.

Sources: the hindu.

Paper 2 Topic: Statutory, regulatory and various quasi-judicial bodies.

1. INDIAN NATIONAL TRUST FOR ART AND CULTURAL HERITAGE (INTACH)

What to study?

- For Prelims: INTACH- key facts.
- For Mains: Significance and the need for preservation of heritage sites.
- Context:** The Indian National Trust for Art and Cultural Heritage (INTACH) has called for transforming heritage buildings in Rajasthan into “economic assets” for the society. Economic benefits could be derived from these properties as an alternative to paying for their upkeep on a regular basis.



INTACH

Indian
National Trust
for Art and
Cultural Heritage

About Indian National Trust for Art and Cultural Heritage (INTACH):

- The Indian National Trust for Art and Cultural Heritage (INTACH) is a **non-profit charitable organisation** registered under the Societies' Registration Act, 1860.
- Aim:** It was founded in 1984 with the vision to create a membership organisation to stimulate and spearhead heritage awareness and conservation in India.
- Contributions:** Since 1984, INTACH has pioneered the conservation and protection of India's natural and cultural heritage and is today the largest membership organisation in the country dedicated to conservation.
- In 2007, the United Nations awarded INTACH a **special consultative status with United Nations Economic and Social Council**.

Sources: the hindu.

2. APPELLATE TRIBUNAL FOR ELECTRICITY (ATE)

What to study?

- For Prelims: ATE- objectives, functions and composition.
- For Mains: Highlights of the Electricity Act.
- Context:** Justice Manjula Chellur is the new Chairperson of Appellate Tribunal for Electricity (ATE).

Appellate Tribunal for Electricity (APTEL):

- Appellate Tribunal for Electricity is a **statutory body** constituted for the purpose of hearing cases against the orders of the Regulatory Commissions and the Adjudicating officer.
- By virtue of Section 110 of The Electricity Act, 2003**, an Appellate Tribunal for Electricity having jurisdiction throughout India has been set up to hear appeals or original petitions against the orders of the Adjudicating officer or The Central Regulatory Commission or State Regulatory Commission or Joint Commission. The Tribunal is conferred with original jurisdiction to hear petitions under Section 121 of the Act and issue directions to all Commissions for the performance of its statutory functions.
- Composition:** The Appellate Tribunal shall consist of a Chairperson and three other Members. Every Bench constituted by the Chairperson shall consist of at least one Judicial Member and one Technical Member.

Sources: pib.

3. FSSAI NOTIFIES STANDARDS FOR HONEY & ITS PRODUCTS TO CURB ADULTERATION

What to study?

- For Prelims: New standards notified and about FSSAI.
- For Mains: Food adulteration menace and efforts to prevent it, significance of the bee sector.
- Context:** The regulator FSSAI has come out with food safety standards for honey and its products, in a bid to curb adulteration.

Background:

- At present, there are no separate quality standards for honey and its products. The move comes in the wake of government promoting farmers to venture into the beekeeping business to increase their income.
- The standards will help fetch farmers better prices for their products.

The standards notified:

- Parameters:** As per the FSSAI notification, honey should comply with 18 parameters like that of sucrose content, glucose ratio, pollen count, foreign oligosaccharides among others.
- Limits and standards:** The FSSAI has fixed maximum 5% limit for sucrose content in the honey, while 10% for carviacallosa and Honeydew honey. The moisture percentage should be maximum 20% and pollen count should be 25,000 per gram. With regard to by-products, the FSSAI has fixed standards for 'Bees wax' and 'royal jelly' also.
- The regulator has defined honey** as the natural sweet substance produced by honey bees from the nectar of blossoms or from secretions of plants, which honey bees collect, transform and store in honey combs for ripening.
- No additives:** If a product is sold as honey then food ingredient, including food additives should not be added to it. It should not be heated or processed to such an extent that its essential composition is changed and its quality is impaired.
- Labelling:** Honey can be labelled according to floral or plant source, if it comes from any particular source, and has the organoleptic, physicochemical and microscopic properties corresponding with that origin.
- Pollen content:** In the case of 'Monofloral Honey', the regulator said the minimum pollen content of the plant species concerned should not be less than 45 per cent of total pollen content. In case of 'Multi Floral Honey', the pollen content of any of the plant species should not exceed 45 per cent of the total pollen content.

Facts for Prelims:

- Bees wax** is obtained from the honeycombs of bees of Apidae family after the honey has been removed by draining or centrifuging. Beeswax consists of a mixture of esters of fatty acids and fatty alcohols, hydrocarbons and free fatty acids. Minor amounts of free fatty alcohols are also present.
- The combs** are melted with hot water, steam or solar heat and the melted product is filtered and cast into cakes of **yellow bees wax**.
- White bees wax** is obtained by bleaching the yellow bees wax with oxidising agents.
- Royal jelly** is the mixture of secretions from hypopharyngeal and mandibular glands of worker bees, free from any additive. It is the food of larval and adult queens. It is a raw and natural food, unprocessed except for filtration which does not undergo addition of substances. The colour, taste and the chemical composition of royal jelly are determined by absorption and transformation by the bees fed with the following two types of foods during the royal jelly production time.

Significance of the sector:

- About 90,000 tonnes of honey of all varieties is produced annually in the country. There are about 30 lakh honey bee colonies and five lakh people are engaged in the business.
- The government is promoting honey production through the mission for integrated development of horticulture (MIDH) and the National Bee Board has been formed for implementing various activities for development of scientific beekeeping under MIDH.

Sources: BS.

Paper 2 Topic: Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional Bodies.

1. 123RD CONSTITUTIONAL AMENDMENT BILL

What to study?

- **For Prelims:** Key features of the Bill, NCBC- roles and functions.
- **For Mains:** Significance and the need for constitutional status, concern over few provisions in the Bill.
- **Context:** The Lok Sabha has passed **the 123rd Constitutional Amendment Bill** providing for a National Commission for Backward Classes as a constitutional body.

Highlights of the Bill:

- The bill provides for **the grant of constitutional status to the National Commission for Backward Classes (NCBC)** on par with the National Commission for Scheduled Castes and the National Commission for Scheduled Tribes.
- **Powers of the President:** It states that the President may specify the socially and educationally backward classes in the various states and union territories. He may do this in consultation with the Governor of the concerned state.
- **The duties of the NCBC** include investigating and monitoring how safeguards provided to the backward classes under the Constitution and other laws are being implemented and probe specific complaints regarding violation of rights.
- **Report:** The NCBC will be required to present annual reports to the President on working of the safeguards for backward classes. These reports will be tabled in Parliament, and in the state legislative assemblies of the concerned states.
- **Powers of a civil court:** Under the Constitution Amendment Bill, the NCBC will have the powers of a civil court while investigating or inquiring into any complaints. These powers include: (i) summoning people and examining them on oath, (ii) requiring production of any document or public record, and (iii) receiving evidence.

Present status of NCBC:

- The Supreme Court, in its final verdict in the Indira Sawhney (Mandal Commission) case, had directed the establishment of the NCBC as a statutory body. Based on this, a law was passed in 1993 to set up the commission. The NCBC has been examining cases for inclusion in the BC lists for the Central government since then.

Concerns:

- A widely welcomed move to grant constitutional status to the National Commission for Backward Classes (NCBC) has also brought with it a whiff of controversy over whether it amounts to encroaching on the domain of the States.
- Several Opposition parties, which in general welcome the grant of constitutional status to the BC Commission, have said the Bill, if enacted, would undermine federalism, as it amounts to usurping the power of State governments to prepare their own BC lists.
- The Centre has sought to allay these fears, saying the powers of the States would remain unaffected. In any case, the list for every State will be prepared only in consultation with the State government.

Sources: the hindu.

2. DEPUTY CHAIRMAN OF RAJYA SABHA

What to study?

- For Prelims and Mains: Election of Deputy Chairman of Rajya Sabha, constitutional provisions in this regard, role and significance of the Deputy Chairman.
- **Context:** Harivansh Narayan Singh has been elected as the new deputy Chairman of Rajya Sabha.

The Deputy Chairman of Rajya Sabha:

- The Deputy Chairman is a constitutional position created under **Article 89 of the Constitution**, which specifies that Rajya Sabha shall choose one of its MPs to be the Deputy Chairman as often as the position becomes vacant. The office becomes vacant either by resignation or removal from office or when the Rajya Sabha member's term gets over.

Election of Deputy Chairman:

- The election of a Deputy Chairman shall be held on such date as the Chairman may fix and the Secretary-General shall send to every member notice of this date.
- At any time before noon on the day preceding the date so fixed, any member may give notice in writing addressed to the Secretary-General of a motion that another member be chosen as the Deputy Chairman of the Council, and the notice shall be seconded by a third member and shall be accompanied by a statement by the member whose name is proposed in the notice that he is willing to serve as Deputy Chairman if elected: Provided that a member shall not propose or second more than one motion.
- A member in whose name a motion stands in the list of business may, when called, move the motion or not move the motion, in which case he shall confine himself to a mere statement to that effect.
- The motions which have been moved and duly seconded shall be put one by one in the order in which they have been moved and decided if necessary by division. If any motion is carried, the person presiding shall, without putting later motions, declare that the member proposed in the motion which has been carried, has been chosen as the Deputy Chairman of the Council.

Powers of Deputy Chairman etc. while presiding:

- The Deputy Chairman or other member competent to preside over a sitting of the Council under the Constitution or these rules shall, when so presiding, have the same power as the Chairman when presiding over the Council and all references to the Chairman in these rules shall in these circumstances be deemed to be, references to any such person so presiding.

Significance of the position:

- The Deputy Chair is the one position that is elected solely by members of Rajya Sabha. It is a critical position not just because s/he steps in when there is a vacancy in the office of Chairperson/Vice President but also because s/he plays a critical role in ensuring the smooth running of the House.

Sources: the hindu.

3. PRESIDENT APPOINTS GOVERNORS OF SEVEN STATES

What to study?

- For Prelims: Constitutional provisions related to the office of governor.
- For Mains: Significance and issues associated with the office of governor- is he merely a rubber stamp, comparison of powers with the President and frequent removals.
- Context:** By exercising his authority under **Article 156** of the constitution, President Ram Nath Kovind has appointed Governors of seven states including Bihar, Haryana, Uttarakhand, Jammu and Kashmir, Sikkim, Meghalaya, and Tripura.



Governors of States in India:

- Governor is **the head of the Executive power of any state in India**, just like the President who is the head of the executive power in the Union.
 - Governor is **the nominal head of a state**, unlike the Chief Minister who is the real head of a state in India.

- According to an amendment in the Constitution of India (7th Constitutional Amendment Act), brought about in 1956, ***the same person can be the Governor of two or more states.***

Appointment and removal:

- The governors and lieutenant-governors are appointed by the president for a term of 5 years.
- The term of governor's office is normally 5 years but it can be terminated earlier by: Dismissal by the president on the advice of the prime minister of the country, at whose pleasure the governor holds office or Resignation by the governor.
- There is no provision of impeachment, as it happens for the president.
- Article 157 and Article 158 of the Constitution of India specify eligibility requirements for the post of governor.

Powers:

- Like the President of India, the Governor of any state in India is vested with certain executive, legislative and judicial powers.
- He or she also possesses certain discretionary or emergency powers.
- But one major difference in the powers enjoyed by the President and those enjoyed by the Governor is, ***the Governor does not have any diplomatic or military powers.***

Sources: the hindu.

Paper 2 Topic: Salient features of the Representation of People's Act.

1. REPRESENTATION OF THE PEOPLE (AMENDMENT) BILL, 2017

What to study?

- For Prelims: What is Proxy voting? Highlights of the Bill.
- For Mains: Significance of the Bill.
- **Context:** Lok Sabha has passed ***Representation of the People (Amendment) Bill, 2017*** to extend the facility of 'proxy voting' to overseas Indians, on the lines of service voters.
- The Bill seeks to amend Representation of People Act (RPA), 1950 and Representation of People Act (RPA), 1951 to allow for proxy voting and make certain provisions of these Acts gender-neutral.

Highlights of the Bill:

- The Bill proposes ***to allow non-resident Indians (NRIs) to emerge as a decisive force in the country's electoral politics on their own terms.***
- The amendment paves the way to remove an "unreasonable restriction" posed by Section 20A of the Representation of the People Act, which requires overseas electors to be physically present in their electoral constituencies to cast their votes.

What necessitated this move?

- Section 20A of the Act provides for registration and inclusion of overseas electors in the electoral rolls. The Registration of Electors Rules, 1960 provide for overseas electors to register themselves in the electoral rolls of their respective constituencies on the basis of self-attested copies of their passport and valid visa, and exercise their franchise in person on production of the original passport at the time of voting at the specified polling booth.
- Thus, the rules demand for the physical presence of overseas electors in their respective polling stations in India on the day of polling. This causes hardship to the overseas electors. This amendment proposes facilitating an external mode of voting, that is, voting by proxy, whereby such electors can exercise their franchise from their places of residence abroad.

Significance of this move:

- If the Bill is passed, overseas voters can appoint a proxy to cast their votes on their behalf, subject to certain conditions to be laid down in the Conduct of Election Rules, 1961. This would considerably mitigate the difficulties presently faced by overseas electors in exercising their franchise.

What is voting by proxy?

- According to the provisions of 'Representation of the People Act (Amendment) Bill, 2017 overseas Indians, who are entitled to vote in India, can appoint a proxy voter to cast their votes on their behalf. Also, the overseas Indians would be allowed to use the option of proxy, which till now was only available to service personnel.

Drawbacks of the proxy voters:

- It threatens the very core of democracy as the special treatment violates the fact that there are many times more domestic migrants who also seek to have a voting right at their homes.
- The proxy voter may cast vote for the candidate who is not desired by overseas Indians.
- There can be no guarantee of NRI voters exercising their vote in a free and fair manner as there can be no check on coercion or inducement by the employers.
- There is no guarantee that votes would not be sold to the so-called proxy.
- There is no fixed number of votes a proxy could cast in an election.

Sources: the hindu.

2. NOTA IN RAJYA SABHA

What to study?

- For Prelims: Meaning of NOTA and features of RPA.
- For Mains: Significance and the use of NOTA in direct elections, concerns of its use in indirect elections.
- Context:** The Supreme Court has overruled an Election Commission notification, saying that NOTA (None Of The Above) option cannot be allowed in Rajya Sabha elections.

Why SC scrapped the use of NOTA in Rajya Sabha elections?

- As per the court, the NOTA option is meant only for universal adult suffrage and direct elections and not polls held by the system of proportional representation by means of the single transferable vote as done in the Rajya Sabha.
- NOTA in indirect elections, such as in the Rajya Sabha, would lead to horse-trading, corruption and use of extra constitutional methods to defeat a party candidate.
- NOTA also makes the system of proportional representation by means of single transferable vote nugatory and otiose.

SC on the power of ECI:

- The use of NOTA cannot be sanctioned by way of the impugned circulars which has the effect of overriding the provisions of **Article 80(4), the provisions of Representation of People Act 1951 and the Conduct of Election Rules 1961.**
- The circular was ex-facie illegal, arbitrary and tainted with mala fides, as an executive instruction cannot override express statutory provisions.

The use of NOTA in elections:

- The option of NOTA for Lok Sabha and assembly elections was prescribed by the SC in 2013. The option of NOTA in RS polls was introduced by the EC in 2014. Thus, India became the 14th country to institute negative voting.

The protest vote

A look at the genesis of NOTA



Against NOTA: Congress leaders at the EC office in New Delhi

- The Election Commission introduced NOTA option in EVMs from October 11, 2013, pursuant

to the Supreme Court's fat dated September 27, 2013

- The main objective of the option is to enable electors to exercise their right to not vote for any candidate in the fray

- In 2015, the Bihar Assembly polls saw 2.49% of NOTA votes, the highest NOTA votes polled so far

- What if NOTA gets maximum votes? The EC says that in such a case, the candidate securing the maximum votes is elected

- The NOTA symbol has been designed by NID, Ahmedabad

How is a NOTA vote cast?

- The EVMS have the NOTA option at the end of the candidates' list. Earlier, in order to cast a negative ballot, a voter had to inform the presiding officer at the polling booth. A NOTA vote doesn't require the involvement of the presiding officer.

Why have NOTA if there's 'no electoral value'?

- NOTA gives people dissatisfied with contesting candidates an opportunity to express their disapproval. This, in turn, increases the chances of more people turning up to cast their votes, even if they do not support any candidate, and decreases the count of bogus votes.
- Also, the Supreme Court has observed that negative voting could bring about "a systemic change in polls and political parties will be forced to project clean candidates".

Why NOTA is good?

- NOTA option will force the political parties to select the honest candidates, i.e with no criminal records.
- NOTA ensures people's 'right to freedom of speech and expression'.
- This will increase the polling percentage.

Sources: the hindu.

3. CRIMINALIZATION OF POLITICS

What to study?

- For Mains: Criminalization of politics- concerns, challenges and efforts to reform.
- Context:** The Supreme Court has proposed to **make political parties accountable for criminalising politics** by welcoming in "crooks" who may later win elections on party ticket and grab power. The court is hearing a batch of petitions to ban persons charged with heinous criminal charges from contesting elections.

Suggestion made by the court:

- The Court may direct the Election Commission to **insist that parties get new members to declare in an affidavit their criminal antecedents and publish them** so that the "entire country knows how many criminals there are in a party."
- The court said the EC could **de-register a party or withdraw its symbol if it refused to comply**.
- The suggestion was made by the court in a bid to **prevent criminals from entering politics or later contesting elections** to become parliamentarians, legislators and Ministers.

However, the centre has opposed this move suggesting the following reasons:

- A political party has a right to field its candidate. Mere charges of having committed a crime cannot be used to prevent a person from contesting elections. The suggestion made by the court amounts to prematurely disqualifying a candidate. Besides, the court is taking on itself a matter of the legislature.

Provisions in this regard:

- The court based its proposal on the following:
 - Article 324 and Section 29A of RPA:** The power of the Election Commission to conduct an election and register/de-register political parties under Article 324 of the Constitution and Section 29A of the Representation of the People Act of 1951, respectively.
 - The Election Symbols (Reservation and Allotment) Order of 1968.** Section 29A requires a party to swear to uphold the principles of socialism, secularism, democracy, sovereignty, unity and integrity of India.

Criminals in Politics:

- Protecting the parliamentary system from criminalisation has been the intention of the law from the beginning.
- Section 8 of the Representation of the People (RP) Act, 1951** disqualifies a person convicted with a sentence of two years or more from contesting elections. But those under trial continued to be eligible to contest elections. The **Lily Thomas case (2013)**, however, ended this unfair advantage.

Efforts by SC in this regard:

- The SC has repeatedly expressed concern about the purity of legislatures.
 - In 2002, it made it obligatory for all candidates to file an affidavit before the returning officer, disclosing criminal cases pending against them.
 - The famous order to introduce NOTA was intended to make political parties think before giving tickets to the tainted.
 - In its landmark judgment of March 2014, the SC accepted the urgent need for cleansing politics of criminalisation and directed all subordinate courts to decide on cases involving legislators within a year, or give reasons for not doing so to the chief justice of the high court.

The trend:

- According to the ADR's analysis of EC data, 187 MPs in the current Lok Sabha face criminal charges (that is, 34.4 per cent). Of them, 113 face serious criminal charges.
- The number has gone up from 162 (76 serious) charges in 2009 and 128 (58 serious) in 2004.

Main reasons for Criminalization:

- Corruption
- Vote bank.
- Lack of governance.

What is the way out?

- There are three possible options.
 - One, political parties should themselves refuse tickets to the tainted.
 - Two, the RP Act should be amended to debar persons against whom cases of a heinous nature are pending from contesting elections.
 - Three, fast-track courts should decide the cases of tainted legislators quickly.

Opposition to the proposal made by the Supreme Court:

- Far from denying tickets to criminals, all political parties seem to have been in competition to give them more and more tickets.
- They have been unitedly opposing the proposal to debar perpetrators of even heinous offences during pendency of trial on the grounds that false criminal cases may be filed by opponents. This concern is partly valid.

Is this concern justified?

- To counter the concern expressed, the proposal has three safeguards.
 - First, all criminal cases would not invite the ban — only heinous offences like murder, dacoity, rape, kidnapping or moral turpitude.
 - Second, the case should have been registered at least a year before the elections.
 - Third, the court must have framed the charges.

Suggested measure to curb criminalization of politics:

- Bringing greater transparency in campaign financing is going to make it less attractive for political parties to involve gangsters.
- The Election Commission of India (ECI) should have the power to audit the financial accounts of political parties, or political parties' finances should be brought under the right to information (RTI) law.
- Broader governance will have to improve for voters to reduce the reliance on criminal politicians.
- Fast-track courts are necessary because politicians are able to delay the judicial process and serve for decades before prosecution.
- The Election Commission must take adequate measures to break the nexus between the criminals and the politicians.
- The forms prescribed by the Election Commission for candidates disclosing their convictions, cases pending in courts and so on in their nomination papers is a step in the right direction if it applied properly.

Sources: the hindu.

Paper 2 Topic: Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes; mechanisms, laws, institutions and bodies constituted for the protection and betterment of these vulnerable sections.

1. RESTRICTED AREA PERMIT (RAP) REGIME

What to study?

- For Prelims: RAP- features, important Islands in Andaman and Nicobar.
- For Mains: Need for RAP.
- Context:** The Union government has decided to exclude 29 inhabited Andaman & Nicobar Islands from the Restricted Area Permit (RAP) regime, subject to certain conditions, to boost tourism and overall development of Andaman & Nicobar Islands.

Key facts:

- The list of the islands permitted for foreigners visit includes East Island, North Andaman, Smith Island, Curfew Island, Stewart Island, Land Fall Island, Ayes Island, Middle Andaman, Long Island, Strait Island, North Passage, Baratang, South Andaman, Havelock, Neil Island, Flat Bay, Little Andaman, Chowra, Tillang Chong Island, Teressa, Katchal, Nancowry, Kamorta, Pulomilo, Great Nicobar, Little Nicobar, Narcondam Island and Interview Island.
- Foreigners will also be allowed to visit 11 uninhabited Islands, to be notified by Andaman and Nicobar Islands Administration, only for day visits.

Exceptions:

- Citizens of Afghanistan, China and Pakistan and foreign nationals having their origin in these countries would continue to require RAP to visit Andaman & Nicobar Islands. In such cases, RAP may be granted only after obtaining prior approval of the ministry of home affairs.
- For visiting Mayabunder and Diglipur, citizens of Myanmar will continue to require RAP which shall be issued only with the prior approval of the MHA.

Sources: the hindu.

2. SC TO CONSTITUTE PANEL TO LOOK INTO ISSUES IN PRISONS ACROSS COUNTRY

What to study?

- For Prelims: Particulars of the panel.
- For Mains: Prison reforms- need, challenges and solutions.
- Context:** The Supreme Court has proposed to constitute a committee under the chairmanship of its retired judge to look into the problems in jails.

What next?

- The committee's duties will include looking into the problems of jails across the country including overcrowding and women prisoners languishing in cells for years. After studying the problems, the committee would be required to suggest measures to deal with them.

Background:

- The move is based on a petition in the court relating to inhuman conditions prevailing in 1,382 prisons across the country. The court had earlier taken strong exception to overcrowded jails across the country and said prisoners also have human rights and cannot be kept in jail like 'animals'.

Need for reforms:

- NHRC figures show that prisoners cut off from family and friends had a 50% more chance of committing suicide than those outside. The average suicide rate among the general public for this period is 11 (per 100,000) whereas the average suicide rate in prison is 16.9 (per 100,000). In other words, the average suicide rate in prisons is over 50% more than in normal conditions.
- Indian prisons face three long-standing structural constraints: overcrowding, thanks to a high percentage of undertrials in the prison population, understaffing and underfunding. The inevitable outcome is sub-human living conditions, poor hygiene, and violent clashes between the inmates and jail authorities.
- Besides, while 33% of the total requirement of prison officials still lies vacant, almost 36% of vacancy for supervising officers is still unfulfilled. In the absence of adequate prison staff, overcrowding of prisons leads to rampant violence and other criminal activities inside the jails.

Way ahead:

- Indian jails have often been dubbed as a university for grooming criminals due to pathetic and inhumane conditions. In the absence of a robust Whistleblower Protection Act and structural changes to address the issues of overcrowding and understaffing, India's prisons will continue to be heaven for politically connected criminals and hell for socio-economically disadvantaged undertrials, some regular media uproars notwithstanding.
- Fundamental rights of prisoners cannot be placed in the back-burner and the Centre and the states need to be more pro-active in sensitising staff about the need to treat prisoners as humanely as possible.

Sources: the hindu.

3. MEMBERS OF PARLIAMENT LOCAL AREA DEVELOPMENT SCHEME (MPLADS)

What to study?

- For Prelims: Features of the scheme.
- For Mains: Significance and performance of the scheme, challenges associated.



- **Context:** The 21st All India Review Meeting on Members of Parliament Local Area Development Scheme (MPLADS) was recently held under the Chairmanship of Union Minister of Statistics &Program Implementation.
- Nodal Secretaries from States/UTs overseeing the implementation of MPLADS scheme took part in the deliberations. The focus was on issues related to the implementation of MPLADS with the States/UTs so that the Ministry can take steps to address these for further improvements in its implementation.

Challenges:

- The major problems being faced in the implementation of the Scheme at the District level include: Non submission of requisite documents in time to the Ministry such as Audit Certificate, Utilization Certificate, Provisional Utilization Certificate, Monthly Progress Report, Bank Statement and Online Monthly Progress Report.

Performance of the scheme:

- Since April, 2014 out of 4,67,144 works recommended by the MPs (Both Lok Sabha and Rajya Sabha), 4,11,612 works have been sanctioned and 3,84,260 works have been completed upto 31st July, 2018.
- Since inception, till 31.07.2018, Rs 47,922.75 Crores have been released under the Scheme and works of Rs 49,065.58. Crores have been sanctioned by the District Authorities. Of the total release since inception, Rs 45604.94 Crore have been utilized. This is more than ninety-five percent of the release.

About MPLAD scheme:

- **What is it?** It was launched in December, 1993, to provide a mechanism for the Members of Parliament to recommend works of developmental nature for creation of durable community assets and for provision of basic facilities including community infrastructure, based on locally felt needs.
- **Works under the scheme:** Works, developmental in nature, based on locally felt needs and always available for the use of the public at large, are eligible under the scheme. Preference under the scheme is given to works relating to national priorities, such as provision of drinking water, public health, education, sanitation, roads, etc.
- **Funds:** Funds are released in the form of grants in-aid directly to the district authorities. The funds released under the scheme are non-lapsable. The liability of funds not released in a particular year is carried forward to the subsequent years, subject to eligibility.
- **Execution of works:** The MPs have a recommendatory role under the scheme. They recommend their choice of works to the concerned district authorities who implement these works by following the established procedures of the concerned state government. The district authority is empowered to examine the eligibility of works sanction funds and select the implementing agencies, prioritise works, supervise overall execution, and monitor the scheme at the ground level.
- **Recommendation of works:** The Lok Sabha Members can recommend works in their respective constituencies. The elected members of the Rajya Sabha can recommend works anywhere in the state from which they are elected. Nominated members of the Lok Sabha and Rajya Sabha may select works for implementation anywhere in the country.

Sources: pib.

Paper 2 Topic: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

1. HOMOEOPATHY CENTRAL COUNCIL (AMENDMENT) BILL 2018

What to study?

- **For Prelims and Mains:** Highlights of the Bill.
- **Context:** Lok Sabha has passed the **Homoeopathy Central Council (Amendment) Bill 2018**. It seeks to replace the Central Council of Homoeopathy (CCH) with a board of governors and is aimed at bringing accountability and quality in homeopathy education system.

Key features of the Bill:

- **Supersession of the Central Council:** It amends the 1973 Act to provide for the supersession of the Central Council with effect from May 18, 2018. The Central Council will be reconstituted within one year from the date of its supersession. In the interim period, the central government will constitute a Board of Governors, which will exercise the powers of the Central Council.
- **The Board of Governors will consist** of up to seven members including: (i) persons of eminence in the field of homoeopathy education, and (ii) eminent administrators, appointed by the central government. The central government will select one of these members as the Chairperson of the Board. With regard to policy decisions, the directions of the central government will be final.
- **Permission for existing homoeopathy colleges:** It states that: (i) if any person has established a homoeopathy medical college, or (ii) if an established homoeopathy medical college has opened new courses or increased its admission capacity before the Ordinance was promulgated, it will have to seek permission from the central government within one year. If the person or homoeopathy medical college fails to seek such permission, then any medical qualification granted to a student from such medical college will not be recognised under the Act.

2. SEVA BHOJ YOJNA

What to study?

- **For Prelims:** ‘Seva Bhoj Yojna’- features.
- **For Mains:** GST and its implications, issues associated and reforms to resolve them.
- **Context:** Union Ministry of Culture has launched- ‘**Seva Bhoj Yojna**’– a scheme to reimburse central share of CGST and IGST on food, prasad, langar or bhandara offered by religious and charitable institutions.
- The ‘Seva Bhoj Yojna’ has a total outlay of Rs 325.00 crore for financial years 2018-19 and 2019-20.

About Seva Bhoj Yojana:

- The scheme seeks to reimburse the central government’s share of Central Goods and Services Tax (CGST) and Integrated Goods and Service Tax (IGST) on purchase of raw items such as ghee, edible oil, atta, maida, rava, flour, rice pulses, sugar and jaggery, which go into preparation of food/prasad/langar/bhandara offered free of cost by religious institutions.
- The main objective of the scheme is to lessen the financial burden of such charitable religious institutions, which provide free of cost without any discrimination to the general public and devotees.

Eligibility:

- The charitable religious institutions including temples, gurudwara, mosque, church, dharmik ashram, dargah, monasteries, which fulfill the following criteria are eligible for the grant:
 - The institutions that have been in existence for at least five years before applying for financial assistance/grant.
 - The institutions that serve free food to at least 5000 people in a month.
 - The institutions covered under Section 10(23BBA) of the Income Tax Act or those registered as Society under Societies Registration Act (XXI of 1860) or as a Public Trust under any law for the time being in force of statuary religious bodies constituted under any Act or institutions registered under Section 12AA of Income Tax Act.

Sources: the hindu.

3. CONCESSIONAL FINANCING SCHEME (CFS)

What to study?

- For Prelims: CFS- features.
- For Mains: Significance of the scheme.
- **Context:** The Union Cabinet has approved the first extension of **Concessional Financing Scheme (CFS)** to support Indian Entities bidding for strategically important infrastructure projects abroad. Under the CFS, the Govt. of India has been supporting Indian Entities bidding for strategically important infrastructure projects abroad since 2015-16.

How CFS works?

1. Under the Scheme, MEA selects the specific projects keeping in view strategic interest of India and sends the same to Department of Economic Affairs (DEA).
2. The strategic importance of a project to deserve financing under this Scheme, is decided, on a case to case basis, by a Committee chaired by Secretary, DEA.
3. Once approved by the Committee, DEA issues a formal letter to EXIM Bank conveying approval for financing of the project under CFS.
4. The Scheme is presently being operated through the Export-Import Bank of India, which raises resources from the market to provide concessional finance.
5. Government of India (GoI) provides counter guarantee and interest equalization support of 2% to the EXIM Bank.

6. Under the Scheme, EXIM Bank extends credit at a rate not exceeding LIBOR (avg. of six months) + 100 bps. The repayment of the loan is guaranteed by the foreign govt.

Significance of the scheme:

- Prior to the introduction of CFS, Indian entities were not able to bid for large projects abroad since the cost of financing was very high for them and bidders from other countries such as China, Japan, Europe and US were able to provide credit at superior terms, i.e., lower interest rate and longer tenures which works to the advantage of bidders from those countries.
- Also, by having projects of strategic interest to India executed by Indian entities, the CFS enables India to generate substantial backward linkage induced jobs, demand for material and machinery in India and also a lot of goodwill for India.

Sources: pib.

4. RECONSIDER THE BAN ON OXYTOCIN

What to study?

- For Prelims:** Oxytocin- its uses.
- For Mains:** The ban- need for ban, challenges and alternatives available.
- Context:** The Union Health Ministry's ban on the retail sale and private manufacture of oxytocin will kick off from September 1.

PRICE FOR MISUSE

THE BAN

- The Union health ministry has restricted manufacture and sale of oxytocin by the private sector to check its misuse
- The government has also banned import of oxytocin and its formulations

THE REGULATIONS WILL COME INTO FORCE ON JULY 1 2018

THE NEED FOR RESTRICTION

- Oxytocin is widely misused in the dairy industry to make livestock release milk at a time convenient to farmers
- The hormone is also used to increase the size of vegetables such as pumpkins, watermelons, brinjals, gourds and cucumbers

WOMEN FACE THE HEAT
(SOURCE: FOGSI)

- Nearly five women die every hour in India from complications developed during childbirth, with heavy blood loss caused by haemorrhage (postpartum haemorrhage - PPH) being a major factor
- Oxytocin is used to prevent death due to PPH. Its excellent safety profile in women make it the drug of choice

About Oxytocin:

- Oxytocin has also been dubbed the **hug hormone, cuddle chemical, moral molecule, and the bliss hormone** due to its effects on behaviour, including its role in love and in female reproductive biological functions in reproduction.
- Oxytocin is **a hormone that is made in the brain, in the hypothalamus**. It is transported to, and secreted by, the pituitary gland, which is located at the base of the brain.
- It acts both as **a hormone and as a brain neurotransmitter**.
- The release of oxytocin by the pituitary gland acts to regulate two female reproductive functions: Childbirth and Breast-feeding.

Why is it used?

- The drug, a synthetic version of a human hormone, is a life-saver for women. Doctors use it to induce labour in pregnant women and to stem postpartum bleeding. So critical is its role in maternal health that the World Health Organization recommends it as the drug of choice in postpartum haemorrhage.

Why is it being banned?

- The government's ban ignores its critical uses, and is motivated instead by the misuse of the hormone in the dairy industry. Because oxytocin stimulates lactation in cattle, dairy farmers inject the drug indiscriminately to increase milk production. This has spawned several unlicensed facilities that manufacture the drug for veterinary use.
 - Much is unknown about the ill-effects of oxytocin on cattle. One of the concerns was that oxytocin leads to infertility in dairy animals, and some studies show this to be true.
 - It has also been linked to mastitis, a painful inflammation of the udder. Milk consumers worry about exposure to it through dairy products.

What needs to be done?

- Even if the ill-effects of oxytocin are real, a ban is not the answer. The right approach is to strengthen regulation, and crack down on illegal production.
- Oxytocin is simply too important to Indian women, 45,000 of whom die due to causes related to childbirth each year.

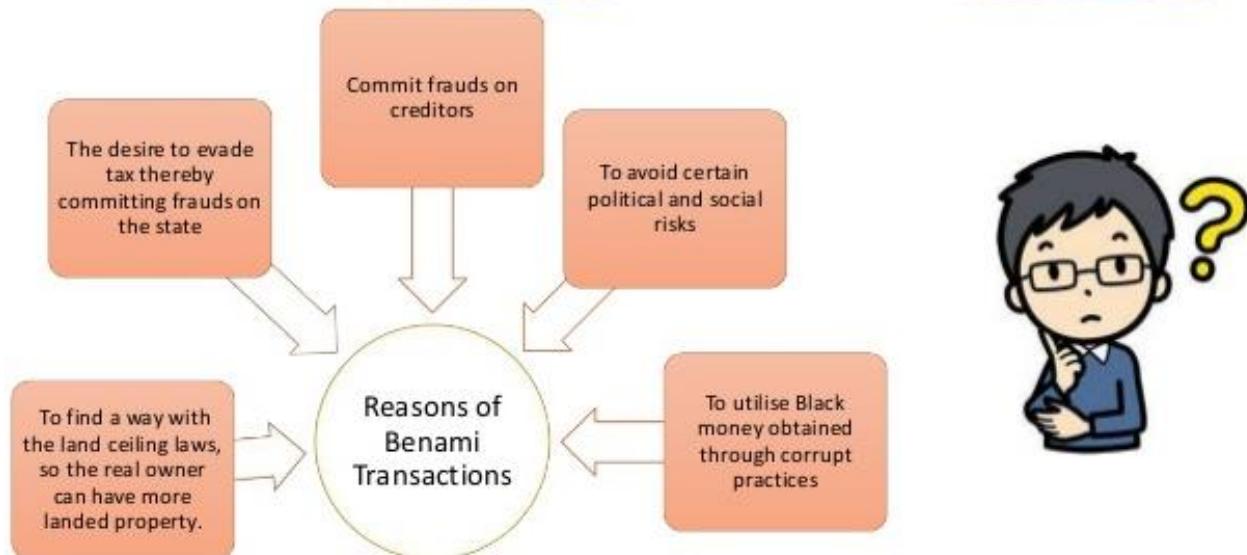
Sources: the hindu.

5. BENAMI TRANSACTIONS (PROHIBITION) ACT

What to study?

- For Prelims:** Key features of the Act.
- For Mains:** Benami Transactions- definition, concerns, impact on economy and measures by the government for its prevention.
- Context:** The prosecution of accused persons in almost 100 confirmed cases instituted under the Benami Transactions (Prohibition) Act has been scuttled as the special courts meant for the purpose have not yet been set up across the country.

Benami Transaction (prohibition) Amendment Act' 2016



What's the issue?

- The Act provides that the Central government, in consultation with the Chief Justice of the respective High Courts, will establish special courts through notification. Such courts are to be constituted to ensure that the trials are conducted “as expeditiously as possible”.
- However, the required special courts have not been set up yet. Therefore, despite the fact that investigations in almost 100 cases have been completed by the I-T Department in different States, including confirmation of attachment of properties by the Adjudicating Authority, the prosecution of accused persons has not started.

About the Benami Act:

- The Benami Transactions (Prohibition) Amendment Act, 2016, designed to curb black money and passed by parliament in August, came into effect on November 1, 2016.
- The new law amends the 1988 Benami Transactions Act.

Highlights of the Act:

- The law provides for up to seven years' imprisonment and fine for those indulging in such transactions.
- The law prohibits recovery of the property held benami from benamdar by the real owner. As per the Act, properties held benami are liable for confiscation by the government, without payment of compensation.
- An appellate mechanism has been provided under the act, in the form of an adjudicating authority and appellate tribunal. According to the government, the four authorities who will conduct inquiries or investigations are the Initiating Officer, Approving Authority, Administrator and Adjudicating Authority.

What is benami transaction?

- A benami transaction is one where a property is held by one person and the amount for it is paid by another person. Therefore, in a benami transaction, the name of the person who paid the money is not mentioned. Directly or indirectly, the benami transaction is done to benefit the one who pays.

Sources: the hindu.

6. NATIONAL SPORTS UNIVERSITY BILL, 2018

What to study?

- For Prelims: National Sports University.
- For Mains: Key features of the Bill.
- Context:** Lok Sabha has passed National Sports University Bill, 2018 to set up the **country's first National Sports University in Imphal, Manipur** that will provide sports education, research and coaching.
- The Bill replaces **National Sports University Ordinance, 2018** promulgated by President in May 2018 to protect interests of students who already have been enrolled in National Sports University.

Highlights of the Bill:

- Establishment of the University:** The Bill establishes a National Sports University located in Manipur. It will promote sports education in the areas of: (i) sports sciences, (ii) sports technology, (iii) sports management, and (iv) sports coaching. It will function as a national training centre for select sports disciplines. It may also establish campuses and study centres in other parts of the country. The University will be empowered to grant degrees, diplomas and certificates.
- Objectives:** The key objectives of the University are: (i) research, development and dissemination of knowledge in physical education and sports sciences, (ii) strengthening physical education and sports training programmes, (iii) generating knowledge capabilities, skills and competence at various levels, and (iv) training talented athletes to help them to evolve into international level athletes.
- Authorities of the University:** The Bill provides for several authorities under the University. These include: Court, Executive Council, Academic and Activity Council, Board of Sports Studies etc.
- Role the central government:** The central government will review and inspect the functioning of the University. The Executive Council may take action based on the inspection report. If it fails to take action to the satisfaction of the central government, it will have to comply with the directions issued by the central government. Further, the central government may annul any proceeding of the University which is not in line with the Act.

- **Funding:** The University will be required to maintain a fund which will be credited with the funds that it receives from the central government, state government, and fees and money received from any other sources (grants and gifts). All funds of the University will be invested as decided by the Board on the recommendation of the Finance Committee.

Significance of the move:

- Setting up of National Sports University in Manipur will result in giving an opportunity for youth of country in general and of North Eastern States in particular for pursuing courses such as B.PEd, MPED, Diploma / certificate courses in coaching, physiotherapy, fitness, sports management, sports journalism, etc.

Sources: pib.

7. UJJWALA PROGRAMME

What to study?

- For Prelims: PMUY- features.
- For Mains: Significance of PMUY.
- **Context:** Pradhan Mantri Ujjwala Yojana has achieved the 5 crore mark. Lok Sabha Speaker Smt Sumitra Mahajan handed over 5 crore LPG connection under Pradhan Mantri Ujjwala Yojana (PMUY) to Smt Takrdiran of Delhi in the Parliament House.

The target:

- Through PMUY, initially, 5 crore BPL households were targeted for providing deposit free LPG connections to BPL households by 31st March, 2019. In a record time of 28 months for its launch, PMUY achieved the initial target of providing 5 crores LPG connection to BPL households.
- In the current year, considering the huge success of the Scheme, target was revised to 8 crores with budgetary allocation of Rs 12,800 crore.

Flagship schemes

- ▶ Under the Ujjwala scheme, the centre provides free cooking gas connections and aims to safeguard the health of women and children.
- ▶ **Ujjwala's ambit has been expanded to include 80 million poor families with the scheme providing financial support of Rs1,600 for each connection.**
- ▶ MGNREGS launched by the Congress-led United Progressive Alliance is the biggest single public works programme in the world.
- ▶ MGNREGS assures 100 days of manual work a year to at least one member of every village household.



About the Pradhan Mantri Ujjwala Yojana:

- Pradhan Mantri Ujjwala Yojana aims to provide LPG (liquefied petroleum gas) connections to poor households.
- **Who is eligible?** Under the scheme, an adult woman member of a below poverty line family identified through the Socio-Economic Caste Census (SECC) is given a deposit-free LPG connection with financial assistance of Rs 1,600 per connection by the Centre.
- **Identification of households:** Eligible households will be identified in consultation with state governments and Union territories. The scheme is being implemented by the Ministry of Petroleum and Natural Gas.

Some of the objectives of the scheme are:

- Empowering women and protecting their health.
- Reducing the serious health hazards associated with cooking based on fossil fuel.
- Reducing the number of deaths in India due to unclean cooking fuel.
- Preventing young children from significant number of acute respiratory illnesses caused due to indoor air pollution by burning the fossil fuel.

What makes LPG adoption necessary?

- A large section of Indians, especially women and girls, are exposed to severe household air pollution (HAP) from the use of solid fuels such as biomass, dung cakes and coal for cooking. A report from the Ministry of Health & Family Welfare places HAP as the second leading risk factor contributing to India's disease burden.

- According to the World Health Organization, solid fuel use is responsible for about 13% of all mortality and morbidity in India (measured as Disability-Adjusted Life Years), and causes about 40% of all pulmonary disorders, nearly 30% of cataract incidences, and over 20% each of ischemic heart disease, lung cancer and lower respiratory infection.

Significance of the project:

- PMUY has been a revolutionary initiative that has transformed the lives of more than 3.57 crore households spanning across the length and breadth of the country. The initiative is in line with Government's aim to eradicate energy poverty, thereby promoting economic empowerment.

Way ahead:

- The PMUY is a bold and much-needed initiative, but it should be recognised that this is just a first step. The real test of the PMUY and its successor programmes will be in how they translate the provision of connections to sustained use of LPG or other clean fuels such as electricity or biogas.
- Truly smokeless kitchens can be realized only if the government follows up with measures that go beyond connections to actual usage of LPG. This may require concerted efforts cutting across Ministries beyond petroleum and natural gas and including those of health, rural development and women and child welfare.

Sources: pib.

8. SOCIAL MEDIA HUB PLAN DROPPED

What to study?

- For Prelims: Features of the Social Media Hub.
- For Mains: Why was the idea dropped, concerns associated and issues related.
- Context:** The Centre has withdrawn a proposal to have hubs to monitor social media traffic and trends. The decision comes after the court had questioned the proposal in a hearing on July 13, saying this may transform the country into a surveillance state.

Concerns over the Social media hub:

- It was alleged that though the stated aim of the project was to enable the government to understand the impact of social media campaigns on welfare schemes and improve the reach of such campaigns, the project had two aspects — “mass surveillance apparatus that aims at collecting and analysing huge volumes of data, and profiling people based on that” and “utilising this data to predict the mood of people online and issue responses, including those targeted at individuals or groups”.
- The social media analytical tool is expected to ‘listen’ to conversations on all major digital channels, including Facebook, Twitter, Instagram, LinkedIn, Tumblr, as well as blogs and news channels. Therefore, it was contended that “such intrusive action on the part of the government, is not only without the authority of law, but also infringes fundamental right to freedom of speech under Article 19(1)(a) of the Constitution.” The move was also violative of Articles 14, 19(1)(a) and 21.

What is Social media communication hub?

- The hub proposes to monitor social media (Facebook, Twitter, Instagram and even email) handles at the very local level in multiple languages to carry out “sentiment analysis”, track down the influence-making social media users and to categorise the conversations on social media into positive, negative and neutral sections.
- It also aimed to track real time the way social media receives news on government’s schemes and announcements and also political events.

Usage of this information:

- This information would help the government in formulating policies, schemes or rectify any flaws in their implementation at the ground level so that the ultimate beneficiary who is the common man is benefited and has a direct way to communicate any complaints regarding the same to the Government.

Social media managers:

- As per the proposal, the project is meant to strengthen the social media division and recruit social media managers to be deployed in 712 districts of the country.

- Each district will have one social media manager who will be entrusted with the tasks of keeping a close eye on the regional and local media, collecting data of regional media and of local events, providing content for social media and supporting media units at the regional level for social media publicity.

Role of social media managers:

- These social media managers will also monitor local editions of newspapers, local cable channels, local audio channels (FM) and key local social media handles for important local developments.
- They will make a daily analysis report incorporating local sentiments to be sent to region head in the PIB as well as the media hub (command centre).

Sources: the hindu.

9. ONE DISTRICT ONE PRODUCT (EK ZILA – EK UT PADAN) SCHEME

What to study?

- For Prelims and Mains: Key features of ODOP and its significance.
- **Context:** Uttar Pradesh government had recently organized ‘One District One Product’ Summit **to promote traditional industries in every district of the state.**
- The ODOP Summit is stated to be the first of its kind in the country and is expected to give a big boost to the MSME and handicraft in the state.
- The summit, which aims to give boost to micro, small and medium enterprises (MSME), will be a corollary of the UP Investors Summit held in the state capital in February this year, followed by the groundbreaking ceremony for the launch of 81 projects in July.

About ODOP:

- ODOP is aimed at giving a major push to traditional industries synonymous with the respective districts of the state.
- The objective of the ODOP is to optimise production, productivity and income, preservation and development of local crafts, promotion of art, improvement in product quality and skill development.
- Under this, one product indigenous to every district would be showcased at the three-day UP Diwas event. This will boost economic development of the state, and also help in generation of five lakh new jobs annually.

Background:

- ODOP is basically a Japanese business development concept, which gained prominence in 1979. It is aimed at promoting a competitive and staple product from a specific area to push sales and improve the standard of living of the local population. Over time, it has been replicated in other Asian countries as well.

Facts for Prelims:

- UP is uniquely famous for product-specific traditional industrial hubs across 75 districts, including Varanasi (Banarasi silk sari), Bhadohi (carpet), Lucknow (chikan), Kanpur (leather goods), Agra (leather footwear), Aligarh (locks), Moradabad (brassware), Meerut (sports goods) and Saharanpur (wooden products).

Sources: the hindu.

10. WORLD BIOFUEL DAY 2018

What to study?

- For Prelims: World Biofuel Day- key facts.
- For Mains: Significance of Biofuels and government initiatives in this regard.
- **Context:** World Biofuel Day is observed every year on 10th August to create awareness about the importance of non-fossil fuels as an alternative to conventional fossil fuels and to highlight the various efforts made by the Government in the biofuel sector.

About World Bio Fuel Day:

- Every year 10th August is observed as World Bio-Fuel Day in a bid to create awareness about non fossil-fuels (Green Fuels).

- On this day in 1893, Sir Rudolph Diesel (inventor of the diesel engine) for the first time successfully ran mechanical engine with Peanut Oil.
- His research experiment had predicted that vegetable oil is going to replace the fossil fuels in the next century to fuel different mechanical engines.
- Thus to mark this extraordinary achievement, World Biofuel Day is observed every year on 10th August.

Government initiatives to promote the use of Biofuels:

- Since 2014, the Government of India has taken a number of initiatives to increase blending of biofuels. The major interventions include administrative price mechanism for ethanol, simplifying the procurement procedures of OMCs, amending the provisions of Industries (Development & Regulation) Act, 1951 and enabling lignocellulosic route for ethanol procurement.
- The Government approved the National Policy on Biofuels-2018 in June 2018. The policy has the objective of reaching 20% ethanol-blending and 5% biodiesel-blending by the year 2030. Among other things, the policy expands the scope of feedstock for ethanol production and has provided for incentives for production of advanced biofuels.
- Recently, the Government has increased the price of C-heavy molasses-based ethanol to Rs. 43.70 from Rs. 40.85 to give a boost to EBP Programme. Price of B-heavy molasses-based ethanol and sugarcane juice-based ethanol has been fixed for the first time at Rs. 47.40. The Government has reduced GST on ethanol for blending in fuel from 18% to 5%. The Ministry of Petroleum & Natural Gas is making all efforts to increase ethanol supply for petrol and has taken several steps in this direction.

Outcomes:

- These interventions of the Government of India have shown positive results. Ethanol blending in petrol has increased from 38 crore litres in the ethanol supply year 2013-14 to an estimated 141 crore litres in the ethanol supply year 2017-18.
- Bio-diesel blending in the country started from 10th August, 2015 and in the year 2018-19, Oil Marketing Companies have allocated 7.6 crore litres of biodiesel. Oil PSUs are also planning to set up 12 Second Generation (2G) Bio-refineries to augment ethanol supply and address environmental issues arising out of burning of agricultural biomass.

Sources: pib.

11. ARBITRATION & CONCILIATION (AMENDMENT) BILL, 2018

What to study?

- For Prelims: Highlights of the Bill, meaning of arbitration.
- For Mains: Significance and the need for alternative dispute resolution system.
- Context:** The Lok Sabha has passed the ***Arbitration and Conciliation (Amendment) Bill, 2018***. It will amend the Arbitration and Conciliation Act, 1996. The Act contains provisions to deal with domestic and international arbitration, and defines the law for conducting conciliation proceedings.

Key features of the Bill are:

- Arbitration Council of India:** The Bill seeks to establish an independent body called the Arbitration Council of India (ACI) for the promotion of arbitration, mediation, conciliation and other alternative dispute redressal mechanisms.
- Its functions include:** (i) framing policies for grading arbitral institutions and accrediting arbitrators, (ii) making policies for the establishment, operation and maintenance of uniform professional standards for all alternate dispute redressal matters, and (iii) maintaining a depository of arbitral awards (judgments) made in India and abroad.
- Composition of the ACI:** The ACI will consist of a Chairperson who is either: (i) a Judge of the Supreme Court; or (ii) a Judge of a High Court; or (iii) Chief Justice of a High Court; or (iv) an eminent person with expert knowledge in conduct of arbitration. Other members will include an eminent arbitration practitioner, an academician with experience in arbitration, and government appointees.
- Appointment of arbitrators:** Under the 1996 Act, parties were free to appoint arbitrators. In case of disagreement on an appointment, the parties could request the Supreme Court, or the concerned High Court, or any person or institution designated by such Court, to appoint an arbitrator.

- **Role of courts:** Under the Bill, the Supreme Court and High Courts may now designate arbitral institutions, which parties can approach for the appointment of arbitrators. For international commercial arbitration, appointments will be made by the institution designated by the Supreme Court. For domestic arbitration, appointments will be made by the institution designated by the concerned High Court. In case there are no arbitral institutions available, the Chief Justice of the concerned High Court may maintain a panel of arbitrators to perform the functions of the arbitral institutions. An application for appointment of an arbitrator is required to be disposed of within 30 days.
- **Relaxation of time limits:** Under the 1996 Act, arbitral tribunals are required to make their award within a period of 12 months for all arbitration proceedings. The Bill proposed to remove this time restriction for international commercial arbitrations.
- **Completion of written submissions:** Currently, there is no time limit to file written submissions before an arbitral tribunal. The Bill requires that the written claim and the defence to the claim in an arbitration proceeding, should be completed within six months of the appointment of the arbitrators.
- **Confidentiality of proceedings:** The Bill provides that all details of arbitration proceedings will be kept confidential except for the details of the arbitral award in certain circumstances. Disclosure of the arbitral award will only be made where it is necessary for implementing or enforcing the award.

What is Arbitration?

- Arbitration is a settlement of dispute between two parties to a contract by a neutral third party i.e. the arbitrator without resorting to court action. The process can be tailored to suit parties' particular needs.
- Arbitrators can be chosen for their expertise. It is confidential and can be speedier and cheaper than court. There are limited grounds of appeal. Arbitral awards are binding and enforceable through courts.

Significance of ADR:

- It is felt that a reliable and responsive alternative dispute resolution system is essential for rapidly developing countries like India. While business disputes need speedy resolution, litigation is the least favoured method for that.
- The Indian judicial system is marred by delays because of which businesses suffer as disputes are not resolved in a reasonable time period. Therefore, need for alternative dispute resolution processes like negotiation, mediation conciliation and arbitration is felt from time to time.

Sources: the hindu.

12. SWADESH DARSHAN SCHEME

What to study?

- For Prelims: Key features of the scheme, Cities covered.
- For Mains: Significance of the scheme.
- **Context:** First project under the Swadesh Darshan Scheme the '**North East Circuit: Imphal & Khongjom**' in Manipur has been inaugurated.

'North East Circuit: Imphal & Khongjom':

- The project covers two sites i.e. Kangla Fort and Khongjom.
- Kangla Fort is one of the most important historic and archaeological site of Manipur located in the heart of the Imphal city. It served as the seat of Manipur's power till 1891. Kangla has a special place in the hearts and minds of the people of Manipur.
- The old Govindajee Temple, outer and inner moat and other relics are perfect reflections of the rich art and architectural heritage of Manipur.

Features of Swadesh Darshan Scheme:

- The scheme is 100% centrally funded for the project components undertaken for public funding.
- To leverage the voluntary funding available for Corporate Social Responsibility (CSR) initiatives of Central Public Sector Undertakings and corporate sector.
- Funding of individual project will vary from state to state and will be finalised on the basis of detailed project reports prepared by PMC (Programme Management Consultant).

About Swadesh Darshan Scheme:

- The Tourism Ministry had launched 'Swadesh Darshan' scheme with an objective to **develop theme-based tourist circuits in the country**. These tourist circuits will be developed on the principles of high tourist value, competitiveness and sustainability in an integrated manner.

- A National Steering Committee (NSC) will be constituted with Minister in charge of M/O Tourism as Chairman, to steer the mission objectives and vision of the scheme.
- A Mission Directorate headed by the Member Secretary, NSC as a nodal officer will help in identification of projects in consultation with the States/ UTs governments and other stake holders.
- PMC will be a national level consultant to be appointed by the Mission Directorate.

Sources: pib.

13. NITI AAYOG LAUNCHES “PITCH TO MOVE”

What to study?

- For Prelims: particulars of the programme.
- For Mains: Entrepreneurship promotion in the country and the efforts by government in this regard.
- **Context:** *NITI Aayog has launched “Pitch to MOVE”* – a mobility pitch competition that aims to provide budding entrepreneurs of India a unique opportunity to pitch their business ideas to a distinguished jury.

About “Pitch to MOVE”:

- “Pitch to MOVE” is organised by NITI Aayog in collaboration with Invest India and Society of Indian Automobile Manufacturers (SIAM).
- **Aim:** The competition aims to identify and reward the start-ups offering innovative solutions for shared, connected, and environment friendly mobility. It also aims to incentivise the startups, which will help the Government realize its vision of Shared, Connected, Intermodal and Environment Friendly Mobility for India. The objective is to harness the latest disruption for generating employment and growth in our country.
- The Startups can be from the domain of Public Mobility, Electric Vehicles, Shared Transport, Last Mile Connectivity, Passenger Transportation, Battery Technology, Automotive IoT, Freight & Logistics, Powertrain/Drivetrain, Experiential, Travel, Mobility Infrastructure and Automotive Electronics etc.

Sources: pib.

14. PROMPT CORRECTIVE ACTION (PCA) FRAMEWORK

What to study?

- For Prelims: Features of PCA.
- For Mains: Significance and the need for PCA framework, the NPA menace.
- **Context:** PSU banks are expected to come out of the Prompt Corrective Action (PCA) framework by the end of this year. Currently, 11 out of a total of 21 state-owned banks are under the RBI’s Prompt Corrective Action (PCA) framework.

Background:

- Various measures taken by the government including implementation of Insolvency and Bankruptcy Code (IBC) has yielded good results in terms of reining bad loans and increasing recovery.

What is PCA?

- PCA norms allow the regulator to place certain restrictions such as halting branch expansion and stopping dividend payment. It can even cap a bank’s lending limit to one entity or sector. Other corrective action that can be imposed on banks include special audit, restructuring operations and activation of recovery plan.
- Banks’ promoters can be asked to bring in new management, too. The RBI can also supersede the bank’s board, under PCA.

When is PCA invoked?

- The PCA is invoked when certain risk thresholds are breached. There are three risk thresholds which are based on certain levels of asset quality, profitability, capital and the like.
- The third such threshold, which is maximum tolerance limit, sets net NPA at over 12% and negative return on assets for four consecutive years.

What are the types of sanctions?

- There are two type of restrictions, mandatory and discretionary. Restrictions on dividend, branch expansion, directors compensation, are mandatory while discretionary restrictions could include curbs on lending and deposit. In the cases of two banks where PCA was invoked after the revised guidelines were issued — IDBI Bank and UCO Bank — only mandatory restrictions were imposed. Both the banks breached risk threshold 2.

What will a bank do if PCA is triggered?

- Banks are not allowed to re new or access costly deposits or take steps to increase their fee-based income. Banks will also have to launch a special drive to reduce the stock of NPAs and contain generation of fresh NPAs. They will also not be allowed to enter into new lines of business. RBI will also impose restrictions on the bank on borrowings from interbank market.

Sources: the hindu.

15. HEALTH POLICIES TO COVER MENTAL ILLNESS

What to study?

- For Prelims: Key features of the Mental Healthcare Act, 2017.
- For Mains: Need for inclusion of mental illness under health policies, mental health- concerns, challenges and need for awareness generation.
- Context:** Insurance regulator IRDAI has issued a circular directing insurers to cover mental illness, which has reached serious proportions in the country.

What's the issue?

- The Mental Healthcare Act, 2017 — which came into force from May 29 — has made it mandatory to provide “for medical insurance for treatment of mental illness on the same basis as is available for treatment of physical illness”.
- But to date, none of India’s 33 insurers has introduced a product that covers ailments such as depression, schizophrenia, and bipolar disorder, even though such covers are commonplace in many countries.

Significance of this step:

- The change has been long overdue. This is being seen as a progressive step. This will ensure a life of dignity to those who have mental health issues.
- It will create awareness, acceptance, and inclusion of mental illness as any other physical ailment. It will ‘normalise’ diagnoses, by reducing associated myths and stigma.

Present scenario:

- Mental health conditions have always been in the list of exclusions of health insurance policies. The only exceptions to this have been the coverage of development conditions such as autism and Down’s syndrome by the National Health Insurance Scheme, and a few private schemes like Star Health Insurance’s cover for autistic children.

What is mental illness?

- As per the Mental Healthcare Act**, mental illness means a substantial disorder of thinking, mood, perception, orientation or memory that grossly impairs judgement, behaviour, capacity to recognise reality or ability to meet the ordinary demands of life.
- It also includes mental conditions associated with the abuse of alcohol and drugs, but does not include mental retardation which is a condition of arrested or incomplete development of mind of a person.
- The Act further states that every person with mental illness will be treated as equal to persons with physical illness when it comes to healthcare, including health insurance.

Sources: the hindu.

16. BRUS OF MIZORAM

What to study?

- For Prelims: Who are Brus and issues associated.
- For Mains: Agreement in this regard and the recent demands for relaxation of the norms in the agreement.
- **Context:** The Union Home Ministry has agreed to relax conditions laid down in the ‘four-corner agreement’ signed with Bru migrants for their repatriation from Tripura to Mizoram.

The deal:

- In a major breakthrough on repatriation laced Bru persons from Mizoram, an agreement was signed by Government of India, Governments of Mizoram and Tripura and Mizoram Bru Displaced People’s Forum (MBDPF) in July 2018.
- As per the agreement, the central government will provide ***financial assistance*** for rehabilitation of Bru community members in Mizoram and address their issues of security, education, livelihood, etc. in consultation with the governments of Mizoram and Tripura.
- According to the agreement, ***the Mizoram government would ensure security*** for all repatriated refugees who were identified and verified as per the 1997 electoral rolls of Mizoram.
- ***The agreement also provides for free ration*** for two years and a monthly assistance of Rs 5,000 for each family.

New changes:

- According to the initial agreement, the cash assistance was to be provided only after three years of uninterrupted stay in Mizoram. As per the latest changes, for those (Brus) who are willing to return to Mizoram, the government might relax the period of stay for cash assistance of Rs 4 lakh from three years to two or even one and a half years. Refugees may also be allowed to withdraw 90% of the Rs 4 lakh assistance as bank loan immediately after their return.
- The Centre may also dilute the conditions in place for financial assistance. According to the original agreement, a house building assistance of Rs 1.5 lakh was to be disbursed in three instalments. This could now be relaxed further, with those Bru refugees building a house on their return to Mizoram being allowed to take the Rs 1.5 lakh assistance in a single installment or two.

What's the issue?

- A bout of ethnic violence forced thousands of people from the Bru tribe to leave their homes in Mizoram. As many as 32,876 people belonging to 5,407 families are living in the refugee camps in the Jampui Hills of Tripura.
 - The displaced Bru people from Mizoram have been living in various camps in Tripura since 1997. In 1997, the murder of a Mizo forest guard at the Dampa Tiger Reserve in Mizoram’s Mamit district allegedly by Bru militants led to a violent backlash against the community, forcing several thousand people to flee to neighbouring Tripura.
 - The Bru militancy was a reactionary movement against Mizo nationalist groups who had demanded in the mid-1990s that the Brus be left out of the state’s electoral rolls, contending that the tribe was not indigenous to Mizoram.

Who are Brus?

- The Brus, also referred to as the Reangs, are spread across the northeastern states of Tripura, Assam, Manipur, and Mizoram.

Sources: the hindu.

17. INTERLINKING OF RIVERS

What to study?

- For Prelims: ILR- approved projects and their brief overview.
- For Mains: Need for and significance of interlinking of rivers.
- **Context:** 15th Meeting of Special Committee for Interlinking of Rivers was recently Held.

Outcomes of the meeting:

- During the meeting, it was stressed on the need for developing consensus amongst the concerned states on interlinking of rivers so that the water draining unutilized into the sea could be utilized for the needy areas.
- States were called upon to discuss and sort out issues through active consultation so that the projects can be implemented on priority.

Developments so far:

- Steps have been taken for early implementation of **five interlinking projects** and Memorandum of Agreement for implementation of these projects is being finalised in consultation with the concerned state governments.
- **These five projects include** Ken-Betwa link project, Damanganga-Pinjal link project, Par-Tapi-Narmada link project, Godavari-Cauvery (Grand Anicut) link project and Parvati-Kali Sindhu-Chambal link.

Need for interlinking of rivers:

- The interlinking project aims to link India's rivers by a network of reservoirs and canals that will allow for their water capacities to be shared and redistributed.
- According to some experts, this is an engineered panacea that will reduce persistent floods in some parts and water shortages in other parts besides facilitating the generation of hydroelectricity for an increasingly power hungry country.

Benefits and significance of interlinking:

- **Enhances water and food security** of the country and it is essential for providing water to drought prone and water deficit areas.
- **Proper utilization:** River interlinking projects envisage that the surplus water available in Himalayan Rivers is transferred to the areas where water supply is not adequate in the Peninsular India. Also, huge quantities of water from several Peninsular rivers drain unutilized into the sea, and river interlinking projects help transfer this water to water deficit areas of Peninsular India.
- **Boost to agriculture:** The main occupation of rural India is agriculture and if monsoon fails in a year, then agricultural activities come to a standstill and this will aggravate rural poverty. Interlinking of rivers will be a practical solution for this problem, because the water can be stored or water can be transferred from water surplus area to deficit.
- **Disaster mitigation:** The Ganga Basin, Brahmaputra basin sees floods almost every year. In order to avoid this, the water from these areas has to be diverted to other areas where there is scarcity of water. This can be achieved by linking the rivers. There is a two way advantage with this – floods will be controlled and scarcity of water will be reduced.
- **Transportation:** Interlinking of rivers will also have commercial importance on a longer run. This can be used as inland waterways and which helps in faster movement of goods from one place to other.
- **Employment generation:** Interlinking also creates a new occupation for people living in and around these canals and it can be the main areas of fishing in India.

Concerns associated:

- Interlinking of rivers will cause **huge amount of distortion in the existing environment**. In order to create canals and reservoirs, there will be mass deforestation. This will have impact on rains and in turn affect the whole cycle of life.
- Usually rivers **change their course and direction** in about 100 years and if this happens after interlinking, then the project will not be feasible for a longer run.
- Due to interlinking of rivers, **there will be decrease in the amount of fresh water entering seas** and this will cause a serious threat to the marine life system and will be a major ecological disaster.
- Due to the creation of Canals and Reservoirs, **huge amount of area which is occupied by the people will be submerged** leading to displacement of people and government will have to spend more to rehabilitate these people.
- **The amount required for these projects is so huge** that government will have to take loans from the foreign sources which would increase the burden on the government and country will fall in a debt trap.

Way ahead:

- National Water Development Agency (NWDA) so far has received more than 40 proposals of intra-state links from 9 States viz. Maharashtra, Gujarat, Jharkhand, Odisha, Bihar, Rajasthan, Tamil Nadu, Karnataka and Chhattisgarh.
- The successful completion of these projects will lead to reduction in disaster during floods, improved irrigation facilities, employment generation in rural agriculture, and increase in exports and decrease in migration from villages.

Sources: pib.

18. PLEA CHALLENGES CHANGES IN SC/ST LAW

What to study?

- For Prelims: Provisions of the SC/ST Act, guidelines by the SC to curb its misuse.
- For Mains: Controversy over dilution of the act and justification of amendments proposed.
- **Context:** A central government amendment passed by both Houses of Parliament in the just-concluded monsoon session, reinstating a controversial clause allowing immediate arrests in complaints filed under the SC/ST Act, has been challenged in the Supreme Court.

Arguments against the amendments by the petitioners:

- It has been alleged that the amendment has been brought in with an eye on the 2019 polls. They also argued that there can be no presumption of guilt only because the person at the receiving end was from an upper caste.
- Besides, the petitioners claimed that the number of cases being filed under the Act had shot up alarmingly in recent years to back their claim that the law was being misused.

Background:

- On March 20, the Supreme Court issued a slew of guidelines to protect people against arbitrary arrests under the Act, directing that public servants could be arrested only with the written permission of their appointing authority, while in the case of private employees, the Senior Superintendent of Police concerned should allow it.
 - A preliminary inquiry should be conducted before the FIR was registered to check if the case fell within the ambit of the Act, and whether it was frivolous or motivated, the court ruled.
 - The ruling was greeted by a storm of protest from Dalit groups, which said the order diluted the law. However, the court refused to stay its ruling, leading to the demand from Dalit groups that the government introduce an ordinance or an Amendment Bill to restore the provisions.
 - Following this, the government introduced a Bill to restore the original provisions of the Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989.

The Amendment Bill seeks to insert three new clauses after Section 18 of the original Act:

- The first stipulates that for the purposes of the Act, “preliminary enquiry shall not be required for registration of a First Information Report against any person.”
- The second stipulates that the arrest of a person accused of having committed an offence under the Act would not require any approval.
- The third says that the provisions of Section 438 of the Code of Criminal Procedure — which deals with anticipatory bail — shall not apply to a case under this Act, “notwithstanding any judgment or order of any Court.”

Sources: the hindu.

19. PRADHAN MANTRI AWAS YOJANA

What to study?

- For Prelims: PMAY- key features.
- For Mains: Significance of PMAY and the need for Housing for All.

- **Context:** The Centre has approved construction of nearly 1.12 lakh more affordable houses for urban poor in eight states under the Pradhan Mantri Awas Yojna, with Andhra Pradesh bagging the largest share of over 37,000 housing units.
- According to the Housing and Urban Affairs Ministry, which is mandated to implement the scheme, the total number of houses being funded under the PMAY (Urban) is close to 55 lakh across the country so far.

About PMAY-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.

The Mission seeks to address the housing requirement of urban poor including slum dwellers through following programme verticals:



- 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.

Key facts:

- The beneficiaries are poor and people living under EWS and LIG categories in the country.
- The scheme is divided into three phases. In the first phase, a total of 100 cities will be covered from April 2015 to March 2017. In phase two, 200 cities will be covered from April 2017 to March 2019. In the third phase, the leftover cities will be covered from April 2019 to March 2022.
- The government is providing an interest subsidy of 6.5% on housing loans which can be availed by beneficiaries for 15 years from start of loan date.
- The government will grant Rs 1 lakh to all the beneficiaries of the scheme. In addition, Rs 1.5 lakh will be given to all eligible urban poor who want to construct their houses in urban areas or plan to go for renovation in their existing houses. One can also avail loans under this scheme to build toilets in existing houses.

Sources: the hindu.

20. STRATEGIC PARTNERSHIP (SP) MODEL

What to study?

- For Prelims: Key features of SP model and about DAC.
- For Mains: Significance, concerns and issues associated with SP model.
- **Context:** The Defence Acquisition Council (DAC), in a landmark decision, has approved procurement of 111 Utility Helicopters for the Indian Navy at a cost of over Rs. 21,000 crores.
- This is the first project under the MoD's prestigious **Strategic Partnership (SP) Model** that aims at providing significant fillip to the Government's 'Make in India' programme.

What is Strategic Partnership (SP) model?

- The strategic partner model is intended to enhance competition, increase efficiencies, facilitate faster and more significant absorption of technology, create a tiered industrial ecosystem, ensure development of a wider skill base, trigger innovation and enable participation in global value chains as well as promote exports.
- Under the model, the government intends to boost private sector participation and create domestic expertise in four key areas, namely, fighter aircraft, helicopters, submarines, and armoured vehicles and main battle tanks.
- One company would be selected for each area based on its competence, which would then tie up with the foreign Original Equipment Manufacturer selected through the procurement process, to build the platform in India with significant technology transfer.

Significance:

- The SP model, if implemented well, is likely to have a number of benefits for both the private sector and the larger Indian defence industry.
- From the private sector's point of view**, the biggest benefit would be the opportunity to participate in some big ticket contracts – estimated to be worth over two lakh crore rupees in the initial phase of execution -- which were hitherto reserved for the DPSUs and OFs.
- Bridging the trust gap:** At the same time, the model would also go a long way in bridging the long-standing trust gap between the Indian private sector and MoD, with the latter perceived to be friendlier toward public sector entities.
- Strategic Partners, being private sector companies, are expected to exploit **their dynamism, competitiveness, profit orientation, and exposure to the civilian sector** for efficient utilisation of the technology, manpower and infrastructure developed in the process.
- The model has a long-term vision of promoting India as **a manufacturing hub for defence equipment** thus enhancing self-sufficiency and establishing an industrial and R&D ecosystem, capable of meeting the future requirements of the Armed Forces.

Concerns:

- Despite potential benefits, there are two concerns which need to be addressed to make SPs contribute in a meaningful and time-bound manner.
- The first and foremost concern is the lack of institutional capacity and ability to guide the new process to its logical conclusion.
- There is also a concern regarding the long-term viability of SPs largely due to the privileged position enjoyed by public sector entities.

Way ahead:

- Time and again, the MoD has deviated from its own promise of fair play in award of contracts and handed over large orders to DPSUs and OFs on nomination. It would be futile to expect SPs to make major investments if the government does not provide a level-playing field to the private sector.

Sources: pib.

21. ODISHA TO COME UP WITH SINGLE REVENUE CODE

What to study?

- For Prelims and Mains: Significance, features and the need for Single revenue code.
- Context:** The Odisha government has proposed to come up with **a single revenue act by merging various revenue laws** enacted at different point in times.
- In this regard, the state government has prepared the draft '**Odisha Land and Revenue Code**' by taking into consideration the Odisha Survey and Settlement Act, 1958, the Odisha Special Survey and the Settlement Act 2012, the Odisha Government Land Settlement Act, 1962, the Odisha Prevention of Land Encroachment Act, 1972, the Odisha Land Reforms Act, 1960, the Odisha Consolidation of Holdings and Prevention of Fragmentation of Land Act 1972 and the Odisha Estates Abolition Act, 1951.

Need for a uniform revenue code:

- The need for a single Revenue Code arises out of the fact that there are many revenue Acts in vogue in Odisha governing the land revenue administration which were enacted years back and are unable to meet the changing needs.
- Existence of so many revenue Acts and Rules often create confusion** among the field-level revenue functionaries in interpretation of such laws which ultimately leads to delay in disposal of cases and sufferings for the public.
- The main purpose is to end the numerous laws** and introduction of a single code having simplified procedures and enabling provisions for speedy disposal of the revenue cases which will benefit the public.

What next?

- The code will be published inviting suggestions and objections from all sections and after scrutiny of feedbacks, necessary changes will be effected and steps will be taken for enactment of the code.

22. ANTI-LYNCHING MEASURES

What to study?

- For Prelims: Name of the panel.
- For Mains: Need for anti- lynching law, concerns and challenges associated with lynching.
- Context:** A panel headed by Union Home Secretary Rajiv Gauba, which deliberated on measures to check incidents of lynching, submitted its report to a Group of Ministers headed by Home Minister Rajnath Singh.

The proposal:

- As per the suggestion made, media platforms — Facebook, WhatsApp, YouTube and Twitter — would be made accountable for not blocking such malicious posts/videos when brought to their notice and “FIR could be lodged against their country heads” for non-compliance of government orders and they could be prosecuted under law.

Background:

- From May-June, more than 20 people were lynched based on fake posts or rumours floating on various social media platforms. Last month, the Home Ministry issued advisories to States and Union Territories following Supreme Court’s directives to check incidents of lynching.
- The Centre asked them to **appoint an officer in each district at the level of Superintendent of Police, set up a special task force to gather intelligence, and closely monitor social media contents** to prevent mob attacks on suspicion of being child-lifters or cattle smugglers.

Need for coordination between the centre and states on this matter:

- The Union Government is highly concerned about the incidents of mob violence in some parts of the country. Government has already condemned such incidents and made its stand clear in the Parliament that, **as per the Constitutional scheme, ‘Police’ and ‘Public Order’ are State subjects**.
- State Governments are responsible for controlling crime, maintaining law and order, and protecting the life and property of the citizens.** They are empowered to enact and enforce laws to curb crime in their jurisdiction.

Recent directions of the Supreme Court on the issue of mob violence:

- Condemning mob lynching incidents across the country and the Supreme Court had **urged the Parliament to enact a new law to deal with the crime**. The court passed a slew of directions in this regard to deal with the mob lynching. Here are the directions:
 - There shall be a **“separate offence”** for lynching and the trial courts must ordinarily award maximum sentence upon conviction of the accused person to set a stern example in cases of mob violence.
 - The state governments will have **to designate a senior police officer in each district** for taking measures to prevent incidents of mob violence and lynching.
 - The state governments need to identify districts, sub-divisions and villages** where instances of lynching and mob violence have been reported in the recent past.
 - The nodal officers shall bring to the notice of the DGP about any inter-district co-ordination issues** for devising a strategy to tackle lynching and mob violence related issues.
 - Every police officer shall ensure to disperse the mob** that has a tendency to cause violence in the guise of vigilantism or otherwise.
 - Central and the state governments shall broadcast on radio, television and other media platforms about the serious consequences of mob lynching and mob violence.
 - Despite the measures taken by the State Police, if it comes to the notice of the local police that an incident of lynching or mob violence has taken place, **the jurisdictional police station shall immediately lodge an FIR**.
 - The State Governments shall prepare a lynching/mob violence victim compensation scheme** in the light of the provisions of Section 357A of CrPC within one month from the date of this judgment.
 - If a police officer or an officer of the district administration fails to fulfill his duty, **it will be considered an act of deliberate negligence**.

Need for an anti-lynching law:

- At present there is no law that criminalises mob killings. The Indian Penal Code has provisions for unlawful assembly, rioting, and murder but nothing that takes cognisance of a group of people coming together to kill (a lynch mob).
- Under Section 223 (a) of the Criminal Procedure Code (CrPC), to prosecute together two or more people accused of the same offence committed in the course of the “same transaction”. But the provision falls far short of an adequate legal framework for prosecuting lynch mobs.

Sources: the hindu.

Paper 2 Topic: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

1. COMMON SERVICE CENTRES TO IMPLEMENT AYUSHMAN BHARAT

What to study?

- For Prelims: What are CSCs, Key features of Ayushman Bharat.
- For Mains: Significance of CSCs and how they help in empowerment of citizens, significance of Ayushman Bharat.
- Context: Common Service Center (CSC) and National Health Accounts (NHA) have signed a memorandum of understand to implement the Ayushman Bharat scheme through three-lakh CSCs across the country.

As per the MoU:

- A beneficiary can now visit the nearby CSC to get the benefit of this scheme and CSC will help the beneficiary to identify his name in the Ministry of Health and Family Welfare database and his entitlement for the scheme.
- The CSCs will help the beneficiary to scan/ upload his KYC documents for verification of his/ her identity and claim his/ her entitlement.
- The beneficiary will also have facility to print his/ her Ayushman Scheme card through the centre which will be his/ her base source claim. CSCs will also provide requisite information about the scheme and promote the same.

Highlights of the scheme:

- Coverage: The scheme has the benefit cover of Rs. 5 lakh per family per year. To ensure that nobody is left out (especially women, children and elderly) there will be no cap on family size and age in the scheme. The benefit cover will also include pre and post-hospitalisation expenses.
- Target: The target beneficiaries of the proposed scheme will be more than 10 crore families belonging to poor and vulnerable population based on SECC database. Benefits of the scheme are portable across the country and a beneficiary covered under the scheme will be allowed to take cashless benefits from any public/private empanelled hospitals across the country.
- Role of state governments: State Governments will be allowed to expand AB-NHPM both horizontally and vertically. States will be free to choose the modalities for implementation. They can implement through insurance company or directly through Trust/ Society or a mixed model.
- Council: For giving policy directions and fostering coordination between Centre and States, it is proposed to set up Ayushman Bharat National Health Protection Mission Council (AB-NHPCM) at apex level Chaired by Union Health and Family Welfare Minister.

Who is eligible?

- It will be an entitlement based scheme with entitlement decided on the basis of deprivation criteria in the SECC database.
- The different categories in rural area include families having only one room with kucha walls and kucharoof; families having no adult member between age 16 to 59; female headed households with no adult male member between age 16 to 59; disabled member and no able bodied adult member in the family; SC/ST households; and landless households deriving major part of their income from manual casual labour.

Ayushman Bharat:

- Ayushman Bharat is the National Health Protection Scheme, which will cover over 10 crore poor vulnerable families (around 50 crore beneficiaries) providing coverage of up to ₹5 lakh (per family per year) for secondary and tertiary care hospitalisation.
- It will subsume the on-going centrally sponsored schemes –Rashtriya Swasthya Bima Yojana (RSBY) and the Senior Citizen Health Insurance Scheme (SCHIS).

- Also, automatically included families in rural areas having any one of the following: households without shelter, destitute, living on alms, manual scavenger families, primitive tribal groups, legally released bonded labour. For urban areas, 11 defined occupational categories are entitled under the scheme.

What are CSCs?

- Common Services Centers (CSCs) are a strategic cornerstone of the Digital India programme. They are the access points for delivery of various electronic services to villages in India, thereby contributing to a digitally and financially inclusive society.

CSCs enable the three vision areas of the Digital India programme:

- Digital infrastructure as a core utility to every citizen.
- Governance and services on demand.
- Digital empowerment of citizens.

Significance of CSCs:

- CSCs are more than service delivery points in rural India. They are positioned as change agents, promoting rural entrepreneurship and building rural capacities and livelihoods. They are enablers of community participation and collective action for engendering social change through a bottom-up approach with key focus on the rural citizen.

Key facts:

- The CSC project, which forms a strategic component of the National eGovernance Plan was approved by the Government in May 2006, as part of its commitment in the National Common Minimum Programme to introduce e-governance on a massive scale.
- It is also one of the approved projects under the Integrated Mission Mode Projects of the National eGovernance Plan.

Sources: the hindu.

2. WORLD BREASTFEEDING WEEK (AUGUST 1 TO 7)

What to study?

- For Prelims: World Breastfeeding Week, MAA programme.
- For Mains: Significance of Breastfeeding.
- Context:** August 1 to 7 every year is observed as World Breastfeeding Week.
- Organized by:** World Alliance for Breastfeeding Action (WABA), WHO and UNICEF.
- Goal:** To promote exclusive breastfeeding for the first six months of life which yields tremendous health benefits, providing critical nutrients, protection from deadly diseases such as pneumonia and fostering growth and development.

Significance of breastfeeding:

- Breastfeeding is an important efficient and cost-effective intervention promoting child survival and health.
- Breastfeeding within an hour of birth could prevent 20% of the newborn deaths.
- Infants who are not breastfed are 15 times more likely to die from pneumonia and 11 times more likely to die from diarrhoea than children who are exclusively breastfed, which are two leading causes of death in children under-five years of age.
- In addition, children who were not breastfed are at increased risk for diabetes, obesity, allergies, asthma, childhood leukemia, sudden infant death syndrome etc. Apart from mortality and morbidity benefits, breastfeeding also has tremendous impact on improved IQ.



MAA programme:

- To intensify the efforts further for promotion of breastfeeding, the Health Ministry has initiated a nationwide programme called "**MAA-Mother's Absolute Affection**" to bring undiluted focus on promotion of breastfeeding and provision of services towards supporting breastfeeding, along with ongoing efforts of routine health systems.
 - **The key components of the MAA programme** are awareness generation, promotion of breastfeeding & inter personal counselling at community level, skilled support for breastfeeding at delivery points and monitoring and Award/ recognition of health facility.
 - Under this programme, **ASHA has been incentivized** for reaching out to pregnant and lactating mothers and provide information on benefits and techniques of successful breastfeeding during interpersonal communication. ANMs at all sub-centres and health personnel at all delivery points are being trained for providing skilled support to mothers referred with issues related to breastfeeding.
 - Under NHM, funding support has been recommended for all States and UTs for successful implementation of the MAA programme.

UNICEF report on early initiation of breastfeeding across the world:

- A new report released by UNICEF and the World Health Organisation (WHO) has ranked Sri Lanka at the top of the list of countries with early initiation of breastfeeding.
 - **India ranks 56th** among the 76 countries that were analysed.
 - Countries like Kazakhstan, Rwanda, Bhutan and Uruguay have fared much better than India.
 - Azerbaijan, Pakistan and Montenegro are at the bottom.
 - Only two in five newborns are breastfed within the first hour of life across the world.

About WABA:

- **World Alliance for Breastfeeding Action (WABA)** is a global network of individuals and organisations concerned with the protection, promotion and support of breastfeeding worldwide based on the Innocenti Declarations, the Ten Links for Nurturing the Future and the WHO/UNICEF Global Strategy for Infant and Young Child Feeding.
- WABA is in consultative status with UNICEF and an NGO in Special Consultative Status with the Economic and Social Council of the United Nations (ECOSOC).

Sources: the hindu.

3. VIDYALAKSHMI PORTAL

What to study?

- For Prelims and Mains: Significance and key features of the portal.
- **Context:** As part of its digital initiative, Karnataka Bank has integrated its education loan scheme/s with Vidya Lakshmi Portal of Government of India.

About Vidyalakshmi Portal:

- Vidya Lakshmi is a first of its kind portal **for students seeking Education Loan**.
- This portal has been developed under the guidance of Department of Financial Services, (Ministry of Finance), Department of Higher Education (Ministry of Human Resource Development) and Indian Banks Association (IBA).
- The portal has been developed and being maintained by NSDL e-Governance Infrastructure Limited.
- Students can view, apply and track the education loan applications to banks anytime, anywhere by accessing the portal. The portal also provides linkages to National Scholarship Portal.

Sources: the hindu.

4. RASHTRIYA UCHCHATAR SHIKSHA ABHIYAN (RUSA)

What to study?

- For Prelims: RUSA- key features.
- For Mains: Significance of the scheme and reforms in higher education.

- **Context:** NITI Aayog has identified 117 districts as 'Aspirational Districts' for Rashtriya Uchchatar Shiksha Abhiyan (RUSA).

Rashtriya Uchchatar Shiksha Abhiyan (RUSA)

- Centrally Sponsored Scheme (CSS), launched in 2013
- Aims at providing strategic funding to eligible state higher educational institutions.
- The central funding would be norm based and outcome dependent.
 - ratio of 60:40 for general category States,
 - 90:10 for special category states and
 - 100% for union territories
- The funding would flow from the central ministry through the state governments/union territories to the State Higher Education Councils before reaching the identified institutions.
- The funding to states would be made on the basis of critical appraisal of State Higher Education Plans, which would describe each state's strategy to address issues of equity, access and excellence in higher education.

Selection of the districts:

- These districts have been selected on the basis of the composite index which includes published data of deprivation enumerated under Socio-Economic Caste Census, Health & Nutrition, Education and Basic Infrastructure.

Key facts:

- **Support by the Centre:** Under the scheme, central assistance is provided for opening of new Model Degree Colleges (MDCs) in these districts and in unserved & underserved districts in North Eastern and Himalayan States.
- **Kind of support:** The central support provided under the component of new MDCs is infrastructural in nature in which funds are released for creation of Colleges with requisite infrastructure such as appropriate number of class rooms, library, laboratory, faculty rooms, toilet blocks and other essential requirements for technologically advanced facilities.
- **States' role:** Under this component, a commitment is given by the State Governments that all recurring expenditure (including salaries) in respect of the MDC being established, will be borne by the respective State Government. Additionally, under a separate component of RUSA viz., Faculty Recruitment Support, central support is provided for creation of additional posts of Assistant Professors.

About RUSA:

- Rashtriya Uchchatar Shiksha Abhiyan (RUSA) is a Centrally Sponsored Scheme (CSS), launched in 2013 aims at providing strategic funding to eligible state higher educational institutions.

Funding:

- The central funding (in the ratio of 60:40 for general category States, 90:10 for special category states and 100% for union territories) would be norm based and outcome dependent.
- The funding would flow from the central ministry through the state governments/union territories to the State Higher Education Councils before reaching the identified institutions.
- The funding to states would be made on the basis of critical appraisal of State Higher Education Plans, which would describe each state's strategy to address issues of equity, access and excellence in higher education.

Objectives:

- The key objectives of RUSA are to improve access, equity and quality in higher education through planned development of higher education at the state level.
- Objectives include creating new academic institutions, expanding and upgrading the existing ones, developing institutions that are self-reliant in terms of quality education, professionally managed, and characterized by greater inclination towards research and provide students with education that is relevant to them as well the nation as a whole.

Components:

- RUSA would create new universities through upgradation of existing autonomous colleges and conversion of colleges in a cluster.
- It would create new model degree colleges, new professional colleges and provide infrastructural support to universities and colleges.
- Faculty recruitment support, faculty improvements programmes and leadership development of educational administrators are also an important part of the scheme.
- In order to enhance skill development the existing central scheme of Polytechnics has been subsumed within RUSA. A separate component to synergise vocational education with higher education has also been included in RUSA.
- Besides these, RUSA also supports reforming, restructuring and building capacity of institutions in participating state.

Sources: pib.

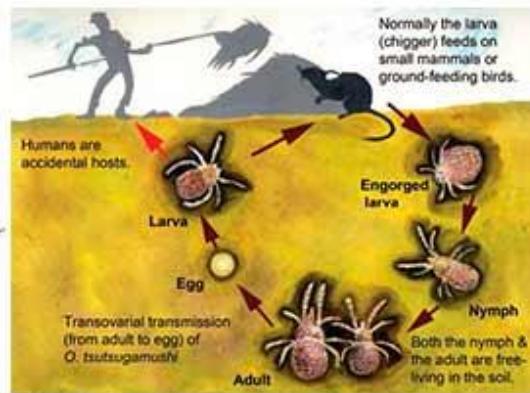
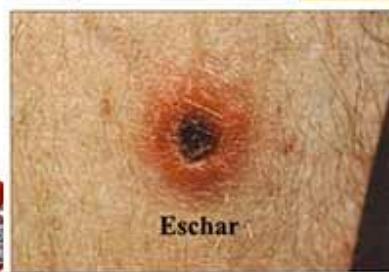
5. SCRUB TYPHUS

What to study?

- For Prelims: Scrub typhus and Japanese encephalitis.
- For Mains: Awareness and the need for prevention of outbreaks.
- Context:** As per recent findings by a team of experts, **Scrub typhus is key encephalitis cause in eastern U.P.** This finding is important, given that the mite-borne disease can be treated easily if doctors look for it early.

Scrub Typhus

**Etiology, Epidemiology
Signs and Symptoms
Pathogenesis, Diagnosis
and Treatment**

**What is Scrub Typhus?**

- Scrub typhus is **an infectious disease** with symptoms similar to any viral fever. However, it is not caused by a virus, but by a parasite called *Orientia tsutsugamushi*, which is transmitted by the bite of infected mite larvae in soil containing scrub vegetation.

- The disease is also known as bush typhus because the mites (*Leptotrombidium deliense*, commonly known as trombiculid mite) that cause it reside in vegetation predominantly comprising small shrubs.
- The disease is more common during the wet season when the mites lay eggs. Incubation period (time between bite and beginning of symptoms) is 10 – 14 days.

Transmission:

- It is usually transmitted by mites that are found in the shrubs in hilly areas. It can also be transmitted by lice, ticks and fleas.

Causes of Scrub Typhus:

- The species which transmits Scrub typhus are found in areas which have heavy scrub vegetation.
- *Orientia tsutsugamushi* gets transmitted through the bite of trombiculid mites. These mites feed on rural and forest rodents, including voles, rats and field mice.
- A person develops infection after the bite of the mite larva. When a person gets bitten by this mite, it leaves a characteristic black colored eschar which helps with the diagnosis.

Symptoms:

- The symptoms of scrub typhus are similar to chikungunya. At onset there is fever, headache, bodyache, cough and gastrointestinal symptoms. Patients with a mild infection may recover without any other symptoms. However, roughly every second patient develops a visible black scab at the point of the bite, with a swelling of the lymph nodes.
- In about a third of cases, a delayed onset of rashes occurs 4-6 days into the disease. Severe cases typically include encephalitis and interstitial pneumonia due to vascular injury. The fatality rate is 7%.
- Other symptoms include high fever, skin rashes, respiratory problems, red eyes and unconsciousness. Some of the patients also develop joint pains, which is characteristic of chikungunya.
- It may progress on to respiratory distress, pneumonitis (inflammation of lung tissue), and multi-organ failure.

What needs to be done?

- If detected in time, the disease can be cured using antibiotics. Antibiotics like Doxycycline or Azithromycin are commonly used to treat the disease. Dengue and chikungunya are self-limiting viral diseases that do not have any treatment, apart from management of symptoms. In scrub typhus, however, administering antibiotics on time can save lives.
- But, getting an early diagnosis is a problem in Himachal, where Indira Gandhi Medical College and Hospital (IGMCH) is the only scrub typhus testing and treating centre.

Preventive measures:

- Limit the spread of rodents.
- Pets should be cleaned regularly.
- Skin should be properly covered while visiting jungle or area with lot of shrubs.

Sources: the hindu.

6. GLOBAL INNOVATION INDEX

What to study?

- For Prelims: GII 2018- key facts.
- For Mains: Need for promotion of innovation and efforts by government to promote innovation.
- **Context:** NITI Aayog has proposed to join hands with Confederation of Indian Industry (CII) to develop a Roadmap for Top 10 Rank in Global Innovation Index (GII).

India's performance in GII:

- India's rank on the Global Innovation Index (GII) has improved from 60 in 2017 to 57 in 2018. India has been consistently climbing the GII ranking for the past two years.

What's needed?

- There is a need to:
 - Transform India's Innovation Ecosystem by formulating a New Innovation Policy to attract R&D investment into cutting edge technologies and build appropriate infrastructure and institutions.
 - Tap Global hotspots of Innovation in latest technologies like AI, Blockchain and Robotics etc.
 - Connect Tinkering labs in schools with start-ups, business and high end educational institutions.
 - Target efficient, productive and outcome driven R&D in the Government Sector.

GII 2018:

- GII is jointly released by Cornell University, INSEAD and World Intellectual Property Organisation (WIPO). GII ranks 126 economies based on 80 indicators.
- The GII 2018 marks the 11th edition of the GII, and the beginning of its second decade providing data and insights gathered from tracking innovation across the globe.
- This year's edition, is dedicated to the theme of Energizing the World with Innovation. It analyses the energy innovation landscape of the next decade and identifies possible breakthroughs in fields such as energy production, storage, distribution, and consumption.
- It also looks at how breakthrough innovation occurs at the grassroots level and describes how small-scale renewable systems are on the rise.

Performance of India:

- This year, India has moved up 3 places as compared to 60th rank in GII 2017 and emerged as top-ranked economy in Central and South Asia. It has consistently moving up on global ranking from 81st in 2015 to 57th this year.
- India is a top performer in the lower middle income group, where it is ranked at fifth position. It is the most innovative country in its region of central and southern Asia.
- In the indicators that capture the quality of innovation inputs and outputs, India is ranked second after China in the lower and upper middle income group combined.
- However, India has fared badly on indicators such as ease of starting business, political stability and safety, overall education and environmental performance.

Performance of other countries:

- Switzerland is at the top. Since 2011, Switzerland has been ranked at the top every year.
- This year, Netherlands follows at second place and Sweden at third. The US drops down to sixth from fourth last year.
- Four of the top five innovation clusters are in Asia, based on patents and publishing. San Francisco is the only innovation cluster outside Asia among the top five.
- Tokyo is at the top, and two of the top five clusters are in China.
- China, at 17, broke into the world's top 20 most-innovative economies.
- On a new indicator – mobile-app creation – Cyprus, Finland and Lithuania emerged as global leaders in development of mobile apps relative to GDP.

Sources: the hindu.

7. BIJU SWASTHYA KALYAN YOJANA

What to study?

- For Prelims: Key features of the scheme.
- For Mains: Significance of the scheme, challenges in implementation and need for Universal Health Coverage.
- **Context:** Odisha government has launched Biju Swasthya Kalyan Yojana, a health for all scheme, on the occasion of the 72nd Independence Day.

Highlights of the scheme:

- Will provide Rs. 5 lakh per family per annum for all Secondary and Tertiary Cashless Health Care Assistance. Women beneficiaries can get health cover upto Rs. 7 lakh.
- This scheme will benefit 3.5 crore people (70 lakh families) at any govt. and private empanelled hospitals.

- All beneficiaries currently enrolled under the Rashtriya Swasthya Bima Yojana (RSBY), as well as other low-income families, are covered under the BSKY.

Challenges in implementation:

- **Trust model:** Odisha purposes to form a Trust to implement the scheme, which will reimburse the hospitalisation cost and will not pay premiums to insurance companies. Though the Trust model saves money, the major constraints are weak in-house capacity, poor governance structure and susceptibility to outside interference.
- **Governance structure:** Another uphill task for the Trust is to improve the governance structure. Riddled with weak IT system and poor administration, the uptake of the ongoing health insurance programmes is far from satisfactory.
- **Procedural challenges:** The Odisha State Treatment Fund has several procedural challenges, which, increases the predicament of patients. The same issues will have a major bearing on the BSKY implementation, unless the Trust carefully introduces measures to lessen these problems.
- **The financial implication** of such a humongous scheme needs deliberation. The current resource absorption for RSBY, BKKY and OSTF is not hefty. The claims ratio for RSBY is 65-68 per cent. This is unlikely to rise significantly, unless architectural correction is made.

The most important question is: Can BSKY improve the persistent health financing problem?

- Currently, Odisha spends around 4.5% GDP on healthcare, of which only 1.05% is by the government. Out of pocket (OOP) expenditure constitutes 76% of total health expenditure, which is unexpectedly high. On the contrary, the utilisation from the public healthcare facilities is quite high, the proportion being 72.55% for outpatient visits.
- Furthermore, a significant proportion of OOP is due to outpatient care, mainly due to drugs and diagnostics services (58% and 12%, respectively). Dubbed as a step towards achieving Universal Health Coverage (UHC), BSKY may provide breathing space to millions of households burdened by costly health care.
- However, a large part of OOP, which occurs due to outpatient visits (71%), will not be alleviated by any insurance mechanism, as it is meant only for hospitalisation.

Way ahead:

- For effective implementation of the scheme, the state needs to design the Trust structure by hiring experts to suggest packages, costs and criteria for empanelment of private hospitals.

Sources: the hindu.

8. ILO REPORT FLAGS WAGE INEQUALITY IN INDIA

What to study?

- For Prelims: Highlights of the report, about ILO.
- For Mains: Wage inequality- concerns, challenges and what needs to be done?
- **Context:** The International Labour Organization has published India Wage Report.

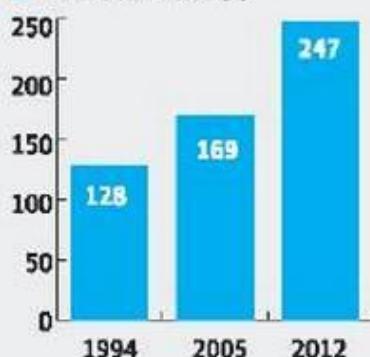
Wage gaps remain

Though daily wages have nearly doubled in absolute terms from 1993-2012 in India, there are significant gaps in urban-rural and male-female wages. A look at the imbalance

Better daily wages

The average daily wage has shown a 92% increase from 1994. The rate at which wages have grown has also increased

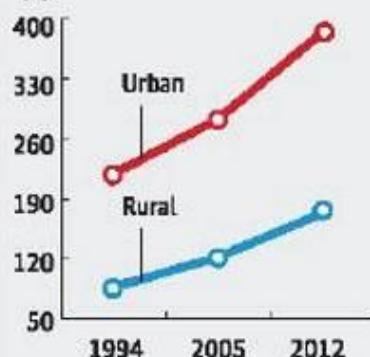
■ AVG. DAILY WAGE (₹)



Urban-rural divide

In 2011-12, an urban worker still earned more than twice of a rural worker. Graph shows average daily wage in ₹

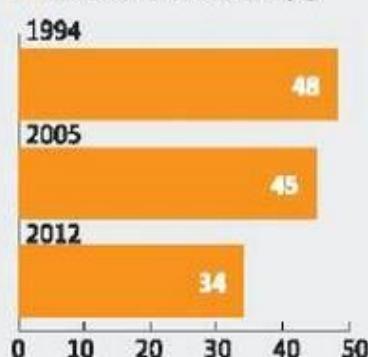
(₹)



Gender gap

While on the decline, the difference between daily wages of men and women is still above the global average of 23%

■ MEN-WOMEN WAGE GAP (%)



Source: International Labour Organization

Highlights of the report:

- Real average daily wages in India almost doubled in the first two decades** after economic reforms, but low pay and wage inequality remains a serious challenge to inclusive growth.
- Overall, in 2009-10, **a third of all wage workers were paid less than the national minimum wage**, which is merely indicative and not legally binding. That includes 41% of all casual workers and 15% of salaried workers.
- In 2011-12, the average wage in India was about ₹247 rupees a day, **almost double the 1993-94 figure of ₹128**. However, average labour productivity (as measured by GDP per worker) increased more rapidly than real average wages. Thus, India's labour share — or the proportion of national income which goes into labour compensation, as opposed to capital or landowners — has declined.
- The rise in average wages was more rapid in rural areas, and for casual workers**. However, these groups started at such a low base that a yawning wage gap still remains. Thus, the average wage of casual workers — who make 62% of the earning population — was only ₹143 a day.
- Daily wages in urban areas (₹384) also remain more than twice as high as those in rural areas (₹175)**. Regional disparities in average wages have actually increased over time, with wages rising more rapidly in high-wage States than in low-wage ones.
- The gender wage gap decreased from 48% in 1993-94 to 34% in 2011-12**, but still remains high by international standards. And of all worker groups, the average wages of casual rural female workers was the lowest, at just ₹104 a day.

Challenges:

- As per the study the minimum wage system in India is quite complex**. The **minimum wages are set by state governments** for employees in 'selected, scheduled' employment and this has led to 1709 different rates across the country. As the coverage is not complete these rates are applicable for an estimated of 66 % of wage workers.
- A national minimum wage floor was introduced in the 1990s** which has progressively increased to Rs 176 per day in 2017 but this wage floor is not legally binding, in spite of a recurrent discussion since the 1970s.

Way ahead:

- The ILO report called for extending legal coverage to all workers in an employment relationship, ensuring full consultation with social partners on minimum wage systems, undertaking regular evidence-based adjustments, progressively consolidating and simplifying minimum wage structures, and taking stronger measures to ensure a more effective application of minimum wage law.
- It also called for collection of statistical data on a timely and regular basis and recommended other complementary actions to comprehensively address how to achieve decent work and inclusive growth like

fostering accumulation of skills to boost labour productivity and growth for sustainable enterprises, promoting equal pay for work of equal value, formalising the informal economy and strengthening social protection for workers.

Sources: the hindu.

9. POSHAN MAAH (NATIONAL NUTRITION MONTH)

What to study?

- For Prelims: Posan Maah and POSHAN Abhiyan – features.
- For Mains: Significance of the campaign and government efforts to address malnutrition in the country.
- **Context:** The Ministry of Women and Child Development, Government of India had recently organized an orientation workshop for various stakeholders participating in the ***Poshan Maah (National Nutrition Month) being celebrated in the month of September.***
- The Workshop focused on sensitizing the line Ministries, States/UTs and District level functionaries and partners on various aspects of ***Rashtriya Poshan Maah (National Nutrition Month) being celebrated during the month of September across the Country as part of Jan Andolan under POSHAN Abhiyaan.***

About Posan Maah (National Nutrition Month):

- The primary objective of the celebration of Posan Maah is to take the messages of POSHAN to the grass root level.
- The programme- an initiative of WCD Ministry and NITI Aayog is supported by 18 line Ministries/Departments/Government Organizations.
- It seeks to synergise all efforts by leveraging technology and intends to take nutrition awareness to the level of Jan Andolan or People's Movement.
- The programme focuses on 8 themes – Antenatal Care, Optimal Breastfeeding (Early & Exclusive), Complementary Feeding, Anemia, Growth Monitoring, Girls-education, diet, right age of Marriage, Hygiene & Sanitation, Food Fortification.

About POSHAN Abhiyan:

- POSHAN Abhiyan (National Nutrition Mission) was launched on 8th March, 2018.
 - **Objectives:** The programme through use of technology, a targeted approach and convergence strives to reduce the level of Stunting, Under-nutrition, Anemia and Low Birth Weight in Children, as also, focus on Adolescent Girls, Pregnant Women & Lactating Mothers, thus holistically addressing malnutrition.
 - **Aims:** POSHAN Abhiyan aims to ensure service delivery and interventions by use of technology, behavioural change through convergence and lays-down specific targets to be achieved across different monitoring parameters over the next few years.
 - **Coverage:** To ensure a holistic approach, all 36 States/UTs and 718 districts will be covered in a phased manner by the year 2020.

Sources: pib.

10. CENTRE ASKS STATES TO BAN E-CIGARETTES

What to study?

- For Prelims: What are e-cigarettes?
- For Mains: Their use, effects on health and need for regulation.
- **Context:** In a move to protect health risks to children, adolescents and women of reproductive age, ***the health ministry has asked states to ban Electronic Nicotine Delivery Systems (ENDS)*** including e-cigarettes, Vape, e-Sheesha, e-Hookah etc.
- States are asked ***to ensure that devices that enable nicotine delivery are not sold (including online sale), manufactured, distributed, traded, imported and advertised in their jurisdictions,*** except for the purpose & in the manner and to the extent, as may be approved under the Drugs and Cosmetics Act, 1940 and Rules made thereunder.

Background:

- The move comes in the wake of the Delhi HC recently taking strong exception to the Centre for delay in coming up with regulatory measures to tackle the “new emerging threat” of e-cigarettes in the country.

What are e-cigarettes?

- An electronic cigarette (or e-cig) is a **battery-powered vaporizer** that mimics tobacco smoking. It works by **heating up a nicotine liquid, called “juice.”**
- Nicotine juice (or e-juice) comes in various flavors and nicotine levels. e-liquid is composed of five ingredients: vegetable glycerin (a material used in all types of food and personal care products, like toothpaste) and propylene glycol (a solvent most commonly used in fog machines.) propylene glycol is the ingredient that produces thicker clouds of vapor.
- Proponents of e-cigs argue that the practice is healthier than traditional cigarettes because users are only inhaling water vapor and nicotine.

Why its hard to regulate them?

- As e-cigarettes contain nicotine and not tobacco, they do not fall within the ambit of the Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 (COTPA), which mandates stringent health warnings on the packaging and advertisements of tobacco products.

Need for regulation:

- The current unregulated sale of e-cigarettes is dangerous for a country like India where the number of smokers is on the decline (WHO Global Report, 2015) as it increases the possibility of e-cigarettes becoming a gateway for smoking by inducing nicotine addiction and perpetuating smoking by making it more attractive, thereby encouraging persons to become users of tobacco as well as e-cigarettes.

WHO report on e-cigarettes and effects:

- As per the report, Electronic Nicotine Delivery Systems (ENDS) (also known as e-cigarettes) emits nicotine, the addictive component of tobacco products. In addition to dependence, nicotine can have adverse effects on the development of the foetus during pregnancy and may contribute to cardiovascular disease.
- The WHO report further says that although nicotine itself is not a carcinogen, it may function as a “tumour promoter” and seems to be involved in the biology of malignant disease, as well as of neurodegeneration.
- Foetal and adolescent nicotine exposure may have long-term consequences for brain development, potentially leading to learning and anxiety disorders.
- The evidence is sufficient to warn children and adolescents, pregnant women, and women of reproductive age against ENDS use and nicotine.

Why ban them?

- Studies say ENDS have cancer-causing properties, are highly addictive and do not offer a safer alternative to tobacco-based products. Experts say e-cigarettes are just a mechanism to deliver nicotine in an attractive format.

Way ahead:

- The government should also impose appropriate restrictions on the sale and advertisement, online and otherwise, of e-cigarettes, including proper health warnings, in order to plug the existing regulatory vacuum. This should be done with immediate effect, and simultaneously the government should also commission independent scientific research on the benefits and risks posed by these products in the Indian context.

Sources: the hindu.

Paper 2 Topic: Development processes and the development industry the role of NGOs, SHGs, various groups and associations, donors, charities, institutional and other stakeholders.

1. SBM- GRAMIN

What to study?

- For Prelims: SBM- G- features.
- For Mains: Significance and performance of the scheme.
- Context:** World Health Organisation has released the progress report on potential health impact from increased sanitation coverage through the Swachh Bharat Mission Gramin (SBM-G).

Highlights of the report:

- Swachh Bharat Mission Gramin (SBM-G) will result in preventing more than three lakh deaths due to diarrhoea and protein-energy malnutrition between 2014-October 2019.
- India's rural sanitation coverage has escalated to 89.07% till August 2. Under the SBM-G, 19 States and Union Territories were declared Open Defecation Free (ODF) and 7.9 crore toilets were built, while 421 districts were declared ODF. Also, more than 4.9 lakh villages in the country were declared ODF.
- The WHO study showed that before the initiation of SBM-G, unsafe sanitation caused 199 million cases of diarrhoea annually and that by 2019, the initiative aims to achieve 100% sanitation coverage.

Overall Recommendations

				
Improve incentives and capacity building activities <ul style="list-style-type: none"> Two-stage incentives for beneficiaries Provide officials with capacity building and training opportunities 	Incorporate technology solutions <ul style="list-style-type: none"> State level MIS+FMS* solution, with alerts External sponsorship of technology Best practices database 	Involve voluntary monitors <ul style="list-style-type: none"> Community involvement in monitoring of construction to encourage ownership of the SBM scheme 	Incorporate program outcome driven audit <ul style="list-style-type: none"> Shift focus from just physical verification to beneficiary feedback, usage of toilet, and long term sustainability 	Sharpen communication (IEC/IPC) <ul style="list-style-type: none"> Government to structure IEC content and develop toolkits as guidelines Partner with CSOs to build effective communication to beneficiaries

About SBM- Gramin:

- Swachh Bharat Mission (SBM) Gramin, launched on October 2, 2014 is the largest behaviour change campaign ever attempted in the field of sanitation in the world.
- Aim:** It aims to build an ODF (Open Defecation Free) and Swachh Bharat by October 2, 2019 as a tribute to Mahatma Gandhi on his 150th birth anniversary.
- Focus:** SBM-Gramin mainly focuses on ensuring the use of toilets, besides their construction. The States and their implementing agencies will be given incentives for meeting performance standards: reducing open defecation, sustaining their open defecation-free status and improving solid and liquid waste management in rural areas.

Significance of the scheme:

- In Rural India, this would mean improving the levels of cleanliness through Solid and Liquid Waste Management activities and making villages Open Defecation Free (ODF), clean and sanitised.

Sources: the hindu.

2. STARTUP INDIA'S ACADEMIA ALLIANCE PROGRAMME

What to study?

- **For Prelims:** Start Up India scheme- key highlights, Academia Alliance Programme.
- **For Mains:** Significance of start-ups for a country's growth and initiatives by the government to boost start-up environment in the country.
- **Context:** Startup India launched the Startup Academia Alliance programme.
- **Aim:** The Startup Academia Alliance aims to reduce the gap between scientific research and its industrial applications in order to increase the efficacy of these technologies and widen their impact.

Key Highlights:

- The first phase of Startup Academia Alliance will be implemented in partnership with Regional Centre for Biotechnology, The Energy and Resources Institute (TERI), Council on Energy, Environment and Water, and TERI School of Advanced Studies.
- Renowned scholars from these institutes, from fields including renewable energy, biotechnology, healthcare and life sciences were taken on board to provide mentorship and guidance to the startups working in relevant areas.

Sources: pib.

Paper 2 Topic: Important aspects of governance, transparency and accountability, e-governance-applications, models, successes, limitations, and potential; citizens charters, transparency & accountability and institutional and other measures.

1. BHOOXI RASHI AND PFMS LINKAGE

What to study?

- For Prelims: Bhoomi Rashi, PFMS.
- For Mains: Significance of PFMS.
- **Context:** The government has proposed to **integrate Bhoomi Rashi with Public Financial Management System (PFMS)**. Integration of Public Financial Management System (PFMS) with Bhoomi Rashi is one of the key functionalities to facilitate payment related to compensation for land acquisition to all the beneficiaries directly through the Bhoomi Rashi system.

What is Bhoomi Rashi?

- Bhoomi Rashi, the portal developed by MoRTH and NIC, comprises the entire revenue data of the country, right down to 6.4 lakh villages.
- The entire process flow, from submission of draft notification by the State Government to its approval by the Hon. Minister of State for RT&H and publication in e-Gazette, is online.
- The portal, created for expediting the process of publication of notifications for LA, is now being fully utilised for issuing the notifications.
- Bhoomi Rashi portal has been instrumental in reducing the time taken for approval and publication of notifications pertaining to land acquisition.

About PFMS:

- The Public Financial Management System (PFMS) is an end-to-end solution for processing payments, tracking, monitoring, accounting, reconciliation and reporting.
 - It is **administered by the Department of Expenditure**.
 - It is **implemented by the Controller General of Accounts**.

Functions:

- It provides scheme managers a unified platform for tracking releases and monitoring their last mile utilisation.
- It provides platform for efficient management of funds through tracking of funds and real time reporting of expenditure and receipts through treasury and bank interface.

- The line ministries/departments utilise this platform to monitor the utilisation of funds provided to the implementing agencies and state governments.
- PFMS is also used for DBT payments under MGNREGA and other notified schemes of the Government of India.

Significance of PFMS:

- Introduction of the PFMS resulted in effectiveness and economy in public finance management through better cash management for government transparency in public expenditure and real-time information on resource availability and utilisation across schemes.
- It also resulted in improved programme administration and management, reduction of float in the system, direct payment to beneficiaries and greater transparency and accountability in the use of public funds.

Sources: pib.

2. DIGITAL LITERACY LIBRARY

What to study?

- For Prelims: Digital Literacy Library- features.
- For Mains: Significance and benefits of the library.

Context: Facebook Launches Digital Literacy Library to Help Youth Build Skills Online.

About the Digital Literacy Library:

- The Library **aims to help young people build the skills** they need to safely enjoy online technology.
 - The library is a collection of lessons to help young people think critically and share thoughtfully online.
 - Divided into themes such as privacy and reputation, identity exploration, security, safety and well-being, the lessons reflect the voices of young people from diverse socio-economic backgrounds, ethnicities, geographies, and educational levels.
 - The lessons can be found on Facebook's Safety Center as well as on Berkman Klein's Digital Literacy Resource Platform.

Significance of the library:

- There are 830 million young people online around the world, and this library is a resource for educators looking to address digital literacy and help these young people build the skills they need to safely enjoy digital technology.

Sources: the hindu.

3. DEFENCE INDIA STARTUP CHALLENGE

What to study?

- For Prelims: The challenge.
- For Mains: Importance of participation of domestic industries in the defence sector.
- **Context:** Defence Minister has unveiled the Defence India Startup Challenge.

About Defence India Startup Challenge:

- Defence India Startup Challenge **is part of iDEX (Innovation for Defence Excellence) scheme** announced by Prime Minister Narendra Modi in April meant to build an eco-system of innovation and entrepreneurship in India for the defence sector to make India self-reliant.
- It is **an initiative to tap startups for finding safe and futuristic Indian solutions** to critical needs of the three Armed Forces.
- **A list of 11 technologies** that the Army, the Navy, and the Air Force need, have been chosen. They included remote air vehicles, laser weapons, secure and safe communication systems and bandwidth, precision targeting systems, sensors, and protected and informed movement of soldiers in battle tanks.
- Those that come up with prototypes of usable products would be supported with ₹1.5 crore each and friendly procurement procedures from the Ministry under **SPARK or Support for Prototype & Research Kickstart in Defence.**

4. UMANG (UNIFIED MOBILE APPLICATION FOR NEW-AGE GOVERNANCE)

What to study?

- **For Prelims and Mains: Key features of UMANG.**
- **Context:** Recognizing the importance of reaching out to the consumers and to safeguard their interests, TRAI has now integrated its Mobile Apps namely DND 2.0 & MyCall with UMANG Platform.

TRAI MyCall App:

- TRAI MyCall is an intuitive and user friendly application for Crowdsourced Voice Call Quality Monitoring. The Application helps Mobile phone users to rate their experience about voice call quality in real time and help TRAI gather consumer experience data along with Network data.
- A pop up requests the user to rate the call after it ends. Callers simply select their rating in the form of stars and indicate if the calls were made in indoor, outdoor or while travelling. Callers can also provide additional details such as noise or audio delay or mark a call-drop.



DND 2.0 App:

- DND (Do Not Disturb) Services App enables smart phone users to register their mobile number under DND and report spam messages or calls to avoid Unsolicited Commercial Communication (UCC)/Telemarketing Calls/SMS.

About Umang app:

What is it?

- Umang is an initiative to promote Digital India program. The term — Umang stands for Unified Mobile Application for New-age Governance and is envisaged to make e-governance. The application is developed by the Ministry of Electronics and Information Technology (MeitY) and National e-Governance Division (NeGD) in order to drive Mobile Governance in India.
- **The key goal of launching this application** is to allow the citizens of India do everything online, at just a click – be it making a passport, Aadhaar or Pan, book a gas cylinder, know about your Provident fund account or resolving an Aadhaar related. Umang app basically provides a unified approach where you can install one application to avail multiple government services — almost over 100 of them.

Sources: pib.

5. NIRYAT MITRA MOBILE APP

What to study?

- For Prelims: Details about the app.
- For Mains: e- governance- significance and potential.
- **Context:** Ministry of Commerce & Industry has launched Niryat Mitra – mobile App.

About Niryat Mitra:

- The app has been developed by the Federation of Indian Export Organisations (FIEO).
- It provides wide range of information required to undertake international trade right from the policy provisions for export and import, applicable GST rate, available export incentives, tariff, preferential tariff, market access requirements – SPS and TBT measures. All the information is available at tariff line.
- The app works internally to map the ITC HS code of other countries with that of India and provides all the required data without the users bothering about the HS code of any country. Presently the app comes with the data of 87 countries.

Significance of the App:

- The exports are showing good sign and registering increase at the rate of 20%. The government plans to further increase the ease of doing business. Therefore, the app will provide big opportunity to everybody and help promote export interests in the country.
- The Human Resource tool of the app enables candidates with interest in the international trade sector to register and apply against the vacancies arising in the sector. Companies can also search the profiles of the candidates and engage them.

Additional facts:

- ITC (HS) codes** are better known as Indian Trade Clarification (ITC) and are based on Harmonized System (HS) of Coding. It was adopted in India for import-export operations. Indian custom uses an eight digit ITC (HS) code to suit the national trade requirements.
- Any changes or formulation or addition of new codes in ITC-HS Codes are carried out by DGFT (Directorate General of Foreign Trade).

Sources: pib.

6. PARIVESH

What to study?

- For Prelims and Mains: PARIVESH- key features and significance.
- What is it?** It is an environmental single window hub for Environment, Forest, Wildlife and CRZ clearances launched recently. This Single-Window Integrated Environmental Management System has been developed in pursuance of the spirit of 'Digital India' initiated by the Prime Minister and capturing the essence of Minimum Government and Maximum Governance.
- PARIVESH:** Pro-Active and Responsive facilitation by Interactive, Virtuous and Environmental Single-window Hub.

Key features:

- "PARIVESH" is a workflow based application, based on the concept of web architecture. It has been rolled out for online submission, monitoring and management of proposals submitted by Project Proponents to the Ministry of Environment, Forest and Climate Change (MOEFCC), as well as to the State Level Environmental Impact Assessment Authorities (SEIAA).
- It seeks to give various types of clearances (e.g. Environment, Forest, Wildlife and Coastal Regulation Zone Clearances) from Central, State and district-level authorities.
- The system has been designed, developed and hosted by the Ministry of Environment, Forest and Climate Change, with technical support from National Informatics Centre, (NIC).
- It provides single registration and single sign-in for all types of clearances (i.e. Environment, Forest, Wildlife and CRZ), unique-ID for all types of clearances required for a particular project and a single Window interface for the proponent to submit applications for getting all types of clearances (i.e. Environment, Forests, Wildlife and CRZ clearances).



Significance and benefits of the platform:

- PARIVESH offers a framework to generate economic growth and strengthens Sustainable Development through e-Governance. With automatic highlighting of non-compliance by the system, PARIVESH helps in improving the overall performance and efficiency of the whole appraisal process.
- It also helps the processing authorities, as it has a Single Window System for Central, State and District level clearances.

- The facility of Geographic Information System (GIS) interface for the Appraisal Committee will help them in analyzing the proposal efficiently, automatic alerts (via SMS and emails) at important stages to the concerned officers, committee members and higher authorities to check the delays, if any.
- It also enables project proponents, citizens to view, track and interact with scrutiny officers, generates online clearance letters, online mailers and alerts to state functionaries in case of delays beyond stipulated time for processing of applications.

Sources: pib.

7. NPCI LAUNCHES UPI 2.0

What to study?

- For Prelims: Features of UPI, NPCI.
- For Mains: Significance of UPI, can it help build a cashless society?
- Context:** National Payments Corporation of India (NPCI) has launched UPI 2.0, an upgraded and renewed version of Unified Payments Interface (UPI).

New features:

- The latest edition has four new features to make it attractive and safer for users. These new features will allow users to link their overdraft account to UPI, creation of one-time mandates and pre-authorisation of transactions for payment at later date and checking the invoice sent by merchant prior to making payment.

The UPI ecosystem functions with three key players:

- Payment service providers (PSPs) to provide the interface to the payer and the payee. Unlike wallets, the payer and the payee can use two different PSPs.
- Banks to provide the underlying accounts. In some cases, the bank and the PSP may be the same.
- NPCI to act as the central switch by ensuring VPA resolution, effecting credit and debit transactions through IMPS.

How does it work?

- UPI, built on IMPS, allows a payment directly and immediately from bank account. There is no need to pre-load money in wallets.
- It allows payments to different merchants without the hassle of typing one's card details or net-banking password.

Sources: the hindu.

8. NATIONAL LOGISTICS PORTAL

What to study?

- For Prelims and Mains: Features and significance of the portal.
- Context:** A *National Logistics Portal is being developed by the Ministry of Commerce and Industry* to ensure ease of trading in the international and domestic markets. The portal will link all the stakeholders of EXIM, domestic trade and movement and all trade activities on a single platform.

Significance:

- The portal will be implemented in phases and will fulfil the commitment of the Government of India to enhance trade competitiveness, create jobs, boost India's performance in global rankings and pave the way for India to become a logistics hub.

What exactly is UPI?

- The Unified Payments Interface (UPI) is a *system developed by the NPCI and the RBI to aid instant transfer of money using a cashless system*.
- Using UPI services, one just requires a smartphone and a banking app to send and receive money instantly or to pay a merchant for retail purchase.
- In the long run, UPI is likely to replace the current NEFT, RTGS, and IMPS systems as they exist today.

India's logistics sector:

- India's logistics sector is highly fragmented and the aim is to reduce the logistics cost from the present 14% of GDP to less than 10% by 2022. India's logistics sector is very complex with more than 20 government agencies, 40 partnering government agencies (PGAs), 37 export promotion councils, 500 certifications, 10000 commodities, 160 billion market size.
- It also involves 12 million employment base, 200 shipping agencies, 36 logistic services, 129 ICDs, 168 CFSs, 50 IT ecosystems and banks & insurance agencies. Further, 81 authorities and 500 certificates are required for EXIM.

Significance of the sector:

- As per the Economic Survey 2017-18, the Indian logistics sector provides ***livelihood to more than 22 million people*** and improving the sector will facilitate 10 % decrease in indirect logistics cost leading to the growth of 5 to 8% in exports.
- Further, the Survey estimates that ***the worth of Indian logistics market would be around USD 215 billion in next two years*** compared to about USD 160 billion currently.

Background:

- In 2018-19 budget speech, Union Finance Minister had announced that Department of Commerce will create portal which will be single window online market place for trade and will connect business, create opportunities and bring together various ministries, departments and private sector.

Sources: pib.

9. CJI LAUNCHES APPLICATIONS TO FACILITATE LITIGANTS AND LAWYERS

What to study?

- For Prelims and Mains: Key features of newly launched applications.
- **Context:** Three new applications have been launched for the benefit of the litigants and lawyers.
- **These applications are:** e-Filing, e-Pay, and National Service and Tracking of Electronic Processes (NSTEP).

e-Filing application:

- The application is meant for online registration of lawyers and litigants. Through the application, one can file cases from any part of India to any court on registration.
- Portfolio management of cases of litigants and lawyers is provided on the portal and one can get updates from time to time about filed cases, cases under objection or rejected cases.

Significance:

- The e-Filing application will facilitate efficient administration of Judicial System by easing pressure on filing counters and will speed up work flow processing. Data entry will be more accurate which will help to take data driven decisions in court administration.
- It will start building digital repositories which will auto generate paper books and can be quickly transmitted to Higher Courts which will reduce delays. It will also help reduce touch point of litigants will also result in more productivity of staff members and will help send documents for service to other locations or mail addresses which will be relatively easy.

e-Pay application:

- It is a unified portal wherein facility to pay online court fees is provided. The platform is user friendly which can be used with very little self help.
- At present, the facility will be made operational in two states – Maharashtra and Haryana.

Significance:

- The OTP authentication provides secure way to financial transactions and one can get instant acknowledgement through SMS and print receipt.

- The application is beneficial for the judicial administration since verification of court fees becomes more easy, secure and transparent and accurate figures of court fees collected can be generated for any court, district or State.

National Service and Tracking of Electronic Processes (NSTEP):

- It is launched as part of the eCourts Project. It is a transparent and secure system for transmission of process from one location to another and will address delays in process.
- It offers facility to send electronic processes directly to registered mail of the addressee by secured mechanism; enables uploading of documents associated with process; and facilities like tracking GPS, obtaining photograph and on screen signature.

Significance:

- NSTEP will lead to secured auto generation of processes with unique QR Code through CIS, publishing processes on portal and transmission of processes to other court complexes.
- The service will empower litigants with real time information relating to status of service of process and will entail litigants to take immediate follow up action which will reduce delays.

About the e-courts project:

- What is it?** The eCourts Mission Mode Project (Phase I 2010-15; Phase II 2015-19) is a national eGovernance project for ICT enablement of district and subordinate courts of the country.
- Implementation:** It is being implemented by the Government of India with a total outlay of 1670 crores (Phase II).
- The major objectives of the Project** are to make whole judicial system ICT enabled by putting in place adequate and modern hardware and connectivity; automation of workflow management in all courts; electronic movement of records from taluka/trial to appeal courts; installation of video conferencing (VC) facility and recording of witness through Video Conferencing.
- Specific targets set under the Project include:** computerization of all the courts (around 20400) and DLSA and TLSC; WAN and cloud connectivity in 3500 court complexes; full Installation and use of Video Conferencing facility at 3000 Court Complexes and 1150 prisons; charting out key identified citizen services like electronic filing, daily orders, delivery of decrees, online case status in all the district courts etc.

Sources: the hindu.

10. REPORT ON “WORNGFUL PROSECUTION

What to study?

- For Prelims: Babloo Chauhan case is related to?
- For Mains: Miscarriage of Justice- meaning, issues, concerns and report by law commission.
- Context:** The Law Commission of India has submitted its Report titled '**Wrongful Prosecution (Miscarriage of Justice): Legal Remedies**' to the Government of India.

Background:

- The High Court of Delhi in the **case of Babloo Chauhan** had expressed grave concern about the state of innocent persons being wrongfully prosecuted, incarcerated for crimes that they did not commit. The Court highlighted the urgent need for a legislative framework for provided relief and rehabilitation to victims of wrongful prosecution, incarceration and asked the Law Commission to undertake a comprehensive examination of the aforesaid issued and make a recommendation thereon to the Government of India.

What is wrongful prosecution?

- Internationally, the issue of wrongful prosecution, incarceration, and conviction of innocent persons is identified as ‘miscarriage of justice’ that takes place after a person has been wrongfully convicted but is later found to be factually innocent basis a new fact / proof coming to light.
- As per the law commission, ‘Wrongful prosecution’ would include cases where the accused and not guilty of the offence, and the police and / or the prosecution engaged in some form of misconduct in investigating and / or prosecuting the person. It would include both the cases where the person spent time in prison as well as

where he did not; and cases where the accused was found not guilty by the trial court or where the accused was convicted by one or more courts but was ultimately found to be not guilty by the Higher Court.

Highlights of the report:

- This report looks at the issue from the context of Indian Criminal Justice system and recommends ‘wrongful prosecution’ to be the standards of miscarriage of justice, as against ‘wrongful conviction’ and ‘wrongful incarceration’.
- The Report gives an overview of the remedies available under the existing laws and discusses their inadequacies (also noted by the High Court in the aforementioned Order).
- The Commission recommends enactment of a specific legal provision for redressal of cases of wrongful prosecution – to provide relief to the victims of wrongful prosecution in terms of monetary and non-monetary compensation (such as counselling, mental health services, vocational / employment skills development etc.) within a statutory framework.
- The Report enumerates the core principles of the recommended framework- defining ‘wrongful prosecution’ i.e., cases in which claim for compensation can be filed, designation of a Special Court to decide these claims of compensation, nature of proceedings – timeline for deciding the claim, etc., financial and other factors to be considered while determining the compensation, provisions for interim compensation in certain cases, removal of disqualification on account of wrongful prosecution / conviction etc.
- A draft Bill is also annexed with the Report as the Code of Criminal Procedure (Amendment) Bill, 2018.

Facts for Prelims:

- The ***International Covenant on Civil and Political Rights ('ICCPR', ratified by India)*** also creates an obligation on the State parties to enact a law to compensate the victims of such miscarriage of justice.

Sources: pib.

11. INNOVATION CELL

What to study?

- For Prelims and Mains: Key features and significance.
- **Context:** Innovation Cell has been launched by the Ministry of HRD.

MHRD Innovation Cell (MIC):

- Innovation cell is MHRD’s initiative established at AICTE with a purpose to systematically foster the culture of Innovation in all Higher Education Institutions (HEIs) across the country.
- The primary mandate of Innovation Cell is to encourage, inspire and nurture young students by exposing them to new ideas and processes resulting in innovative activities in their formative years fostered through Network of Innovation clubs in Higher Educational Institutions.

Significance and the need for innovation:

- Without innovation no country can achieve sustainable development and prosperity. 21st century is century of Innovation, and the Prime Minister of India has called the decade 2010-20 as the ‘Decade of Innovation’, to unleash the creative potential of every Indian. India has already been improving on global stage in terms of Innovation ranking from 86th place, 5 years ago, to 57th place this year.

Sources: pib.

12. ATAL RANKING OF INSTITUTIONS ON INNOVATION ACHIEVEMENTS (ARIIA)

What to study?

- For Prelims and Mains: Features and significance.
- **Context:** Ministry of Human Resource Development (MHRD) has launched '***Atal Ranking of Institutions on Innovation Achievements (ARIIA)***' to systematically rank education institutions and universities primarily on innovation related indicators.

About ARIIA:

- ARIIA considers all major indicators which are commonly used globally to rank most innovative education institutions/ universities in the world.
- More than quantity, ARIIA will focus on quality of innovations and will try to measure the real impact created by these innovations nationally and internationally.

ARIIA will primarily focus on 5 main parameters:

Indicators	Weightage
Budget Expenses and Revenue generated through Innovation and entrepreneurship development	20
Facilitating access to advance centres / facilities and entrepreneurial support system	10
Idea to Entrepreneurship	54
Development of Innovation Ecosystems Supported through Teaching & Learning	10
Best innovative solutions Developed In-house for Improving Governance of Your Institution	6
Total	100

Significance of ARIIA:

- ARIIA ranking will certainly inspire Indian institutions to reorient their mind-set and build ecosystems to encourage high quality research, innovation and entrepreneurship. Moreover, ARIIA will set tone and direction for institutions for future development for making them globally competitive and in forefront of innovation.

Need for such a tool:

- For India to emerge as a global innovation hub, the youth of our country, especially in higher education institutions (HEIs) need to play a crucial role to create a sustainable innovation ecosystem. Hence, ideally all HEIs should have a comprehensive and functional mechanism to convert research into innovations.
- This ecosystem will encourage, inspire and nurture young students by exposing them to new ideas and processes resulting in innovative activities in their formative years.
- To ensure that Innovation is primary fulcrum of all HEIs, Ministry of Human Resource Development (MHRD), Govt. of India is introducing 'Atal Ranking of Institutions on Innovation Achievements (ARIIA)' to systematically rank education institutions and universities primarily on innovation related indicators.

Sources: pib.

Paper 2 Topic: India and its neighbourhood- relations.

1. '8888' UPRISING

What to study?

- **For Prelims and Mains: The Uprising and its relevance for Myanmar today.**
- **What is it?** It was a series of nationwide protests, marches and civil unrest in Burma (Myanmar) that peaked in August 1988. Key events occurred on 8 August 1988 and therefore it is known as the 8888 Uprising.
- **Why in News?** August 8 marks the 30th anniversary of this uprising.

Overview of the uprising:

- '8888' was a people's movement that challenged the then ruling Burma Socialist Programme Party's grip on political, economic and social affairs which led the country into extreme poverty.
- **The objective of '8888' was two-fold:** to push for the transfer of power from the military to a civilian leadership and a change in the political system from an authoritarian regime to a multi-party democracy.

Outcomes:

- The protests and the bloody crackdown gave rise to the National League for Democracy (NLD), a political party which paved the way for the current Myanmar State Counsellor, Aung San Suu Kyi's entry into politics and for the pro-democracy movement to continue.

The present set up:

- The democratic transition in Myanmar thus far has been meticulously designed by the military. The primary objective, which is laid out in the country's 2008 Constitution, is to give the military a dominant role in politics.
- In a parallel to the 'Burmese way to socialism' introduced by former military leader Ne Win in the 1960s, Myanmar now practices what can be called the 'Burmese way to democracy' as introduced by former Prime Minister Khin Nyunt in 2003 when he announced the military's seven-step road map to a flourishing democracy.

Way ahead:

- For democracy to strike deep roots in Myanmar, the role of the '8888' leaders remains important. The military must note that the people of Myanmar as well as members of the international community want a democracy that respects the rights of all its people, including the minorities.
- The military may hesitate to roll back its dominant role in Myanmar's politics but it should note that no democracy can succeed when the military holds the reins and is unaccountable to an elected civilian leadership.

Sources: the hindu.

2. UIGHURS

What to study?

- For Prelims: Who are Uighurs and why are they unhappy with the Chinese government.
- For Mains: Ethnic conflicts in China and its relevance for the world.
- Who are they?** The Uighurs are a Muslim ethnic minority mostly based in China's Xinjiang province. They make up around 45% of the population there. Xinjiang is officially designated as an autonomous region within China, like Tibet to its south.
- Why in News?** A UN human rights committee has heard there are credible reports that China is holding a million Uighurs in "counter-extremism centres".

What is Beijing accused of?

- Human rights groups including Amnesty International and Human Rights Watch have submitted reports to the UN committee documenting claims of mass imprisonment, in camps where inmates are forced to swear loyalty to China's President Xi Jinping.
- The World Uyghur Congress said in its report that detainees are held indefinitely without charge, and forced to shout Communist Party slogans.
- It said they are poorly fed, and reports of torture are widespread. Most inmates have never been charged with a crime, it is claimed, and do not receive legal representation. China is said to carry out the detentions under the guise of combating religious extremism.

Reasons for unrest:

- Over the decades, waves of Han Chinese migrants arrived in the region, displacing Uighurs from their traditional lands and fueling tensions.
- Xinjiang is now home to more than eight million Han Chinese, up from 220,000 in 1949, and 10 million Uighurs. The newcomers take most of the new jobs, and unemployment among Uighurs is high.
- They complain of discrimination and harsh treatment by security forces, despite official promises of equal rights and ethnic harmony.

Why is China concerned about the Uighurs?

- Beijing says Uighur groups want to establish an independent state and, because of the Uighurs' cultural ties to their neighbours, leaders fear that elements in places like Pakistan may back a separatist movement in Xinjiang.

Facts for Prelims:

- Xinjiang shares borders with Mongolia, Russia, Kazakhstan, Kyrgyzstan, Tajikistan, Afghanistan, Pakistan and India.

Sources: the hindu.

3. AUSTRALIA RECOMMENCES ITS ADOPTION PROGRAMME WITH INDIA

What to study?

- For Prelims: CARA, Hague convention.
- For Mains: Inter- country adoptions- issues, challenges and measures in place.
- Context:** The Government of Australia has decided to recommence the Adoption Programme with India, as per Hague Convention on Inter-Country Adoption.

Background:

- The adoptions from India had earlier been put on hold by the Government of Australia eight years ago, on the reported charges of trafficking of children for Inter-country adoption by some of the recognized Indian placement agencies (the Adoption agencies mandated to place children in Inter-country adoption at that point of time).

Significance:

- The recommencement of the adoption programmes will now enable large number of prospective adoptive parents including those of Indian origin settled in Australia in fulfilling their desire of adopting a child from India.

Safety measures put in place by India:

- The regulation of Inter-country adoptions have been made strict by the Government of India with the enactment of Juvenile Justice Act, 2015 and notification of Adoption Regulations, 2017.
- The Ministry of Women & Child Development along with Central Adoption Resource Authority (CARA) have been constantly monitoring the implementation of these laws.

What is the Hague Convention?

- The Hague Convention protects children and their families against the risks of illegal, irregular, premature or ill-prepared adoptions abroad.
- To do this, the Hague Convention puts:
 - Safeguards in place to make sure that all intercountry adoptions are in the best interests of the child and respects their human rights,
 - A system in place of cooperation among countries to guarantee that these safeguards are respected, and to prevent the abduction of, sale of, or traffic in children.

Implementation:

- For Hague adoptions, the authorities in both countries must agree to go ahead with the adoption. For non-Hague adoptions, requirements may vary from one country to another.
- The Hague Convention does not allow private adoptions in the child's home country.
- Adoption is handled by the provinces and territories, and they all have and follow laws implementing the Hague Convention.

About CARA:

- Central Adoption Resource Authority (CARA) is **a statutory body of Ministry of Women & Child Development**, Government of India.

- It functions as ***the nodal body for adoption of Indian*** children and is mandated to monitor and regulate in-country and inter-country adoptions.
- CARA is designated as the Central Authority to deal with inter-country adoptions in accordance with the provisions of the Hague Convention on Inter-country Adoption, 1993, ratified by Government of India in 2003.

Sources: pib.

4. POSTAL HIGHWAY

What to study?

- For Prelims: What is Postal Highway.
- For Mains: Bilateral relations between India and Nepal.
- **Context:** The Indian government has handed over a cheque amounting Rs 33 crore to the Nepal Government for construction of a Postal Highway.

Background:

- The amount has been released towards 25% of the tendered cost (including 10% mobilization advance) of the two road packages of Birgunj-Thori Road being implemented under Postal Highway Project in Nepal with Government of India's grant assistance.
- With this payment, the Government of India has released a total of Rs 117.63 Crores to the Government of Nepal for implementing 14 packages of the Postal Highway Projects.

About the Postal Highway project:

- Postal Highway also ***called Hulaki Rajmarg*** runs across the Terai region of Nepal, from Bhadrapur in the east to Dodhara in the west, cutting across the entire width of the country.
- It is the Oldest highway in Nepal constructed by Juddha Shumsher Jung Bahadur Rana & Padma Shumsher Jung Bahadur Rana to aid transportation and facilitate postal services throughout the nation.

Sources: the hindu.

Paper 2 Topic: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

1. SCO PEACE MISSION EXERCISE

What to study?

- For Prelims: SCO- objectives, composition and initiatives.
- For Mains: Significance of SCO and other such regional groupings.
- **Context:** The 2018 SCO Peace Mission Exercise is being held in Russia.

Key facts:

- As part of the SCO initiatives, the SCO Peace Mission Exercise is conducted biennially for the SCO member states.
- The exercise will involve tactical level operations in an international counter insurgency or counter-terrorism environment under the SCO Charter.
- At least 3,000 soldiers from China, Russia, Kazakhstan, Tajikistan, Kyrgyzstan, India and Pakistan are participating in the drill.

Significance:

- The previous SCO counter-terrorism drills were mainly limited to the Central Asian nations. But due to the entry of India and Pakistan, the SCO's counter-terrorism mission has expanded to South Asia.
- The 2018 exercise will be ***the first for India and Pakistan since becoming full members of the SCO in 2017.*** It also will be the first time India and Pakistan take part in a military exercise together since their independence, though their militaries have previously worked on United Nations peacekeeping missions.

About SCO:

- **What is it?** The Shanghai Cooperation Organisation, also known as the Shanghai Pact, is a Eurasian political, economic, and military organisation which was founded in 2001 in Shanghai by the leaders of China, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, and Uzbekistan. Apart from Uzbekistan, the other five countries have been a part of the Shanghai 5 since 1996. The cooperation was renamed to Shanghai Cooperation Organisation after Uzbekistan joined the organisation in 2001.
- **New members:** India and Pakistan joined SCO as full members in June 2017 in Astana, Kazakhstan.
- **The SCO's main goals are:** strengthening mutual trust and neighbourliness among the member states; promoting their effective cooperation in politics, trade, the economy, research, technology and culture, as well as in education, energy, transport, tourism, environmental protection, and other areas; making joint efforts to maintain and ensure peace, security and stability in the region; and moving towards the establishment of a democratic, fair and rational new international political and economic order.

Sources: the hindu.

2. G20 DIGITAL ECONOMY MINISTERIAL MEETING

What to study?

- For Prelims: About G20 and a overview of various meetings.
- For Mains: Significance of G20.
- **Context:** In the framework of the Argentinian presidency of G20, the 2018 edition of **Digital Economy ministerial meeting** is being held in Salta, Argentina. The ministerial meeting was preceded by the second meeting of **the G20 Digital Economy Task Force**.
- Argentina has selected the theme, '**Building consensus for fair and sustainable development**', for the 2018 G20 Leaders' Summit, and has identified three key issues for the agenda: the future of work, infrastructure for development, and a sustainable food future.

Digital Economy Task Force:

- The Digital Economy Task Force (DETF) was established under the 2017 German presidency, based on the decision adopted in Hangzhou in 2016 under the Chinese Presidency.
- In Antalya, under the Turkish presidency in 2015, G20 leaders recognized the modern period as a critical era of digital transformation, influenced by the advent of new technologies as key elements for economic development.

What is Digital economy?

- The digital economy refers to a broad range of activities which include: the use of knowledge and information as factors in production, information networks as a platform for action, and how the information and communication technology (ICT) sector spurs economic growth.

Challenges to digital economy:

- Important challenges include providing high-speed internet for all by 2025, creating inclusive growth and new jobs through digital trade, promoting lifelong digital learning, and closing the gender gap.

About G20:

- **The G20 is made up of 19 countries and the European Union.** The 19 countries are Argentina, Australia, Brazil, Canada, China, Germany, France, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom and the United States.

Origin:

- **The G20 was born out of a meeting of G7 finance ministers and central bank governors in 1999** who saw a need for a more inclusive body with broader representation to have a stronger impact on addressing the world's financial challenges. The G7 invited leading markets – both developed and emerging – to form a new ministerial-level forum: the G20.

Significance:

- In 2008, amidst the global financial crisis, the world saw a need for new consensus-building at the highest political level. Since then, the G20 summits have been attended by heads of state or government, and the G20 was instrumental in stabilizing the world economy. Since then, its agenda has expanded to include additional issues affecting financial markets, trade, and development.

Global Impact:

- Collectively, G20 members represent all inhabited continents, 85% of global economic output, two-thirds of the world's population, and 75% of international trade.
- G20 policy-making is enriched by the participation of key international organizations regularly invited to G20 meetings, guest countries invited at the president's discretion, and engagement groups composed of different sectors civil society.

The work of the G20 is generally divided into two tracks:

- **The Finance track** comprises all meetings with G20 finance ministers and central bank governors and their deputies. Convening several times throughout the year, they focus on financial and economic issues, such as monetary, fiscal and exchange rate policies, infrastructure investment, financial regulation, financial inclusion and international taxation.
- **The Sherpa track** focuses on broader issues such as political engagement, anti-corruption, development, trade, energy and climate change, gender equality, among others. Each G20 country is represented at these meetings by its relevant minister, and by its designated sherpa, or emissary. The sherpa engages in planning, negotiation and implementation tasks on behalf of the leader of their respective country. Each sherpa orients their minister and head of state or government accordingly on the progress of the G20, and delegates the dialogue and topics to relevant working groups.

Sources: pib.

3. INDIAN OCEAN CONFERENCE

What to study?

- For Prelims and Mains: Indian Ocean Conference and its significance.
- **Context:** The *third edition of Indian Ocean Conference is being held at Hanoi, the capital of Vietnam.*
- This year, the Indian Ocean Conference will emphasise on better cooperation, strategic collaboration and governance architectures. This conference will serve a platform to the countries to come closer and exchange better views on the economic and strategic importance of the region and neighbourhood.
- **Theme:** “Building Regional Architectures”.

About Indian Ocean Conference:

- The Indian Ocean Conference *initiated by India Foundation along with its partners* from Singapore, Sri Lanka and Bangladesh is an annual effort to bring together Heads of States/Governments, Ministers, Thought Leaders, scholars, diplomats, bureaucrats and practitioners from across the region.
- **Two successful editions of the Conference have been hosted so far in 2016 and 2017 in Singapore and Sri Lanka respectively.** Both the Conferences were supported by the Ministry of External Affairs of India and had participation from over 35 countries with a global media coverage.



Sources: the hindu.

Paper 2 Topic: Effect of policies and politics of developed and developing countries on India's interests.

1. US GIVES INDIA STRATEGIC TRADE AUTHORISATION-1 STATUS

What to study?

- **For Prelims and Mains:** Strategic Trade Authorisation-1 status- what does it mean and how is it helpful for India?
- **Context:** The US has given India Strategic Trade Authorisation-1 status.

What is Strategic Trade Authorisation (STA)?

- STA allows for license exception with regards to exports from the US. This type of US government authorisation allows a certain item to be exported under defined conditions without a transaction-specific license.
- Items eligible for export to STA-1 nations include those under control for national security, chemical or biological weapons, nuclear non-proliferation, regional stability, crime control.
- The categories also include electronics, lasers and sensors, information security, computers and electronics, navigation, telecommunications, aerospace, etc.

Significance of this move:

- The move means that India can get easy access to latest defence technologies, with the reduction of the number of licenses needed for exports from the US.
- It is also a boost for the foundational Communications, Compatibility and Security Agreement (COMCASA).
- STA-1 provides India with greater supply chain efficiency, both for defence, and for other high-tech products.
- The status eases export controls for high technology product sales to India, granting it the same access as NATO allies — Australia, Japan and South Korea.

Background:

- India and the United States share an interest in countering China's expanding economic and military weight and the United States has emerged as a top arms supplier to India, selling more than \$15 billion of weapons over the past decade as New Delhi modernizes its Soviet-era military.
- Looking at current exports from the US to India, 50% of those are eligible now under STA-1. This can free up \$2.1 billion in trade, make US exporters more competitive in the global marketplace, help provide India more advanced US technology.

Facts for Prelims:

- India is the only South Asian nation on the STA-1 list that has 36 countries. Other Asian countries designated as STA-1 are Japan and South Korea. Till recently, India was classified as an STA-2 country along with seven others.

Sources: the hindu.

2. CASPIAN SEA AGREEMENT

What to study?

- For Prelims: All about Caspian sea.
- For Mains: Significance of the latest agreement.
- **Context:** Leaders from Russia, Azerbaijan, Iran, Kazakhstan and Turkmenistan have finally signed a legal convention on ways to manage Caspian sea and its surrounding areas.

Significance of Caspian Sea:

- The Caspian Sea is a geopolitically strategic body of water, both in terms of its location and its resources. Situated in a transcontinental zone between Europe and Asia, it has historically been a key trade and transit corridor between eastern and western powers.
- The Caspian Sea became even more important in the modern era after the discovery of significant energy resources, including over 50 billion barrels of oil and 9 trillion cubic meters of natural gas in proven or probable reserves.

What's the issue?

- The countries surrounding the Caspian Sea make use of its strategic qualities. Russia and Iran are among the world's largest energy producers and exporters, while Kazakhstan, Turkmenistan and Azerbaijan produce significant amounts as well. However, since the 1991 collapse of the Soviet Union established Azerbaijan, Kazakhstan and Turkmenistan as independent states and competitors in the region, ongoing disputes about how to draw boundaries in the Caspian have limited all the surrounding countries' ability to exploit its resources.
- The primary issue has been whether to legally classify the Caspian as a sea or a lake. The former would require the division of the Caspian to extend from the shoreline of each littoral state to the body of water's midway point, while the latter would divide the Caspian equally. Until now, the dispute has not stopped the Caspian states from accessing energy resources close to their shorelines, but it has prevented energy exploitation from taking place deeper offshore. Moreover, it has stalled the progress of any pipeline projects that would go across the seabed itself.

Outcomes of the latest summit:

- The convention signed at the recent summit has confirmed that the surface of the Caspian Sea would be legally classified as a sea, meaning each country would control 15 nautical miles of water from its shoreline for mineral exploration and 25 natural miles of shoreline for fishing.
- All other parts of the Caspian Sea would be considered neutral waters for common use. The summit also produced important security decisions, including an agreement that military vessels from non-Caspian states would be prohibited from entering the sea.

Impact:

- This is a boon for both Russia and Iran, who have long had concerns about a U.S. or NATO military presence increasing Western influence, particularly over Azerbaijan. The agreement does not prevent the shipment of military cargo through the Caspian, though, since both Azerbaijan and Kazakhstan have played logistical supply roles for U.S. and NATO forces in Afghanistan.

Way ahead:

- The legal convention signed at the Caspian Sea summit in Aktau is far from the final word on the division of the strategic sea and its abundant energy resources. It does indicate progress in certain areas such as security, but Russia and Iran will likely try to delay any finalized protocol for managing the body of water in order to protect their strategic energy interests.
- However, many issues remain unsettled. For example, the delimitation of the seabed itself, where most energy resources are located, was left pending, meaning the Caspian countries will need to negotiate bilateral agreements.

Sources: the hindu.

3. IMPACT OF THE FALLING RUPEE ON ECONOMY

What to study?

- For Prelims and Mains: Reasons for rupee's fall and its impact.
- Context:** With the rupee recently weakening past ₹70 to a dollar and hovering about that level since, concerns over the impact of the devaluation on economic indicators are intensifying.

Why Indian Rupee is Falling Against the US Dollar?

- Turkish currency turmoil:** The Indian currency had plunged by Rs 1.08, or 1.57 per cent, to a record low of 69.91 against the US currency amid fears that Turkish currency turmoil could turn out into global financial crisis.
- The Spike in oil prices** has pulled down the rupee, by pushing up dollar demand.
- Global Trade war fears** triggered by the US and China's retaliatory import tariffs have also weakened the Rupee.
- The Chinese yuan has fallen sharply** in the last few sessions. This also has triggered a dollar flight from many emerging economies. The Spurt in dollar outflow has pulled down most Asian currencies, including the rupee.

How it affects inflation?

- With rupee falling, country's imports become more expensive and exports cheaper. The reason is simple. It takes more rupees to pay for the same quantum of imports and fewer dollars for a buyer to pay for the same quantity of exports.
- More expensive imports are likely to drive inflation upward, especially in India where input products constitute a large part of our imports. In addition, a depreciating rupee also impacts the oil import bill since it costs more rupees per barrel of oil, which plays its own part in pushing inflation up.

What happens to GDP growth?

- On the one hand, costlier inputs and the subsequent increase in the prices of finished goods should have a positive impact on GDP. But the consequent decrease in demand due to higher prices could nullify this.
- A depreciating rupee certainly affects the exports and imports, since exports are likely to receive a boost while imports could flag somewhat. It remains to be seen what impact a reduction in household consumption would have on demand, especially when the festive season is nearing.

How does it affect individuals?

- A depreciating rupee means higher prices of goods and services, costlier petrol and trips abroad turning more expensive. On the flip side, the domestic tourism could grow as more tourists visit India since their currency now buys more here. In the medium term, export-oriented industries may also create more jobs.

Sources: the hindu.

4. QUAD GROUPING

What to study?

- For Prelims: Members of the Quad grouping, countries in the Indian ocean region, Chinese military bases.
- For Mains: The Quad grouping- features, significance, concerns and potential.
- Context:** A report on the policy recommendations on Indian Ocean security by four think tanks from the Quad countries has been unveiled.

Important recommendations:

- Maintain the momentum of high-level consultations** among the Quad countries with the aim of "free and open Info-Pacific region" and progressively move it to a political level.
- Australia, Japan, India and the US should work with countries in the IOR to help maintain independent security and economic policies** by supporting high-quality alternatives to unilateral Chinese investments and political alignment with Chinese regional objectives.
- The four countries should work to oppose the establishment of permanent Chinese military bases in the IOR.** This should include demonstrating to China that its security needs can be met through cooperation and consultation with other nations and without the recourse to a "disruptive unilateral military presence."
- Naval fleets should evolve increasingly long range operations.** This may require consideration in Japan of new options such as nuclear propulsion for its submarines.

The Quad:

- Regional coalition known as the 'Quad', the quadrilateral formation includes Japan, India, United States and Australia.
- All four nations find a common ground of being the democratic nations and common interests of unhindered maritime trade and security.
- The idea was first mooted by Japanese Prime Minister Shinzo Abe in 2007. However, the idea couldn't move ahead with Australia pulling out of it.

China's concerns:

- The coming together of India, the US, Japan and Australia is being seen as building a strategic partnership to deal with China's rise and its implications.

Way ahead:

- The Quad grouping is one of the many avenues for interaction among India, Australia, Japan and the US and should not be seen in an exclusive context. Quad should not be seen in any comparative or in an exclusive context.

Sources: the hindu.

5. NORTH AMERICAN FREE TRADE AGREEMENT (NAFTA)

What to study?

- For Prelims: Key features of NAFTA.
- For Mains: Significance, concerns and why there is a demand for change in the deal.
- Context:** The United States and Mexico have agreed to overhaul the North American Free Trade Agreement (NAFTA), putting pressure on Canada to agree to new terms on auto trade and dispute settlement rules to remain part of the three-nation pact. If talks with Canada are not wrapped up by the end of this week, Trump plans to notify Congress that he has reached a deal with Mexico, but would be open to Canada joining.

NAFTA: History

NAFTA (north American Free Trade Agreement) :

An agreement b/w U.S.A , Canada and Mexico ,creating trilateral rule-based trade bloc in North America.

Establishment date: January 1st ,1994

Memberships: U.S.A. , Canada , Mexico

Administration center : Washington D.C (U.S.A) , Ottawa (Canada) ,

Mexico city(Mexico)

languages: English, French, Spanish

**Highlights of the new deal:**

- The deal would require **75% of auto content to be made in the NAFTA region**, up from the current level of 62.5%. A fact sheet describing the bilateral agreement specified the content would be made in the United States and Mexico.
- The deal improves labour provisions**, in part by requiring 40% to 45% of auto content to be made by workers earning at least \$16 per hour. That measure could move some production back to the United States from Mexico and should lift Mexican wages.
- The United States relented on its demand for an automatic expiration for the deal, known as a “sunset clause.” Instead, the United States and Mexico agreed to **a 16-year lifespan for the deal**, with a review every six years that can extend the pact for 16 years.
- Mexico agreed to eliminate dispute settlement panels** for certain anti-dumping cases, a move that could complicate talks with Canada, which had insisted on the panels.

What is NAFTA?

- NAFTA is the initialism for the North American Free Trade Agreement, an agreement signed by Canada, Mexico, and the United States that reduced or eliminated trade barriers in North America. (Since the U.S. and Canada already had a free trade agreement (signed in 1988), NAFTA merely brought Mexico into the trade bloc.)
- Negotiations for the trade agreement began in 1990 under the administration of George H.W. Bush and were finalized under Bill Clinton's presidency in 1993. The agreement went into effect on January 1, 1994.

What was the purpose of NAFTA?

- In 1993 the European Union (EU) created a “single market”—one territory without any internal borders or other regulatory obstacles to the free movement of goods and services. This allowed every country and business in the EU to have access to more than 500 million consumers.
- NAFTA, which was approved that same year, was designed to have a similar effect, providing a way to allow the exchange of goods and services to flow more freely across national borders without the artificial restrictions.
- NAFTA provided for progressive elimination of all tariffs on any goods qualifying as North American. The deal also sought to protect intellectual property, establish dispute-resolution mechanisms, and, through corollary agreements, implement labor and environmental safeguards.

Why is NAFTA controversial?

- NAFTA was controversial when first proposed, mostly because it was the first [free trade agreement] involving two wealthy, developed countries and a developing country. Some people felt that allowing free trade with a developing country provides an incentive for U.S-based business to move their operations to that country.
- Since its implementation NAFTA has remained a prime target of trade protectionists (those who advocate taking measures such as taxing imports to “protect” domestic industries from foreign competition).

Sources: the hindu.

6. VENEZUELA CRISIS

What to study?

- For Prelims: Location of Venezuela, Venezuela's new currency.
- For Mains: Causes and effects of the crisis, how to avert?
- **Context:** Venezuela, once a rich oil reserve country, is now battering an unprecedented economic crisis. Hyperinflation, mass migration, food shortage, increasing number of crimes and grinding poverty has pushed the nation into a deep turmoil.

What is the Venezuela crisis?

- **Hyperinflation** is the biggest problem faced by Venezuela. The inflation rate there is expected to reach a stunning one million per cent this year, putting it on par with the crises of Zimbabwe in the 2000s and Germany in the 1920s, according to the International Monetary Fund.
- The government claims that the country is the victim of an “economic war” and that the major issues are due to opposition “plots” and American sanctions.

What caused this increase?

- **The plummeting oil prices** since 2014 is one of the main reasons why Venezuela's currency has weakened sharply. The country, which has rich oil reserves largely depended on it for its revenue.
- But when the oil price dropped drastically in 2014, Venezuela which received 96 per cent of its revenue from the oil exports, suffered a shortage of foreign currency. This made import of basic essentials like food and medicines difficult.

Impacts:

- **Venezuela's imports are down 50% from a year ago.** Venezuela's minimum wage is now about the equivalent of \$1 a month, making basics unaffordable for many. With a shortage of the import goods, the black market has got a free hand in the country. Prices have been doubling every 26 days on average.
- **A survey from February this year found that almost 90% of Venezuelans live in poverty** and more than 60% surveyed said that they had woken up hungry because they did not have enough money to buy food, reported Reuters. Apart from food, the country is also facing medicine shortage. The economic crisis has also hit the public health system, making medicine and equipment inaccessible to its people.
- **As the country slips into poverty**, many are turning towards crime to make money. A recent Gallup study placed Venezuela at the bottom of its 2018 Law and Order index, with 42 per cent of surveyed Venezuelans reporting they had been robbed the previous year and one-quarter saying they had been assaulted.

Mass migration:

- Angered by the economic crisis in the country, many Venezuelans have started leaving the country. Of the 2.3 million Venezuelans living abroad, more than 1.6 million have fled the country since the crisis began in 2015, according to the UN.
- The pace of departures has accelerated in recent days, sparking a warning from the UN. The majority have crossed into neighbouring Colombia and then to Ecuador, Peru and Chile. Others have gone south to Brazil.

Sources: [toi](#).***Paper 2 Topic: Important International institutions, agencies and fora, their structure, mandate.*****1. ASIA-PACIFIC INSTITUTE FOR BROADCASTING DEVELOPMENT****What to study?**

- For Prelims and Mains: AIBD and its features.
- Context:** India has been elected as the president of the Asia-Pacific Institute for Broadcasting Development.
- First time opportunity:** India got the presidency of the organisation, servicing countries of the UN Economic and Social Commission for Asia and the Pacific (UN-ESCAP) in the field of electronic media development, for the first time by defeating Iran in the election that took place in Sri Lanka.

About Asia-Pacific Institute for Broadcasting Development (AIBD):

- The Asia-Pacific Institute for Broadcasting Development (AIBD) was established in 1977 under the auspices of UNESCO.
 - It is a unique **regional inter-governmental organisation** servicing countries of the United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP) in the field of electronic media development.
 - It is **hosted by the Government of Malaysia** and the secretariat is located in Kuala Lumpur.

Mandate:

- The AIBD is mandated to achieve a vibrant and cohesive electronic media environment in the Asia-Pacific region through policy and resource development.
- The Institute seeks to fulfill this mandate by mobilizing the intellectual and technological resources available within the national broadcasting organizations of its member countries as well as regional and international bodies through a well-established infrastructure and networking mechanism which includes government agencies, non-governmental organizations, institutions of higher learning, private sector and individual professionals.

Membership:

- The International Telecommunication Union (ITU), the United Nations Development Programme (UNDP), and the United Nations Educational, Scientific and Cultural Organisation (UNESCO) are founding organisations of the Institute and they are non-voting members of the General Conference.
- The Asia-Pacific Broadcasting Union (ABU) is also a founding organisation of the Institute and is a non-voting member of the General Conference.
- Full membership** of the AIBD is confined to sovereign states and they are invited to designate the broadcasting authority of the country to be the beneficiary.
- The AIBD currently has 26 Full Members (countries), represented by 34 organisations, and 67 Affiliate Members (organisations) with a total membership of 101 representing 48 countries and regions and over 50 partners in Asia, Pacific, Europe, Africa, Arab States and North America.

Sources: [the hindu](#).

2. INTERNET CORPORATION FOR ASSIGNED NAMES AND NUMBERS (ICANN)

What to study?

- For Prelims and Mains: ccNSO, ICANN and its key features.
- Context:** The nominating committee of Internet Corporation for Assigned Names and Numbers (ICANN) has selected Ajay Data, Founder & CEO of Data XGen Plus and a global leader in email linguistic services, as a new council member of Country Code Supporting Organisation (ccNSO).
- Ajay Data is the first Indian to have been selected as a member of ccNSO** and will be representing India at a global level. He will be the custodian of Asia, Australia and Pacific Islands as a member of ccNSO.

About ccNSO:

- ccNSO of the ICANN is the policy-development body for global issues regarding country code top-level domains (ccTLD) within the ICANN structure.
- The members of ccNSO, which is ICANN's policy development body for ccTLD (country code top-level domains) issues, are all country code top level domain operators from around the world.

What is the ICANN?

- The Internet Corporation of Assigned Names and Numbers (ICANN) is a non profit organization that was set up in 1998 to oversee the administration of domain names.
- ICANN coordinates and ensures the smooth and secure functioning of the cybernetic framework.

What it does?

- The global nature of the Web today means that there are constantly increasing numbers of Domain Names, Host Names, IP addresses and web sites that are emerging on a daily basis.
- ICANN oversees this interconnected network and ensures that computers across the internet can find one another through defined unique pathways and identifiers.

ICANN performs four major functions namely:

- Approval of companies that can become accredited registrars for domain names.
- Decision making regarding the addition of new Top Level Domains (TLDs) to the Root system.
- Coordinating technical parameters to maintain universal connectivity.
- Creating a Uniform Domain Name Dispute Resolution Policy (UDRP) for competing domain names.

Sources: the hindu.

What is ICANN?



The Internet Corporation for Assigned Names and Numbers (ICANN) is a global multistakeholder, private sector-led organization that manages Internet resources for the public benefit

- ICANN is best known for its role as the technical coordinator of the Internet's **Domain Name System (DNS)**
- ICANN's mission overall is to coordinate the global Internet's systems of unique identifiers, and in particular to ensure the stable and secure operation of those unique identifier systems
- The set of unique identifier systems coordinated by ICANN are the **IANA functions**

3. REGIONAL COMPREHENSIVE ECONOMIC PARTNERSHIP (RCEP)

What to study?

- For Prelims: RCEP- features and members.
- For Mains: Significance, potential and challenges, India's concerns and ways to address them.
- Context:** The Centre has constituted a Group of Ministers (GoM) headed by Union Minister of Commerce and Industry Suresh Prabhu to decide on 16-member Regional Comprehensive Economic Partnership (RCEP) negotiations.

Objectives:

- It has been mandated to find way forward from current deadlock over issues of joining RCEP or not.

- It will also help fine tune India's strategy for the upcoming RCEP ministerial meet in August 2018 in Singapore.

What's the issue with India?

- There's a mounting pressure on New Delhi to give an early consent to the Regional Comprehensive Economic Partnership. India has, however, refused to take responsibility for the long-winding negotiations and has stressed that it is important to address the sensitivities and aspirations of all participants.
- India is not comfortable with the ambitious dismantling of import tariffs being pushed for by the ASEAN, especially as it would also mean allowing duty-free access to Chinese goods. The Indian industry does not want the country to commit to high levels of liberalisation as it fears that it could get out-priced in the domestic market.
- India has also stressed on the need for other RCEP members to deliver in the area of services to arrive at an agreement. So far proposals in the area of services, including on work-visas for movement of professionals, have been disappointing with no member ready to make meaningful contributions.

What you need to know about RCEP?

- RCEP is proposed between the ten member states of the Association of Southeast Asian Nations (ASEAN) (Brunei, Burma (Myanmar), Cambodia, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand, Vietnam) and the six states with which ASEAN has existing FTAs (Australia, China, India, Japan, South Korea and New Zealand).
- RCEP negotiations were formally launched in November 2012 at the ASEAN Summit in Cambodia. RCEP aims to boost goods trade by eliminating most tariff and non-tariff barriers — a move that is expected to provide the region's consumers greater choice of quality products at affordable rates. It also seeks to liberalise investment norms and do away with services trade restrictions.

Why has it assumed so much significance in recent times?

- When inked, it would become the world's biggest free trade pact. This is because the 16 nations account for a total GDP of about \$50 trillion and house close to 3.5 billion people. India (GDP-PPP worth \$9.5 trillion and population of 1.3 billion) and China (GDP-PPP of \$23.2 trillion and population of 1.4 billion) together comprise the RCEP's biggest component in terms of market size.

Why is China so much interested in this deal?

- China, using its influence as the global leader in goods exports, has been deploying quiet diplomacy to ensure consistent focus on attempts to obtain commitments on elimination of tariffs on most traded goods. China is keen on an agreement on a 'high level' of tariff liberalisation — eliminating duties on as much as 92% of traded products. This deal helps China fulfil its objectives.
- China is also speeding up the RCEP negotiation process and striving for an early agreement, so as to contribute to realising the greater common goal of building the Free Trade Area of the Asia-Pacific (FTAAP). The FTAAP spans 21 Asia-Pacific Economic Cooperation countries, including the U.S. and China, but does not cover India. With the U.S. withdrawing from the Trans Pacific Partnership — a mega-regional FTA not involving India and China — that similarly aimed to help establish the FTAAP, the path is clear for China to push ahead with this strategic initiative to its advantage through the RCEP.

Way ahead:

- India's FTA strategy has to be guided by the 'Make In India' initiative that aims to boost domestic manufacturing and job creation within India.
- In return for greater market access in goods, India, with its large pool of skilled workers and professionals, should try to use the RCEP to gain on the services side, by securing commitments from the other nations to mutually ease norms on movement of such people across borders for short-term work.

Sources: the hindu.

4. US SPACE FORCE

What to study?

- For Prelims: Outer Space treaty- features.
- For Mains: Space force- issues, challenges and response by other countries.

- **Context:** NASA Administrator recently expressed full support for President Donald Trump's proposed military "Space Force" but added that it will have a role separate from NASA.

Background:

- U.S. President Donald Trump is planning to create a "space force" or a sixth branch of the American armed forces. The space force plan requires congressional approval.
- Military leaders and experts have questioned the wisdom of launching an expensive, bureaucratic new service branch.



What is Space Force?

- The United States Space Force, as proposed by the Trump administration, would be a new branch of the military by 2020, on par with the army, navy, air force, marines and coast guard. An independent branch can't be created until Congress approves it, but the administration can take several steps on its own to prepare for the launch of a new force, the first since the air force was formed shortly after the second world war.
- Officials plan to create a Space Operations Force – an "elite group of war fighters specializing in the domain of space" drawn from various branches of the military, in the style of existing special operations forces, Pence said. They'll also create a United States Space Command and a Space Development Agency, and appoint an assistant secretary of defense for space.

The need:

- The White House points to galactic threats from US adversaries, particularly Russia and China, which could develop weapons to jam, blind or destroy satellites that are crucial to communications systems.
- In 2007, China destroyed one of its own satellites, in a test of a weapon that could be used to target others. Russia has also tested a missile that could be used to track and destroy satellites.
- Not everyone is convinced, however, with critics saying threats on earth are much more real than the prospect of wars in space.

Does it already exist?

- There is no independent military branch focused on space, but there is a sizable space command within the air force.
- Created in 1982, it is headquartered at Peterson air force base in Colorado and oversees 30,000 people.
- It includes the Space and Missile Systems Center, oversees Department of Defense satellites, and uses radar to monitor ballistic missile launches to guard against a surprise attack on the United States.

Would military action in space be legal?

- In a word, yes. But if a U.S. Space Force ever came online, legal experts say that international law would limit what it could do.
- All major space powers, including the U.S., Russia, and China, have signed the Outer Space Treaty of 1967. The pact says that nothing in space can be claimed as a single country's territory, and it bars countries from stationing nuclear weapons or weapons of mass destruction anywhere in outer space, including in orbit around Earth.
- The treaty gets stricter when it comes to "celestial bodies" such as the moon and Mars. Parties can't build military bases, conduct military maneuvers, or test weapons of any kind—even conventional weapons—on another world.
- But the Outer Space Treaty does give countries some wiggle room. The treaty doesn't explicitly forbid intercontinental ballistic missiles, which enter and exit space on their way toward their targets. The treaty also doesn't specify whether conventional weapons can be used in open space or on space stations.

Why it may not feasible to have a space force?

- The fundamental difficulty of a space corps is that the physical environment of space is not conducive to the conduct of military operations without incurring serious losses in the form of spacecraft and debris.
- And despite efforts to make spacecraft more fuel efficient, the energy requirements are enormous.
- The technical demands of defending assets in space make the possibility of dominance and space as a domain for war-fighting a sort of chimera.

5. INTERNATIONAL NITROGEN INITIATIVE

What to study?

- For Prelims and Mains: INI- mandate, objectives and key facts on Nitrogen.
- Context:** Indian scientist **Nandula Raghu Ram** has been elected as the Chair of the International Nitrogen Initiative (INI), a global policy making initiative. He is **the first Indian and Asian to be elected to the Chair of INI**.

About International Nitrogen Initiative:

- The International Nitrogen Initiative (INI) is an international program, set up in 2003 under sponsorship of the Scientific Committee on Problems of the Environment (SCOPE) and from the International Geosphere-Biosphere Program (IGBP).
 - The initiative aims to optimise nitrogen's beneficial role in sustainable food production and minimise nitrogen's negative effects on human health.
 - INI is coordinated by a Steering Committee, led by a chair and six regional centre directors representing, Africa, Europe, Latin America, North America, South Asia and East Asia.
 - The INI holds a conference once in every three years, inviting members of the international nitrogen community to meet up and discuss ideas and exchange knowledge on nitrogen issues.
 - The program is currently a sustained partner of Future Earth, an international organisation that works to accelerate transformations to global sustainability through research and innovation.



**International
Nitrogen Initiative**

Nitrogen:

- Nitrogen is one of the five major chemical elements that are necessary for life. While nitrogen is the most abundant of these, more than 99% of it occurs as molecular nitrogen, or N₂, which cannot be used by most organisms. This is because breaking the triple bond holding the two nitrogen atoms together requires a large amount of energy, which can be mustered only through high-temperature processes or by a small number of nitrogen-fixing microbes.
- Most living organisms can only make use of reactive nitrogen, which includes inorganic forms of nitrogen like ammonia, ammonium, nitrogen oxide, nitric acid, nitrous oxide, and nitrate, and organic compounds like urea, amines, proteins, and nucleic acids. It includes any nitrogen compound that is radiatively, chemically or biological active.

Why care about it?

- In the prehuman world, a small amount of usable reactive nitrogen was created from N₂ by lightning and biological nitrogen fixation, but the spread of reactive nitrogen was held in check by denitrification, a process that converts reactive N back to N₂.
 - This is no longer the case. Human beings have dramatically altered the nitrogen balance, breaking into the vast reservoir of molecular nitrogen and releasing reactive forms into the environment. We have done so by cultivating legumes, rice, and other crops that promote nitrogen fixation, by burning fossil fuels, and by transforming nonreactive atmospheric nitrogen to ammonia to sustain food production and some industrial processes.
 - During the last few decades, the global increase of reactive nitrogen by all human sources has far outstripped production from all natural terrestrial systems, and since the 1960s, the rate of increase has accelerated sharply.
 - This unprecedented growth in reactive nitrogen has impacted the health and welfare of people and ecosystems worldwide. On the positive side, approximately 40 percent of the world's population is fed by crops sustained by human-induced formation of reactive nitrogen.
 - At the same time, this reactive nitrogen can cascade through a variety of environmental systems, damaging them significantly and exacting a toll on human health. Reactive nitrogen is implicated in the high concentration of ozone in the lower atmosphere, the eutrophication of coastal ecosystems, the acidification of forests, soils, and freshwater streams and lakes, and losses of biodiversity. In the form of

nitrous oxide, a greenhouse gas, nitrogen contributes to global warming and stratospheric ozone depletion.

Sources: the hindu.

6. ICOMOS

What to study?

- For Prelims: About ICOMOS.
- For Mains: Significance of cultural heritages and their protection.
- **Context:** The ICOMOS, a global monument conservation body, has launched an initiative to assess the damage to the rich cultural and built heritage in flood-devastated Kerala and set up an emergency response platform.
- The initiative also aims at setting up a platform for emergency response to the cultural heritage damaged by the floods in Kerala.
- ICOMOS has also approached the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) to partner in the post-disaster work.



Background:

- Kerala is endowed with natural beauty, and is home to a number of iconic forts, palaces and other heritage buildings, which attract a huge number of tourists every year. The state is facing its worst floods in nearly a century.

About ICOMOS:

- The International Council on Monuments and Sites (ICOMOS) is a **prestigious non-government organisation**.
- It **promotes** the application of theory, methodology and scientific techniques for conservation of architectural and archaeological heritage across the world.
- ICOMOS is also an **advisory body to the UNESCO for cultural heritage**, in particular for implementation of the World Heritage Convention.

Facts for Prelims:

- **Rome-based ICCROM is an inter-governmental organisation** dedicated to the preservation of cultural heritage worldwide through training, information, research, cooperation and advocacy programmes.

Sources: the hindu.

7. ASIAN ELECTORAL STAKEHOLDER FORUM

What to study?

- For Prelims and Mains: ASEF- meetings, features, objectives and significance.
- **Context:** The **fourth edition of Asian electoral stakeholders forum (AESF-IV) was held in Sri Lanka** to discuss the state of elections and democracy in the region. It was jointly organised by Election Commission of Sri Lanka and Asian network for free elections (ANFREL).

Key facts:

- This was for first time AESF was held in South Asia.
- **Theme:** 'Advancing Election Transparency and Integrity: Promoting and Defending Democracy Together'.

The key objectives of AESF-IV are:

- To provide a venue for Election Management Bodies (EMBs), Civil Society Organizations (CSOs), and other stakeholders to share and learn about the present electoral challenges as well as best practices in the region.
- To develop and endorse the "Colombo Strategy to Promote and Defend Electoral Democracy in Asia".
- To institutionalize capacity building efforts in making elections more meaningful and credible through cooperation among stakeholders.

- To promote inclusiveness in elections by paying special attention to sectoral cooperation.

About AESF:

- The AESF is the largest gathering of its kind, and is sustained through a strong cooperation between the civil society and election commissions.
- The Forum will cover a wide array of crucial election issues like the current state of democracy in Asia, the common electoral challenges in the region, and various good practices employed to make elections better.
- It provides opportunity for Asian election commissions, election observers, non-government organizations (NGOs) and interstate bodies to gather and discuss state of elections and democracy in the region. It also provides platform for institutionalizing capacity building efforts to pave the way for more meaningful and credible election through cooperation among stakeholders.

Sources: the hindu.

8. UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP)

What to study?

- For Prelims and Mains: UNEP- mandate, objectives, compositions and significance.
- **Context:** Satya S Tripathi, an Indian development economist and lawyer, has been appointed assistant secretary general of the United Nations and will head the New York office of the United Nations Environment Programme (UNEP).



About UNEP:

- The United Nations Environment Programme (UNEP) is an agency of United Nations and coordinates its environmental activities, assisting developing countries in implementing environmentally sound policies and practices.
 - It was founded by Maurice Strong, its first director, as a result of the ***United Nations Conference on the Human Environment (Stockholm Conference)*** in June 1972 and has its headquarters in the Gigiri neighborhood of Nairobi, Kenya.
 - **UNEP has overall responsibility for environmental problems** among United Nations agencies but talks on addressing global warming are overseen by the Bonn-based Secretariat of the United Nations Framework Convention on Climate Change. Its activities cover a wide range of issues regarding the atmosphere, marine and terrestrial ecosystems, environmental governance and green economy.
 - UNEP has also been active in funding and implementing environment related development projects.
 - **IPCC:** The World Meteorological Organization and UNEP established the Intergovernmental Panel on Climate Change (IPCC) in 1988. UNEP is also one of several Implementing Agencies for the Global Environment Facility (GEF) and the Multilateral Fund for the Implementation of the Montreal Protocol, and it is also a member of the United Nations Development Group.
 - **The International Cyanide Management Code**, a program of best practice for the chemical's use at gold mining operations, was developed under UNEP's aegis.

Sources: the hindu.

9. INTERNATIONAL ENERGY AGENCY (IEA)

What to study?

- For Prelims and Mains: IEA- Key facts, need for innovation on clean energy.
- **Context:** The Department of Biotechnology (DBT), Ministry of Science and Technology, and the International Energy Agency (IEA) have signed a Memorandum of Understanding (MoU) on Enhancing Innovation for Clean Energy Transition.

Highlights of the MoU:

- The MoU seeks to deepen co-operation in support of clean energy innovations to accelerate the research, development, and demonstration (RD&D) of clean energy technologies in India and will help support the

- generation of data for policymaking and improve knowledge of good policy practices for innovation in India and around the world.
- The MoU will ensure cooperation for sharing of energy policies on RD&D and sharing of best practices on data collection and analysis. This MoU also has a provision for activities such as training and capacity building and accelerating energy innovation by identifying sources of finance.

About International Energy Agency:

- Founded in 1974, the IEA was initially designed to help countries co-ordinate a collective response to major disruptions in the supply of oil, such as the crisis of 1973/4. While this remains a key aspect of its work, the IEA has evolved and expanded significantly.

Important functions performed by IEA:

- The IEA examines the full spectrum of energy issues including oil, gas and coal supply and demand, renewable energy technologies, electricity markets, energy efficiency, access to energy, demand side management and much more.
- Through its work, the IEA advocates policies that will enhance the reliability, affordability and sustainability of energy in its member countries and beyond.

Publications:

- Its publications include the flagship ***World Energy Outlook*** and the IEA Market Reports; data and statistics, such as Key World Energy Statistics and the Monthly Oil Data Service; and a series of training and capacity building workshops, presentations, and resources.

The four main areas of IEA focus are:

- Energy Security:*** Promoting diversity, efficiency, flexibility and reliability for all fuels and energy sources;
- Economic Development:*** Supporting free markets to foster economic growth and eliminate energy poverty;
- Environmental Awareness:*** Analysing policy options to offset the impact of energy production and use on the environment, especially for tackling climate change and air pollution; and
- Engagement Worldwide:*** Working closely with partner countries, especially major emerging economies, to find solutions to shared energy and environmental concerns.

Sources: pib.

10. RCEP MINISTERIAL MEETING

What to study?

- For Prelims: RCEP- objectives and composition.
- For Mains: Significance, concerns by India and challenges involved.
- Context:*** 6th RCEP Trade Ministers' Meeting is being held at Singapore.

Background:

- India has been constructively engaged in the RCEP negotiations with an aim to work towards a high quality, balanced and inclusive outcomes that take into consideration sensitivities and interests of member countries.

What you need to know about RCEP?

- RCEP is proposed between the ten member states of the Association of Southeast Asian Nations (ASEAN) (Brunei, Burma (Myanmar), Cambodia, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand, Vietnam) and the six states with which ASEAN has existing FTAs (Australia, China, India, Japan, South Korea and New Zealand).
- RCEP negotiations were formally launched in November 2012 at the ASEAN Summit in Cambodia. RCEP aims to boost goods trade by eliminating most tariff and non-tariff barriers — a move that is expected to provide the region's consumers greater choice of quality products at affordable rates. It also seeks to liberalise investment norms and do away with services trade restrictions.

India's Concerns with member countries:

- Greater access to Chinese goods may have impact on the Indian manufacturing sector. India has already got massive trade deficit with China.
- There are demands by other RCEP countries for lowering customs duties on a number of products and greater access to the market than India has been willing to provide.

Challenges ahead for India:

- More developed countries such as Australia and Singapore are unwilling to accommodate India's demands to liberalise their services regime and allow freer mobility of Indian workers.

Way ahead:

- The negotiations on the Regional Comprehensive Economic Partnership, among 16 Asian and Pacific Ocean countries, have entered a decisive phase. Most potential member-countries of the grouping would like to see a "substantive agreement" on the trade deal by the end of this year.
- At a meeting in Singapore countries which still have issues with the outline of the agreements reached so far may be told politely to step aside and allow a smaller group to go ahead with finalising the RCEP.

Sources: pib.



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GS PAPER - III

Paper 3 Topic: Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.

1. TREDs PLATFORM

What to study?

- For Prelims: TReDS- features, how it works and India's first TReDS platform.
- For Mains: Significance of MSME sector and efforts by various stakeholders to promote them.
- Context:** State-owned aerospace and defence PSU Hindustan Aeronautics Limited (HAL) has executed its first digitised invoice discounting transaction on **RXIL TReDS platform** when it accepted the digital invoice uploaded by Narendra Udyog, a Nasik-based MSME vendor.
- This makes HAL the first PSU (public sector unit) to transact on TReDS across platforms.
- RXIL, India's first TReDS platform, enables MSMEs to gain control of their receivables with enhanced visibility and timeliness.

Salient Features of TReDS:

- Unified platform for Sellers, Buyers and Financiers.
- Eliminates Paper.
- Easy Access to Funds.
- Transact Online.
- Competitive Discount Rates.
- Seamless Data Flow.
- Standardised Practices.

What is TReDS?

- TReDS is an online electronic institutional mechanism for facilitating the financing of trade receivables of MSMEs through multiple financiers.
- The TReDS Platform will enable discounting of invoices/bills of exchange of MSME Sellers against large Corporates including Govt. Departments and PSUs, through an auction mechanism, to ensure prompt realization of trade receivables at competitive market rates.

How does the system work?

- A seller has to upload the invoice on the platform. It then goes to the buyer for acceptance. Once the buyer accepts, the invoice becomes a factoring unit.
- The factoring unit then goes to auction. The financiers then enter their discounting (finance) rate. The seller or buyer, whoever is bearing the interest (financing) cost, gets to accept the final bid.
- TReDs then settle the trade by debiting the financier and paying the seller. The amount gets credited the next working day into the seller's designated bank account through an electronic payment mode.
- The second leg of the settlement is when the financier makes the repayment and the amount is repaid to the financier.

Sources: the hindu.

Paper 3 Topic: Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth.

1. PARTICIPATORY NOTES

What to study?

- For Prelims: Meaning and features of P- notes.
- For Mains: Significance, concerns associated and recent measures taken.
- Context:** Investments through participatory notes into Indian capital markets have plunged to over nine-year low of Rs 80,341 crore till July-end amid stringent norms put in place by the watchdog Sebi to check misuse of these instruments.

Background:

- The decline could be attributed to several measures taken by the market watchdog to stop the misuse of the controversy-ridden participatory notes.
 - In July 2017, SEBI had notified stricter norms stipulating a fee of USD 1,000 on each instrument to check any misuse for channelising black money. It had also prohibited FPIs from issuing such notes where the underlying asset is a derivative, except those which are used for hedging purposes.
 - These measures were an outcome of a slew of other steps taken by the regulator in the recent past. In April last year, the Securities and Exchange Board of India (Sebi) had barred resident Indians, NRIs and entities owned by them from making investment through P-notes.

WHAT ARE P-NOTES?

- These are used by overseas market participants that don't want to get registered as FIIs. P-notes are not issued in India, rather these are issued by an India registered FII to other overseas investors.
- The FII will be the entity to initiate a transaction in our stock markets, which could be on behalf of foreign clients.
- P-notes are then issued by the FII to the client, underlining that the securities are held on behalf of the client albeit in the name of the FII.
- The P-note holder is entitled to all the dividends, capital gains and other payouts on the underlying securities. FIIs have to periodically report to SEBI on P-note issuance without the need to name the final beneficiary.

What are govt & regulator's concerns?

- The primary reason why P-Notes are worrying is because of the anonymous nature of the instrument as these investors could be beyond the reach of Indian regulators.
- Further, there is a view that it is being used in money laundering with wealthy Indians, like the promoters of companies, using it to bring back unaccounted funds and to manipulate their stock prices.

WHY ARE THEY POPULAR?

- These are a popular way to invest in Indian markets as not only do these save the investor from regulatory hassles of registration, but also allow the final beneficiary to remain anonymous.
- Large hedge funds and high net worth individuals find this a hassle-free and simple way to get exposure to Indian markets.
- Reports also suggest that P-notes may aid in movement of black money or unaccounted funds. Such funds leave the country through various routes and can easily re-enter via investments aided by P-notes, which won't reveal the identity of the beneficiary. Given that P-notes are issued outside India to overseas investors, they are not regulated and are open to misuse.

Sources: the hindu.

2. BARRIERS TO CASHLESS ECONOMY**What to study?**

- For Prelims: Nothing much.
- For Mains: Rationale behind and outcomes of demonetization, significance, need and challenges for cashless economy.
- **Context:** The Reserve Bank of India's second annual report shows that since demonetisation cash transactions have increased.
- Nearly two years after demonetization, about 99.3% of the notes sucked out of circulation has been returned. Besides, the value of bank notes in circulation has increased by 37.7% over the year, reaching Rs 18,037 lakh crore by the end of March 2018.

Outcomes of demonetization:

- Over the last two years, at least three of major claims of demonetization have collapsed.
 - First, **it was supposed to flush out black money and end corruption.** The government predicted that Rs 3 lakh crore in currency would not return to the banks. This has proved to be false, as most of the cash has returned.

- Second, **demonetisation was to help detect fake currency, which apparently funded terror and distorted the economy.** The government claimed that at any point of time, there was Rs 400 crore in fake currency notes floating in the economy. Nine months after demonetisation, it was claimed that Rs 11.23 crore in fake currency had been detected. Now, the Reserve Bank reports a huge jump in fake Rs 2,000 notes, which were introduced after demonetisation.
- Third, **demonetisation was to pave the way to a cashless economy and the gleaming new world of digital India.** Two years later, the amount of cash with the public has reached a record high, the bank has claimed.

Background:

- On November 8, 2016, Prime Minister Narendra Modi announced that all Rs 500 and Rs 1000 notes, comprising 86% of the total value of the currency in circulation at that time, would no longer be recognised as legal tender.

What is a cashless economy?

- It is a situation in which the flow of cash within an economy is non-existent and all transactions have to be through electronic channels such as direct debit, credit and debit cards, electronic clearing, payment systems such as Immediate Payment Service (IMPS), National Electronic Funds Transfer and Real Time Gross Settlement.

Benefits of a cashless economy:

- **Usage of cashless mechanisms would ensure that loopholes in public systems get plugged,** and the intended beneficiaries are able to avail the benefits due to them. It also leads to increased efficiency in welfare programmes as money is wired directly into the accounts of recipients.
- **Efficiency gains can also be seen** as transaction costs across the economy come down. It also provides an on-ramp to financial inclusion and enables e-commerce growth.
- **Reducing use of cash would also strangulate the grey economy,** prevent money laundering and even increase tax compliance, which will ultimately benefit the customers at large.

Benefits for individuals:

- No need for queues outside ATMs.
- No cashout during long holidays.
- No waiting for a deposited cheque to be credited.
- No risk of carrying currency notes in the wallet.

What perpetuates use of cash in India?

- A high propensity to save in and use cash.
- Cash intensive supply chains require many merchants to transact in cash.
- A large shadow and remittance based economy is also to be blamed for the situation.
- Gender imbalance in use of digital payments has further aggravated the problem. This is due to insufficient focus on financial literacy.
- Also, costs of point-of-sale terminals and operating costs are still high in India.

Sources: the hindu.

Paper 3 Topic: Inclusive growth and issues arising out of it.

1. NABARD STUDY ON FARM HOUSEHOLD

What to study?

- For Prelims: Highlights of the survey.
- For Mains: Agricultural households- challenges faced by them and efforts by the government to address them.
- **Context:** NABARD has released its report on All India Rural Financial Inclusion Survey 2016-17.

Definition of agricultural household:

- The survey covered a sample of 1.88 lakh people from 40,327 rural households.
- Only 48% of these are defined as agricultural households, which have at least one member self-employed in agriculture and which received more than ₹5,000 as value of produce from agricultural activities over the past year, whether they possessed any land or not.

Highlights of the survey:**Outstanding debt:**

- More than half the agricultural households in the country have outstanding debt, and their average outstanding debt is almost as high as the average annual income of all agricultural households.
- NABARD found that 52.5% of the agricultural households had an outstanding loan on the date of the survey, and thus were considered indebted. For non-agricultural households in rural India, that figure was 10 percentage points lower, at only 42.8%.
- Agricultural households reporting any outstanding debt also had a higher debt liability compared with non-agricultural ones.
- The average debt of an indebted agricultural household stood at ₹1,04,602 in comparison to ₹76,731 for indebted non-agricultural households.

Reasons for taking loans:

- The biggest reason for taking loans among agricultural households was capital expenditure for agricultural purposes, with a quarter of all loans taken for this purpose.
- While 19% of loans were taken for meeting running expenses for agricultural purposes, another 19% were taken for sundry domestic needs. Loans for housing and medical expenses stood at 11% and 12%, respectively.

Distribution:

- While all classes of farmers had debt, the highest incidence of indebtedness came from those owning more than two hectares of land. In that category, 60% of households are in debt.
- Among small and marginal farmers owning less than 0.4 hectares, slightly less than 50% of the households were in debt. Those with more land were more likely to have multiple loans.
- This may be attributed to the fact that these economically better-off households are more eligible for taking loans as they have enough assets to serve as security against the loans taken.

State-wise variation:

- The southern States of Telangana (79%), Andhra Pradesh (77%), and Karnataka (74%) showed the highest levels of indebtedness among agricultural households, followed by Arunachal Pradesh (69%), Manipur (61%), Tamil Nadu (60%), Kerala (56%), and Odisha (54%).

Sources:

- Looking at loans taken between July 2015 and June 2016, the survey found that farm households took less than half their loans from commercial banks. While 46% of the loans were taken from commercial banks, and another 10% from self-help groups, almost 40% were taken from non-institutional sources such as relatives, friends, moneylenders and landlords.

Annual income of households:

- According to the survey, the average annual income of an agricultural household is ₹1.07 lakh. That is barely ₹2,500 more than the average outstanding debt of indebted farm households.

Sources: the hindu.

Paper 3 Topic: Major crops cropping patterns in various parts of the country, different types of irrigation and irrigation systems storage, transport and marketing of agricultural produce and issues and related constraints; e-technology in the aid of farmers.

1. ZERO BUDGET NATURAL FARMING

What to study?

- For Prelims: Features of ZBNF.
- For Mains: Significance of ZBNF, advantages of ZBNF.
- Context:** Indian Council of Agricultural Research (ICAR) under Network Project on Organic Farming (NPOF) and All India Coordinated Research Projects (AICRP) on Integrated Farming Systems, has initiated an experiment on “**Evaluation of zero budget farming practices in basmati rice-wheat system**” at Modipuram (Uttar

Pradesh), Ludhiana (Punjab), Pantnagar (Uttarakhand) and Kurukshetra (Haryana) from rabi 2017 to study the zero budget farming practices on productivity, economics and soil health including soil organic carbon and soil fertility.

What is Zero Budget Natural Farming?

- Zero Budget Natural Farming, as the name implies, is a method of farming where the cost of growing and harvesting plants is zero. This means that farmers need not purchase fertilizers and pesticides in order to ensure the healthy growth of crops.
- It is, basically, a natural farming technique that uses biological pesticides instead of chemical-based fertilizers. Farmers use earthworms, cow dung, urine, plants, human excreta and such biological fertilizers for crop protection. It reduces farmers' investment. It also protects the soil from degradation.



SOME UNIQUE QUALITY OF ZBNF

- In the Zero Budget Natural Farming **nothing** has to be purchased from the outside. All things required for the growth of the plant are **available** around the root zone of the plants.
- **98 to 98.5%** nutrients are taken from air, water & solar energy.
- Remaining **1.5% nutrients** taken from the **soil** are also available **free** of cost as it is taken from the prosperous soil which is enriched with these nutrients.

Government initiatives to support ZBNF:

- Government of India has been promoting organic farming in the country through the dedicated schemes of Paramparagat Krishi Vikas Yojana (PKVY) since 2015-16 and also through Rashtriya Krishi Vikas Yojana (RKVY).
- In the revised guidelines of PKVY scheme during the year 2018, various organic farming models like Natural Farming, Rishi Farming, Vedic Farming, Cow Farming, Homa Farming, Zero Budget Natural Farming (ZBNF) etc. have been included wherein flexibility is given to states to adopt any model of Organic Farming including ZBNF depending on farmer's choice.
- Under the RKVY scheme, organic farming/ natural farming project components are considered by the respective State Level Sanctioning Committee (SLSC) according to their priority/ choice.

Sources: the hindu.

2. RECENTLY DEVELOPED RACES OF SILK WORM SEED

What to study?

- For Prelims: Particulars of Silk Worms, Central Silk Board.
- For Mains: Significance of Sericulture.
- **Context: Central Silk Board (CSB)** has notified recently developed races of silkworm seed of mulberry and Vanya silk for increasing the productivity of cocoons and to increase the income of the farmers engaged in sericulture.

Key facts:

- **Tropical Tasar Silkworm** (BDR-10) race developed by the CSB have 21% more productivity than the traditional Daba breed. Farmers can get upto 52 kg cocoons per 100 disease free layings (dfls).
- **This silkworm** breed will help the tribal farmers of Jharkhand, Chattishgarh, Odisha, West Bengal, Andhra Pradesh, Maharastra, Madhya Pradesh, Bihar, Telangana and Uttar Pradesh.
- **Multivoltine x Bivoltine Mulberry hybrid** (PM x FC2) race of silkworm can produce 60 kg per 100 Dfls and the race is better than earlier race PM x CSR. Due to high quality silk and significant egg recovery, this race is suitable for the farmers of Karnataka, Andhra Pradesh, Tamil Nadu, Telangana and Maharastra.
- **Eri Silkworm** (C2) race has been found better than local breed and it can produce 247 numbers of Eri cocoons per 100 Dfls. This race is suitable for the farmers in Arunachal Pradesh, Assam, Bihar, Maharastra, Madhya Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Sikkim, Uttar Pradesh, Uttarakhand and West Bengal.

Significance:

- Silk worm breeds for specific agro-climatic condition are essential for increasing the productivity of cocoons. The recently notified silkworm races will improve the income of the farmers by its enhanced productivity and quality.

CSB:

- Central Silk Board (CSB) is a **Statutory body** established in 1948 by an Act of Parliament. It is working under the administrative control of Ministry of Textiles, Government of India.

Sources: pib.

3. INTERNATIONAL YEAR OF MILLETS

What to study?

- For Prelims and Mains: Features and significance of millets.
- Context:** Continuing its efforts to get 'millets' a global recognition for its promotion among consumers, India has written to Food and Agriculture Organisation (FAO) of the United Nations proposing declaration of the upcoming year as "*International Year of Millets*".

Significance of this move:

- Adoption of this proposal by FAO with the support of its member nations will enable it to be moved to the United Nations General Assembly (UNGA) for declaration of the upcoming year as International Year of Millets.
- Dedicating a year for millets will not only increase awareness about its health benefits, but also result in higher demand for these drought-resistant varieties, resulting in remunerative prices for poor and marginal farmers.

Efforts by government to promote millets:

- In order to promote 'millets', India had on its part notified these climate resilient crops as "**Nutri-Cereals**" and allowed its **inclusion in the Public Distribution System (PDS)** for improving nutritional support in April.
- Recognising millets' anti-diabetic properties, the notification called it a "**powerhouse of nutrients**" and identified several varieties of millets for promotion. The millets in the category of "Nutri-Cereals" include Sorghum (Jowar), Pearl Millet (Bajra), Finger Millet (Ragi), Foxtail Millet (Kangani/Kakun) and Buckwheat (Kuttu) among others.
- Besides, the government had in July substantially hiked the **minimum support price (MSP)** of millets so that more and more farmers may opt for cultivation of these less water consuming crops.

What are Millets?

- Millet is a common term to categorize small-seeded grasses that are often termed nutri-cereals or dryland-cereals, and includes sorghum, pearl millet, ragi, small millet, foxtail millet, proso millet, barnyard millet, kodo millet and other millets.

Benefits of Millets:

- An important staple cereal crop for millions of small holder dryland farmers across sub-saharan Africa and Asia, millets offer nutrition, resilience, income and livelihood for farmers even in difficult times.
- They have multiple untapped uses such as food, feed, fodder, biofuels and brewing.** Therefore, millets are Smart Food as they are Good for You, Good for the Farmer and Good for the Planet.
- Nutritionally superior to wheat & rice** owing to their higher levels of protein with more balanced amino acid profile, crude fiber & minerals such as Iron, Zinc, and Phosphorous, millets can provide nutritional security and act as a shield against nutritional deficiency, especially among children and women.
- The anaemia (iron deficiency), B-complex vitamin deficiency, pellagra (niacin deficiency) can be effectively tackled** with intake of less expensive but nutritionally rich food grains like millets.
- Millets can also help tackle health challenges such as obesity, diabetes and lifestyle problems** as they are gluten free, have a low glycemic index and are high in dietary fibre and antioxidants.
- Adapted to low or no purchased inputs and to harsh environment** of the semi-arid tropics, they are the backbone for dry land agriculture.
- Photo-insensitive & resilient to climate change**, millets are hardy, resilient crops that have a low carbon and water footprint, can withstand high temperatures and grow on poor soils with little or no external inputs. In times of climate change they are often the last crop standing and, thus, are a good risk management strategy for resource-poor marginal farmers.

Sources: the hindu.

4. SAARC AGRI COOPERATIVE BUSINESS FORUM

What to study?

- For Prelims: SAARC- composition, aims, objectives and various meetings.
- For Mains: Significance and criticisms associated with SAARC.
- Context:** The first South Asian Association for Regional Cooperation (SAARC) Agri Cooperative Business Forum was held recently in Kathmandu, Nepal.
- Theme:** ‘Organizing and Strengthening Family Farmers’ Cooperatives to attain the Sustainable-Development-Goals-1 and 2 in South Asia’.

About SAARC Agri Cooperative Business Forum:

- Organized by Food and Agriculture Organization (FAO)** of United Nations and Asian Farmers’ Association with the support from International Fund for Agricultural Development.
- Aim:** To provide platform to bring together representatives both from government and non-governmental entities from member states of SAARC as well as from regional and international organizations.

WHAT IS SAARC?

- SAARC stands for South Asian Association for Regional Cooperation. It is a geopolitical cooperation maintained for mutual benefits between eight south Asian nations: India, Nepal, Bhutan, Sri Lanka, Bangladesh, Pakistan, Afghanistan, and Maldives.

Other key facts:

- SAARC Summits are held annually. There have been, however, times when the summits skipped a year.
- The diplomatic summits can only take place when all the members of SAARC are present.
- SAARC Secretariat is based in Kathmandu. It is responsible for monitoring the activities of the cooperation.
- The body was founded in Dhaka in 1985.

SAFTA:

- In a landmark move, SAARC nations unanimously decided to form South Asian Free Trade Area (SAFTA). Although the agreement was reached at the 12th SAARC summit in 2004, it came into force on 1 January 2006.
- The agreement not only created a free trade area of 1.8 billion people in SAARC nations (except Afghanistan), but also removed trade barriers to increase the level of economic cooperation.

Sources: the hindu.

Paper 3 Topic: Issues related to direct and indirect farm subsidies and minimum support prices; Public Distribution System objectives, functioning, limitations, revamping; issues of buffer stocks and food security; Technology missions; economics of animal-rearing.

1. PRADHAN MANTRI KRISHI SINCHAYEE YOJANA (PMKSY)

What to study?

- For Prelims: PMKSY and LTIF- key features.
- For Mains: Significance of PMKSY.
- Context:** A revised Memorandum of Agreement (MoA) has been signed amongst Govt. of India (through MoWR, RD & GR), NABARD and National Water Development Agency (NWDA) for funding of central share of 99 prioritized irrigation projects under Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) through Long Term Irrigation Fund (LTIF).
- The MoU will enable this Ministry to release Central Assistance** to prioritized projects under PMKSY as per the requirements from time to time.



PRADHAN MANTRI KRISHI SINCHAI YOJANA (PMKSY)

A NATIONAL MISSION TO PROVIDE WATER TO EVERY FIELD

KEY HIGHLIGHTS

- Total area brought under precision irrigation system is **2.36 lakh ha** and **18750** water harvesting structures have been created having **27835 ha** potential for protective irrigation.
- During 2016-17, funds allocated to PMKSY is **Rs. 2340 cr** and **8 lakh ha** has been targeted under micro irrigation.
- Farmers can contact District Agriculture/Horticulture officer for obtaining subsidy on drip/ sprinkler irrigation technique.
- Priority is given to projects which are close to completion so that **farmers can get immediate benefit**.

About LTIF:

- To cater to the large fund requirement and ensure completion of the projects, the Union Finance Minister, during his Budget speech 2016-17, announced creation of dedicated **Long Term Irrigation Fund (LTIF) in NABARD** with an initial corpus of Rs. 20,000 crore for funding of Central and State share for the identified ongoing projects under PMKSY (AIBP and CAD).
- Corpus would be raised by way of budgetary resources and market borrowings to fund fast tracking of implementation of incomplete major & medium irrigation projects.

About PMKSY:

- PMKSY has been conceived amalgamating ongoing schemes viz. Accelerated Irrigation Benefit Programme (AIBP) of the Ministry of Water Resources, River Development & Ganga Rejuvenation (MoWR, RD&GR), Integrated Watershed Management Programme (IWMP) of Department of Land Resources (DoLR) and the On Farm Water Management (OFWM) of Department of Agriculture and Cooperation (DAC).
 - The scheme will be **implemented by Ministries of Agriculture, Water Resources and Rural Development**.
 - **The major objective of PMKSY** is to achieve convergence of investments in irrigation at the field level, expand cultivable area under assured irrigation, improve on-farm water use efficiency to reduce wastage of water and enhance the adoption of precision-irrigation and other water saving technologies (More crop per drop).

Sources: pib.

Paper 3 Topic: Food processing and related industries in India- scope and significance, location, upstream and downstream requirements, supply chain management.

1. INTERNATIONAL CONFERENCE ON RECENT ADVANCES IN FOOD PROCESSING TECHNOLOGY (ICRAFPT)

What to study?

- For Prelims: Meaning of food processing, IIFT.
- For Mains: Significance and the need for food processing.
- **Context:** International Conference on Recent Advances in Food Processing Technology (iCRAFPT) 2018 is being held at Indian Institute of Food Processing Technology, Thanjavur in Tamilnadu.
- **Theme:** Doubling farmers' income through food processing.

Significance of the conference:

- This conference will be a valuable and important platform for inspiring international and interdisciplinary exchange at the forefront of food research.
- Over the course of three days, internationally renowned speakers will share their research experiences in the areas of advances in food engineering and its industrial applications, food product development, food biotechnology, nano foods.

Significance and the need for strengthening of food processing sector:

- Most of the agricultural products are not consumable in their original form, for which they are processed. Wheat is converted into flour, Paddy into rice, sugarcane into jaggery, Sugar, ethanol, alcohol etc. These products can be further processed such as flour into bread. Apart from this, left over part of crop such as rice husk can also be processed to get some useful product for e.g. Rice Bran oil, cattle feed, Sugarcane bagasse can be used for power cogeneration.
- Hence, food processing not merely adds value to the agro products, but also increases their utility. We know that activities in an economy are broadly divided into Agriculture, industry and Services. Food processing Industry is the product of agriculture and Industry.

Food processing industry in India:

- India Food Processing Industry is estimated at \$135 billion industry which is growing at about 8% annually. This growth rate is significantly more than agricultural growth rate which remains around 4%.
- These signals indicate toward phenomenal shift toward food processing from traditional ways.

Food processing industry and employment growth:

- FPI is employment intensive industry; it can be an answer to jobless growth of past decade. Currently, only 3 % of employment is in FPI, while in developed countries it handles 14% population.
- Again, much of the employment will be created into rural India. This can remedy problem of distress migration. Growth in direct employment in the organized food processing sector stands at 6 % between 2011-12.

The key challenges identified overall for the food processing sector in India are as follows:

- **Poor supply chain linkages:** India's agriculture market has a long and fragmented supply chain that results in high wastage and high costs, especially due to seasonality, perishability, and variability of produce.
- **Infrastructure bottlenecks:** The export related infrastructure for agri-produce is grossly inadequate, especially at sea ports and airports. More than 30 percent of the produce from the fields gets spoilt due to poor post-harvesting facilities and lack of adequate storage infrastructure.
- **Lack of skilled manpower:** The agricultural workforce is inadequately skilled across different levels of food processing.
- **Low adherence to quality standards:** India lacks basic standardization and certification infrastructure. Given the size of the food processing industry, there is a huge gap in the availability of laboratories, trained manpower, and certification agencies.

Sources: pib.

Paper 3 Topic: Infrastructure: Energy, Ports, Roads, Airports, Railways etc.

1. POLICY FRAMEWORK FOR EXPLORATION AND EXPLOITATION OF UNCONVENTIONAL HYDROCARBONS

What to study?

- For Prelims: Shale gas, CBM.
- For Mains: Features of new framework.
- **Context:** The Union Cabinet has approved the policy to permit exploration and exploitation of unconventional hydrocarbons such as Shale oil/gas, Coal Bed Methane (CBM) etc.
- It will be carried out under the existing Production Sharing Contracts (PSCs), CBM contracts and Nomination fields to encourage the existing Contractors in the licensed/leased area to unlock the potential of unconventional hydrocarbons in the existing acreages.

Significance of the move:

- With the approval of this policy, there will be complete shift from 'One hydrocarbon Resource Type' to 'Uniform Licensing Policy' which is presently applicable in Hydrocarbon Exploration & Licensing Policy (HELP) and Discovered Small Field (DSF) Policy.

Benefits:

- This policy will enable the realization of prospective hydrocarbon reserves in the existing Contract Areas which otherwise would remain unexplored and unexploited.
- With this policy dispensation, new investment in Exploration and Production (E&P) activities and chances of finding new hydrocarbon discoveries and resultant increased domestic production thereof is expected.
- Exploration and exploitation of additional hydrocarbon resources is expected to spur new investment, impetus to economic activities, additional employment generation and thus benefitting various sections of society.
- This will lead to induction of new, innovative and cutting-edge technology and forging new technological collaboration to exploit unconventional hydrocarbons.

Need for new framework:

- As per existing contractual regime of PSCs, existing Contractors are not allowed to explore and exploit CBM or other unconventional hydrocarbons in already allotted licensed/leased area. Similarly, CBM Contractors are not allowed to exploit any other hydrocarbon except CBM. Acreages held at present by various Contractors in PSCs and CBM blocks and National Oil Companies (NOCs) in nomination regime constitute a significant part of India's sedimentary basin.

What is Coal Bed Methane?

- Coal Bed Methane (CBM) is an unconventional form of natural gas found in coal deposits or coal seams. CMB is formed during the process of coalification, the transformation of plant material into coal. It is considered a valuable energy resource with reserves and production having grown nearly every year since 1989. Varied methods of recovery make CBM a stable source of energy.

What is Shale Gas?

- Shale gas is a natural gas formed from being trapped within shale formations. It is unconventional source of methane, like coal-bed gas (in coal seams) and tight gas (trapped in rock formations). It is colourless, odourless gas, lighter than air. It is cheaper than natural gas, releases 50% less CO₂, hence better source for generating electricity. It also provides feedstock for petrochemicals industry, which is turned into fertilizer, plastics and other useful stuff.

Sources: the hindu.

2. 'STATE ENERGY EFFICIENCY PREPAREDNESS INDEX'

What to study?

- **For Prelims:** Highlights of 'State Energy Efficiency Preparedness Index'.
- **For Mains:** Energy efficiency- need, significance and government efforts.
- **Context:** 'State Energy Efficiency Preparedness Index' has been released by Bureau of Energy Efficiency (BEE) and Alliance for an Energy Efficient Economy (AEEE).

About the Index:

- The nationwide Index is a joint effort of the NITI Aayog and BEE. The index assesses state policies and programmes.
- The Index will help in implementing national energy efficiency initiatives in states and meet both State as well as national goals on energy security, energy access and climate change.
- It has 63 indicators across Building, Industry, Municipality, Transport, Agriculture and DISCOM with 4 cross-cutting indicators.
- The Index examines states' policies and regulations, financing mechanisms, institutional capacity, adoption of energy efficiency measures and energy savings achieved.

Performance of states:

- States are categorised based on their efforts and achievements towards energy efficiency implementation, **as 'Front Runner', 'Achiever', 'Contender' and 'Aspirant'.**
 - The 'Front Runner' states in the inaugural edition of the Index are: Andhra Pradesh, Kerala, Maharashtra, Punjab, and Rajasthan based on available data.
 - Gujarat, Karnataka, Tamil Nadu and Haryana have been categorised in the second best category of 'achiever' states.

Significance of the Index:

- Such an index assumes significance in a country that is now the biggest emitter of greenhouse gases after the US and China, and which is among the countries most vulnerable to climate change. India plans to reduce its carbon footprint by 33-35% from its 2005 levels by 2030, as part of its commitments to the United Nations Framework Convention on Climate Change adopted by 195 countries in Paris in 2015.

Sources: pib.

3. STRATEGIC INVESTMENT FUND UNDER NIIF

What to study?

- For Prelims: NIIF- features, strategic fund.
- For Mains: Significance of NIIF.
- **Context:** As on date, three funds have been established by the Government under the NIIF platform and registered with SEBI as Category II Alternative Investment Funds and **National Investment and Infrastructure Fund II ('Strategic Fund')** is one of those three funds.
- **The other two funds are** National Investment and Infrastructure Fund (or Master Fund) and NIIF Fund of Funds – I.

About Strategic Fund:

- The objective of National Investment and Infrastructure Fund II ('Strategic Fund') is to invest largely in equity and equity-linked instruments. The Strategic Fund will focus on green field and brown field investments in the core infrastructure sectors.
- It will focus on green field and brown field investments in the core infrastructure sectors.

About NIIF:

- NIIF was set up in 2015 as an investment vehicle for funding commercially viable greenfield, brownfield and stalled projects in the infrastructure sector. NIIF will invest in areas such as energy, transportation, housing, water, waste management and other infrastructure-related sectors in India.
- **The corpus of the fund** is proposed to be around Rs40,000 crore, with the government investing 49% and the rest to be raised from third-party investors such as sovereign wealth funds, insurance and pension funds, endowments etc.
- **NIIF's strategy** includes anchoring equity, quasi-equity and debt funds in partnership with investors targeting investments across the relevant sectors in India.

Sources: pib.

4. JAL MARG VIKAS PROJECT

What to study?

- For Prelims: IWAI, Jal Marg Vikas project, NW 1.
- For Mains: Significance of Waterways for India and challenges involved in development of these waterways.
- **Context:** IWAI recently held a large public outreach along Ganga for Jal Marg Vikas Project. Two-Day long advocacy meetings were held in Jharkhand leg of Ganga.

About Jal Marg Vikas Project:**What is it?**

- The Jal Marg Vikas Project seeks to facilitate plying of vessels with capacity of 1,500-2,000 tonnes in the Haldia-Varanasi stretch of the River Ganga. The major works being taken up under JMVP are development of fairway, Multi-Modal Terminals, strengthening of river navigation system, conservancy works, modern River Information System (RIS), Digital Global Positioning System (DGPS), night navigation facilities, modern methods of channel marking etc.
- **Implementation:** The JMVP, which is expected to be completed by March, 2023, is being implemented with the financial and technical support of the World Bank. The project will enable commercial navigation of vessels with the capacity of 1500-2,000 tons on NW-I.
- **Benefits of this project:** Alternative mode of transport that will be environment friendly and cost effective. The project will contribute in bringing down the logistics cost in the country. Mammoth Infrastructure development like multi-modal and inter-modal terminals, Roll on – Roll off (Ro-Ro) facilities, ferry services, navigation aids. Socio-economic impetus; huge employment generation.

Environmental challenges:

- Though the project is ambitious in its intent, it does not account for the monetary value of the environmental costs that are imposed upon society. The river Ganga meanders across the landscape and spreads over its riverbed making pools and shallow areas. Fish and turtles lay eggs in these shallow areas. But thanks to dredging, which is already being done in the Ganga under the NW-1 project, the river is now channelised in one deep channel. The river no longer meanders and no longer has pools and shallow areas, destroying the habitat of fish and turtles. The stretch of the Ganga near Varanasi has been declared as a turtle sanctuary and studies in other countries indicate that large numbers get hit by fast-moving tourist boats because turtles move slowly.
- The stretch of the Ganga near Bhagalpur has been declared a wildlife sanctuary for the conservation of the Ganges Dolphin. This animal does not have eyes. It navigates and catches its prey by the sound made by the movement of other aquatic creatures. The plying of large barges will create a high level of sound and make it difficult for them to survive. The paint on ships and barges will also pollute the water. The carbon dioxide released by the ships will be absorbed more by the water because of its proximity and this too pollutes the river.

What can be done to minimize impacts in sensitive zones?

- A ban on dredging in protected habitat areas. In other areas that are known to be the habitat of valued aquatic species, no dredging should be allowed in the breeding and spawning seasons.

- The speed of barges travelling along the protected areas of the sanctuaries should be restricted to 5km per hour. All vessels plying on the Ganga should be fitted with noise control and animal exclusion devices so that aquatic life is not unduly disturbed. All vessels will also have to comply with 'zero discharge' standards to prevent solid or liquid waste from flowing into the river and affecting its biodiversity.

Way forward:

- It is time to ensure that the small direct benefits from cheaper transportation shall not have large environmental costs.

Know about IWAI:

- Inland Waterways Authority of India (IWAI) is the statutory authority in charge of the waterways in India. Its headquarters is located in Noida, UP. It does the function of building the necessary infrastructure in these waterways, surveying the economic feasibility of new projects and also administration.

Sources: pib.

5. NATIONAL ENERGY STORAGE MISSION

What to study?

- For Mains: Need for energy storage and its significance.

Background:

- In February 2018, an Expert Committee under the chairpersonship of Secretary, Ministry of New and Renewable Energy, with representatives from relevant Ministries, industry associations, research institutions and experts was constituted by the Ministry of New & Renewable Energy to propose draft for setting up National Energy Storage Mission (NESM) for India.

The proposal:

- The Expert Committee referred has proposed a draft NESM with objective to strive for leadership in energy storage sector by creating an enabling policy and regulatory framework that encourages manufacturing, deployment, innovation and further cost reduction.

Key areas for energy storage application include:

- Integrating renewable energy with distribution and transmission grids.
- Setting Rural microgrids with diversified loads or stand-alone systems.
- Developing Storage component of electric mobility plans.

Highlights of the draft National Energy Storage Mission (NESM):

- The draft expects to kick-start grid-connected energy storage in India, set up a regulatory framework, and encourage indigenous manufacture of batteries.
- The draft sets a "realistic target" of 15-20 gigawatt hours (GWh) of grid-connected storage within the next five years. Power grids do not currently use storage options that would help in smoothly integrating renewable energy sources.
- The mission will focus on seven verticals: indigenous manufacturing; an assessment of technology and cost trends; a policy and regulatory framework; financing, business models and market creation; research and development; standards and testing; and grid planning for energy storage.

Significance and the need for energy storage:

- Energy Storage is one of the most crucial & critical components of India's energy infrastructure strategy and also for supporting India's sustained thrust to renewables.
- Renewable energy sources now make up almost one-fifth of India's total installed power capacity. However, as power grids increase their share of solar and wind energy, the problem remains that the peak supply of renewable sources does not always meet peak demand. For instance, solar energy generation may be at its peak at noon, but unless stored, it will not be available when needed to light up homes at night. Moreover, renewable sources are inherently intermittent: there are days when the wind doesn't blow or the sky is cloudy.

Sources: the hindu.

6. PRADHAN MANTRI GRAM SADAK YOJANA

What to study?

- For Prelims: PMGSY- key features.
- For Mains: Significance of PMGSY and significance of rural road connectivity.
- Context:** Cabinet Committee on Economic Affairs (CCEA) has approved continuation of Pradhan Mantri Gram Sadak Yojana (PMGSY) beyond 12th Five Year Plan period ((2012–2017)).
- It will help in connecting 38,412 habitations at estimated cost of Rs. 84,934 crore. The centre's share will be Rs 54,900 crore and states' share is Rs 30,034 crore.

Background:

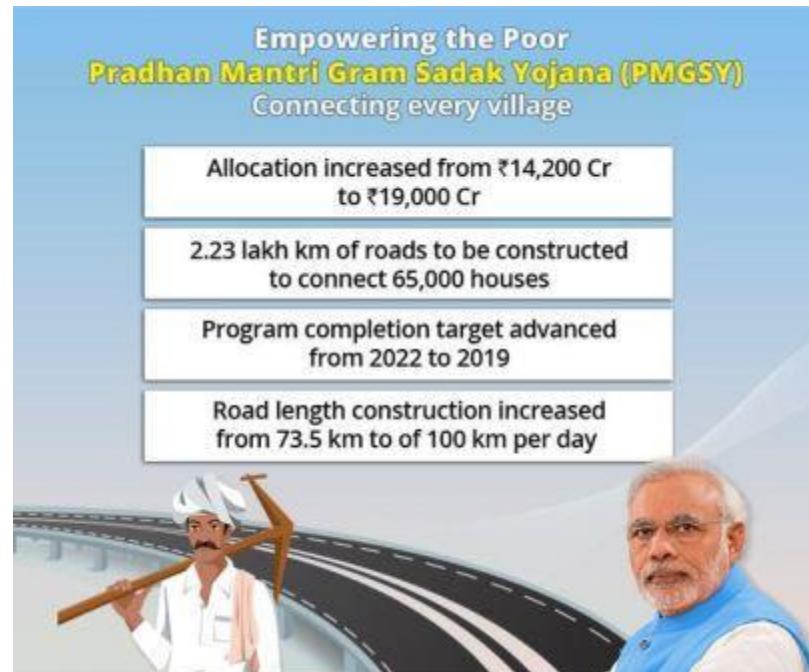
- Initially the targets of PMGSY were to be achieved by March 2022, however, the sunset date of achievement of PMGSY-I was pre-poned to March, 2019, with enhanced fund allocation and changed funding pattern i.e. in the ratio of 60:40 between the Centre and State for all States except for 8 North Eastern and 3 Himalayan States (Jammu & Kashmir, Himachal Pradesh & Uttarakhand) for which it is 90:10.
- Under, PMGSY-II, against the target length of 50,000 km works of upgradation almost 32,100 km road length have been sanctioned in 13 States, which have transited to PMGSY-II. Against the sanctions issued, 12,000 km road length has been completed up to March, 2018.

Achievements:

- The Task of connecting 1,78,184 eligible unconnected habitations under PMGSY on its way towards completion by March, 2019.
- So far, 95 per cent habitations (1,69,415) have been sanctioned, of which 91 per cent habitations (1,54,257) have been connected including 16,380 habitations connected by the States from their own resources.
- Against the sanctioned length of 6,58,143 km, 5,50,601 km road length has been completed.

Pradhan Mantri Gram Sadak Yojana (PMGSY):

- The scheme, launched in 2000, aims to provide single all-weather road connectivity to all eligible unconnected habitations in rural areas with population of 500 persons and above (in plain areas) and 250 persons and above (in hilly states, desert areas, tribal areas and selected tribal and backward districts).
- Union Ministry of Rural Development is nodal ministry for implementation of Scheme.



Sources: the hindu.

7. UDAN SCHEME FOR INTERNATIONAL ROUTES

What to study?

- For Prelims: Key features of the draft proposed.
- For Mains: Significance of the proposed scheme.
- Context:** The centre has unveiled the draft International Air Connectivity (IAC) scheme.

Key highlights:

- **Target:** The scheme envisages to increase the international ticketing to 20 crore by 2027.
- **The scheme is to be made operational only for states,** which demonstrate their commitment to implement and provide the requisite support for promoting operations under the scheme.
- **Identification of routes:** According to the draft, state governments will identify the routes to be connected, and airline operators will assess demand on the identified routes and submit proposals for providing connectivity.
- **Permitted aircrafts:** Operations under the scheme will be permitted through fixed-wing aircraft only with more than 70 seats.
- **The scheme has proposed to set up an International Air Connectivity Fund (IACF)** — a dedicated fund for providing subsidy support under the scheme. It will be created through the contributions of state governments.
- **The subsidy support** shall be provided to selected airlines only for the passenger seats, which remain unsold at the time of IAC flight operation, from the total number of passenger seats for which subsidy has been requested by the selected airline as part of its proposal. The subsidy support will be extended only up to three years.
- The Airport Authority of India will be the **implementing agency of the scheme.**

Sources: the hindu.

8. O-SMART SCHEME

What to study?

- For Prelims: Key features of the scheme.
- For Mains: Significance of the scheme, challenges to blue economy.
- **Context:** The Cabinet Committee on Economic Affairs has given its approval for the umbrella scheme "**Ocean Services, Technology, Observations, Resources Modelling and Science (O-SMART)**", for implementation during the period from 2017-18 to 2019-20 at an overall cost of Rs.1623 crore.

Highlights of the scheme:

- The scheme encompasses a total of 16 sub-projects addressing ocean development activities such as Services, Technology, Resources, Observations and Science.
- The services rendered under the O-SMART will provide economic benefits to a number of user communities in the coastal and ocean sectors, namely, fisheries, offshore industry, coastal states, Defence, Shipping, Ports etc.

Significance and benefits of the scheme:

- Currently, five lakhs fishermen community are receiving the related information daily through mobile which includes allocation of fish potential and local weather conditions in the coastal waters. The scheme will help in reducing the search time for fishermen resulting savings in the fuel cost.
- Implementation of O-SMART will help in addressing issues relating to Sustainable Development Goal-14, which aims to conserve use of oceans, marine resources for sustainable development. This scheme (O-SMART) also provide necessary scientific and technological background required for implementation of various aspects of Blue Economy.
- The ocean advisory services and technologies being rendered and developed under the scheme play a pivotal role in the development activities over dozen sectors, working in the marine environment including the coastal states of India, contributing significantly to the GDP.
- The State of Art Early Warning Systems established under the O-SMART Scheme will help in effectively dealing with ocean disasters like Tsunami, storm surges. The technologies being developed under this Scheme will help in harnessing the vast ocean resources of both living and non-living resources from the seas around India.

Significance of the Blue Economy:

- As the resources on land are not adequate enough to meet the future demands, India is also embarking on blue economy for effective and efficient use of the vast ocean resources in a sustainable way, which would require a great deal of information on ocean science, development of technology and providing services.

- Further, the coastal research and marine biodiversity activities are important to be continued also in the context of achieving United Nations Sustainable Development Goal-14 to conserve and sustainably use the oceans, seas and marine resources for sustainable development.

Sources: pib.

Paper 3 Topic: Science and Technology- developments and their applications and effects in everyday life Achievements of Indians in science & technology; indigenization of technology and developing new technology.

1. BALLISTIC MISSILE INTERCEPTOR AAD

What to study?

- For Prelims: Features of AAD.
- For Mains: Significance of AAD.
- Context:** DRDO conducted the successful test of the Ballistic Missile Interceptor Advanced Area Defence (AAD) from Abdul Kalam Island, Odisha.

About Ballistic Missile Interceptor AAD:

- It is **an endo-atmospheric missile**, capable of intercepting incoming targets at an altitude of 15 to 25 kms.
- Indigenously developed by DRDO**, the AAD interceptor is a single-stage missile powered by solid propellants.
- It has been developed **as part of indigenous efforts to have multi-layer ballistic missile defence system**, capable of destroying incoming hostile ballistic missiles.
- It is 7.5 metres tall and weighs around 1.2 tonnes.
- The interceptor missile has its own mobile launcher, secure data link for interception, independent tracking and homing capabilities and sophisticated radars.

Background:

- The **Indian Ballistic Missile Defence (BMD) Programme** is an attempt to develop and to use a multi-layered ballistic missile defence system to protect from ballistic missile attacks.
- The India's decision to develop Ballistic Missile Defense (BMD) was introduced in the light of the ballistic missile threat mainly from Pakistan, especially can be attributed to the Kargil War in 1999.

Need for BMD:

- India follows 'No First Use policy'. A robust BMD provides an opportunity to the nation to strike back if a nuclear projectile is launched by an enemy state.
- BMD would shield from non-state actors initiated missile warfare and thus could avoid Mutual Destruction trap.
- BMD reduces the incentive for the enemy state to launch a nuclear attack, thus enhancing strategic stability.
- An indigenous system would reduce the import bill of defence systems from other nations.
- Technology developed for BMD can be used in other sectors, especially in space technology.

Sources: the hindu.

2. INDIA'S FIRST BLOCKCHAIN DISTRICT IN TELANGANA

What to study?

- For Prelims: First blockchain district.
- For Mains: Blockchain- features, potential and concerns.
- Context:** Tech Mahindra and the Telangana government have signed an agreement to establish **a Blockchain district in Hyderabad, a first-of-its-kind** Centre of Excellence for Blockchain in India.

What is it and how it works?

- Initially it would be a virtual cluster, connecting with the stakeholders working in the emerging technology. It would have a physical building at a later phase.

- In short, it will be “a cluster of buildings”, which will house start-ups and other stakeholders working on the development of the platform.
- Tech Mahindra, as a founding member of the Blockchain district, will provide platform and technology assistance to all the incubators in the district.
- On its part, the Telangana government would provide regulatory and policy support to promote the growth of Blockchain.

What is Blockchain technology?

- Blockchain is a new-age technology that helps in record-keeping through the use of cryptography, a secure method of writing digital codes.
- With blockchain, many people can write entries into a record of information, and a community of users can check the records to reduce the scope of fraudulent practices in altering information.

Benefits of blockchain technology:

- As a public ledger system, blockchain records and validate each and every transaction made, which makes it secure and reliable.
- All the transactions made are authorized by miners, which makes the transactions immutable and prevent it from the threat of hacking.
- Blockchain technology discards the need of any third-party or central authority for peer-to-peer transactions.
- It allows decentralization of the technology.

How blockchain can be used in public administration?

- Blockchain has the potential to optimize the delivery of public services, further India’s fight against corruption, and create considerable value for its citizens.
- By maintaining an immutable and chronologically ordered record of all actions and files (“blocks”) linked together (“chain”) in a distributed and decentralized database, Blockchain creates an efficient and cost-effective database that is virtually tamper-proof. By doing so, blockchain promises to create more transparent, accountable, and efficient governments.
- In addition to creating a more efficient government, blockchain can also help create a more honest government. A public blockchain, like the one Bitcoin uses, records all information and transactions on the decentralized database permanently, publicly, and most importantly, securely. By allowing governments to track the movement of government funds, blockchain can hold state and local actors accountable for any misappropriations.
- Blockchain not only deters corruption through accountability, but it can also do so by bypassing the middleman entirely. Earlier this year, the World Food Programme began testing blockchain-based food and cash transactions in Pakistan’s Sindh province. Refugees in Jordan’s Azraq camp are now using the same technology, in conjunction with biometric registration data for authentication, to pay for food.

Sources: the hindu.

3. IMPRINT-2

What to study?

- For Prelims and Mains: Key features and significance of IMPRINT.
- **Context:** For advancing research in the high education institutions, the government has approved 122 new research projects at a cost of Rs 112 crore under IMPRINT-2 covering Energy, Security, Healthcare, Advanced Materials, ICT and Security/Defence domains.

About IMPRINT:

- IMPacting Research, INnovation and Technology (**IMPRINT**) is a national initiative of the Ministry of Human Resource Development (MHRD) designed to address all major engineering challenges relevant to India through an inclusive and sustainable mode of translational research.
- IMPRINT-2 has been approved by Government of India (GoI) with a revised strategy under which, this national initiative will be jointly funded and steered by MHRD and Department of Science and Technology (DST).
- While any faculty member from an MHRD funded Higher Education Institute (HEI) including Centrally Funded Technical Institution (CFTI) may lead as the Principal Investigator (PI), single or multiple partners from stake

- holder ministry, institutions, PSUs, strategic agencies and industry are welcome as Co-PI, partner or collaborator.
- Proposals under IMPRINT II Projects should (a) address any declared theme (thrust area) under one of the 10 domains of IMPRINT, and (b) connect either with already identified or new research topics defined by the PI under the same 10 domains.
 - Projects proposals should provide clear and convincing evidence of promise for translational research leading to viable technology (product, process or prototype) development.

Sources: pib.

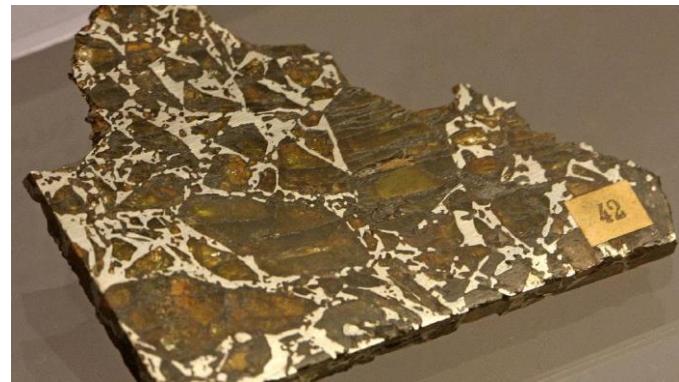
4. UAKITITE

What to study?

- For Prelims and Mains: Uakitite and its features.
- **What is it?** It is a new mineral has been discovered in a meteorite in Eastern Russia.

Key facts:

- It is named “uakitite” after the Uakit region of Siberia where the meteorite was discovered.
- 98% of the Uakit meteorite is an iron alloy called kamacite, which so far has only been found in other meteorites. The other two percent is comprised of minerals that form in space.



Lack of enough data:

- Scientists don't know a lot more about this mysterious space rock as they were unable to obtain all physical and optical properties of the mineral because of its small size.

Sources: the hindu.

5. THERMAL BATTERY

What to study?

- For Prelims and Mains: Thermal battery technology- key features, significance and potential.
- **Context:** India has become home to ***the world's first-ever thermal battery plant***. The thermal battery facility, ***inaugurated in Andhra Pradesh***, will be owned by Bharat Energy Storage Technology Private Limited (BEST).

Significance:

- This plant aims to create a new energy storage form that is expected to have commercial applications, while also maintaining a low carbon footprint, and being less dependent on external factors like weather. It could provide energy solutions for electrical grids, transport and telecom services.

What is thermal battery technology?

- A thermal energy battery is used for storing and releasing thermal energy. It allows for available energy to be temporarily stored and be released for use whenever necessary. Standard battery technology is based on charging and discharging cycles mainly operated by electricity.
- The most commonly used Lithium-ion battery works on electrical energy. However, thermal batteries operate on thermal energy, which can be defined as energy created by temperature differences.

How it works?

- ***Thermal batteries use thermal energy to operate***, i.e., the energy created by temperature differences. Therefore, the energy transfer in thermal batteries helps store heat when heat travels from one part of the battery setup to the other.

- For that to happen, **a thermal battery consists of two parts: a cool zone known as sink, and a hot source called source**. Both these sides consist of compounds known as phase-changing materials (PCMs), which can change their state of matter on the basis of a physical/chemical reaction.
- When the sink of a thermal battery receives heat, it transforms physically or chemically, thereby storing energy, while the source cools down. During operation, the sink is cooled down, so it releases the stored energy, while the source heats up. Depending on the nature of the battery, the system can derive heat from any source, which makes a thermal battery very versatile.

Applications with power grids:

- The possible integration of thermal batteries with power grids is one of its main applications. This will help boost industrial demand and provide substantial support to public transport and telecom grids.
- Thermal batteries can function as long as heat is available for them to operate, which can be helpful in power transmission to remote areas. India's rising regional energy requirements can be resolved using this technology.
- The telecom industry will also benefit as thermal batteries will help boost signal strength and network connectivity, which will thereby increase internet and smartphone penetration.

Use in e-vehicles technology:

- The thermal batteries can be used in electric vehicles as well. India's automobile industry has an ambitious target of going completely electric by 2030. Car manufacturers can use thermal battery technology to manufacture vehicle with clean energy at minimal maintenance cost and set up charging stations for the same.

Why is it good compared to other technologies?

- Although solar power is considered the most reliable source of energy yet it has pitfalls. The energy generation is not possible after sunset and high rainfall areas, which brings in the need for a robust energy storage infrastructure. Thus, the coming of thermal battery is a landmark development in the field of technology and environmental protection.
- Existing energy storage technologies depend on Lithium-based batteries, which are limited by life cycles, making it a very expensive proposition with replacements needed every six to seven years. They are also low on energy density and need a high footprint.
- Furthermore, Lithium's sensitivity to extreme temperatures requires the energy storage systems to be placed in conditioned temperatures, requiring about eight to ten per cent energy storage for the cause.

Facts for Prelims:

- Thermal battery technology was patented in India by Dr Patrick Glynn in 2016.

Sources: the hindu.

6. IRIS SCAN AUTHENTICATION FEATURE FOR AADHAAR-BASED TRANSACTIONS BY AXIS BANK

- Axis Bank has become the **first bank in the country to introduce Iris Scan Authentication feature** for Aadhaar-based transactions through its micro ATM tablets.

How it works?

- The bank has deployed highly secure iris powered micro ATM tablets which are STQC certified and UIDAI compliant registered devices with completely integrated iris sensors.
- Micro ATMs completely eliminate the requirement of debit cards, passwords, PINs, and user IDs, and empower consumers to avail banking services using only their Aadhaar numbers and biometrics (iris scan/fingerprint scan).

Significance:

- This service, which requires a customer to scan their iris on a tablet, will boost the bank's financial inclusion efforts by making Aadhaar authentication process hassle-free and offering easier access to digital banking for consumers especially in the rural parts of the country.

Significance of iris technology:

- Iris scan technology is completely contactless and provides up to 98.2% authentication success rate (as per study conducted by the International Centre for Biometric Research) and offers an edge over other prevalent biometric modes.

Sources: the hindu.

7. AEROGEL- SUPER-INSULATING GEL**What to study?**

- For Prelims and Mains: Features, significance and applications of the Aerogel.
- Context:** Scientists have developed a transparent heat-resistant gel- called aerogel- using beer waste.

Features of aerogel:

- The “aerogel” looks like a flattened plastic contact lens. The transparent gel is highly resistant to heat.
- The gel is cheaper to produce because it comes from beer waste. Aerogels are at least 90% gas by weight, but their defining feature is air. Their thin films are made up of crisscrossing patterns of solid material that trap air inside billions of tiny pores, similar to the bubbles in bubble wrap. It is that trapping capacity that makes them such good insulators.

Potential applications:

- It may one day be used to build greenhouse-like habitats for human colonised on Mars.
- It could also be used on buildings on Earth to help make huge savings on energy costs.

Sources: IE.

8. HUMAN SPACE FLIGHT PROGRAMME**Indian Human Space Flight Programme**

To develop a space vehicle to carry crew of two to LEO and return safely to a predetermined destination on earth

**What to study?**

- For Prelims: Particulars of the programme.
- For Mains: Challenges involved.

- **Context:** In his address to the nation on India's 72nd Independence Day, Prime Minister Narendra Modi announced that India will send an astronaut to space in the year 2022.

Indian Human Space Flight Programme:

- India plans to build a crew vehicle that can accommodate 2 or 3 astronauts and human rate its GSLV Mk-III launcher. In 2004, ISRO prepared a document with the road-map for developing technologies relevant to human spaceflight.
- Initially, a manned space flight was proposed before 2017, at a budget of Rs 12.4 billion (\$242 million), using a fully autonomous orbital vehicle carrying two or three crew members to 400-km (250 miles) low Earth orbit for up to 7 days and back. The planning commission approved the mission and the government sanctioned Rs 95 crore to study all aspects of the manned space mission.
- ISRO has initiated pre-project Research and Development activities focusing on critical technologies for Human Space Flight Program.

Technological Challenges:

- Three major areas that ISRO needs to master are, environmental control and life support (ECLS) system, crew escape system and flight suite and it's currently working on them, under pre-project studies for which the Government sanctioned Rs 145 crore.

Recent technological advancements:

- In what appears to be a preparation for the Gaganyaan mission, ISRO last month conducted its first 'pad abort' test that was successful.
- **The 'pad abort' test** or Crew Escape System is an emergency escape measure that helps pull the crew away from the launch vehicle when a mission has to be aborted. The test was conducted at the Satish Dhawan Space Centre, Sriharikota.
- The Pad Abort Test demonstrated the safe recovery of the crew module in case of any exigency at the launch pad.

Way ahead:

- A manned space mission is very different from all other missions that ISRO has so far completed. In terms of complexity and ambition, even the missions to the Moon (Chandrayaan) and Mars (Mangalyaan) are nowhere in comparison.
- For a manned mission, the key distinguishing capabilities that ISRO has had to develop include the ability to bring the spacecraft back to Earth after flight, and to build a spacecraft in which astronauts can live in Earth-like conditions in space.

Key facts for Prelims:

- If India does launch the Gaganyaan mission, it will be the fourth nation to do so after the United States, Russia and China.

Sources: the hindu.

9. LASER INTERFEROMETER GRAVITATIONAL WAVE OBSERVATORY (LIGO) PROJECT

What to study?

- For Prelims and Mains: LIGO- global significance and significance for India, all about gravitational waves.
- **Context:** The Environment Ministry has allowed scientists to test the suitability of land in Maharashtra's Hingoli district to host the India wing of the ambitious Laser Interferometer Gravitational Wave Observatory (LIGO) project.

Background:

- The LIGO (Laser Interferometer Gravitational-wave Observatory) is a massive observatory for detecting cosmic gravitational waves and for carrying out experiments. The objective is to use gravitational-wave observations in astronomical studies.

- The project operates three gravitational-wave (GW) detectors. Two are at Hanford in the state of Washington, north-western US, and one is at Livingston in Louisiana, south-eastern US. The proposed LIGO India project aims to move one advanced LIGO detector from Hanford to India.

About LIGO- India project:

- Known as the LIGO-India project, it is piloted by Department of Atomic Energy (DAE) and Department of Science and Technology (DST).
- The LIGO-India project will be jointly coordinated and executed by three Indian research institutions: the Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune and Department of Atomic Energy organisations: Institute for Plasma Research (IPR), Gandhinagar and the Raja Ramanna Centre for Advanced Technology (RRCAT), Indore.

Benefits for India:

- The project will bring unprecedented opportunities for scientists and engineers to dig deeper into the realm of gravitational wave and take global leadership in this new astronomical frontier.
- The LIGO-India project will also bring considerable opportunities in cutting-edge technology for the Indian industry which will be engaged in the construction of the eight-km long beam tube at ultra-high vacuum on a levelled terrain.
- With its establishment, India will join the global network of gravitational wave detectors.
- Establishing an observatory in India also assumes importance because the further the distance between the observatories, the greater will be the accuracy in locating gravity waves.

Way ahead:

- Dubbed as the breakthrough of the century, the international team of scientists believes that the detection of gravitational waves will open an unprecedented new window to the cosmos.

Sources: the hindu.

What are Gravitational Waves?

- Gravitational waves are the ripples in the pond of spacetime. The gravity of large objects warps space and time, or “spacetime” as physicists call it, the way a bowling ball changes the shape of a trampoline as it rolls around on it.
- Smaller objects will move differently as a result – like marbles spiraling toward a bowling-ball-sized dent in a trampoline instead of sitting on a flat surface.

10. MICROCRYSTALLITES

What to study?

- For Prelims and Mains: Microcystallites- features, significance and potential applications.
- What are they?** These are a new type of gold in the form of very small crystals developed by researchers from Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bengaluru.
- The microcystallites were synthesised** by decomposing an organic complex containing gold and other ions under controlled conditions.

Key features of Microcystallites:

- The newly formed microcystallites, about 3 micrometre in length were found to be of a different crystal structure.
- Normal gold has a (face-centered) cubic structure, while the new ones exhibit deformed cubic structure — tetragonal and orthorhombic cells.
- The microcrystal gold has been found to be nobler than gold — it do not dissolve in mercury and Aqua regia (a mixture of nitric acid and hydrochloric acid), and showed the least interaction with copper.
- Microcystallites are also more stable than the normal gold.

Way ahead:

- All these properties make these crystallites an ideal candidate for catalytic purposes. Gold in itself is not a catalyst but the new gold microcystallites have very active surfaces. More studies are needed to understand them fully in the context wide range of applications in the offing.

Sources: the hindu.

11. WORLD BANK LAUNCHES WORLD-FIRST BLOCKCHAIN BOND

What to study?

- For Prelims: Bondi Bond, what is blockchain?
- For Mains: Significance and applications of blockchain technology.
- **Context:** World Bank has launched ***world-first blockchain bond***. Australia's Commonwealth Bank (CommBank) is the sole arranger of the issuance by the World Bank.
- The prototype deal, dubbed ***a “Bondi” bond – standing for Blockchain Operated New Debt Instrument as well as a reference to Australia’s most famous beach*** – is being viewed as an initial step in moving bond sales away from manual processes towards faster and cheaper automation.

Significance:

- This issue of World Bank bond will be the first time that capital is raised from public investors through a legally valid bond issuance that uses blockchain from start to finish.

Background:

- The World Bank, whose bonds carry an AAA rating, regularly uses its borrowing power to help develop new bond markets as well as pioneering new means for selling and trading the securities. It issues between \$50 billion and \$60 billion a year of bonds to back economic progress in developing countries.
- Australia is a popular test site for market developments because of its well-established financial infrastructure and the familiarity of international investors with the Australian dollar, which is one of the most-traded currencies in the world.

What are Blockchains?

- Blockchains are a new data structure that is secure, cryptography-based, and distributed across a network. The technology supports cryptocurrencies such as Bitcoin, and the transfer of any data or digital asset.
- Spearheaded by Bitcoin, blockchains achieve consensus among distributed nodes, allowing the transfer of digital goods without the need for centralized authorisation of transactions.
- The present blockchain ecosystem is like the early Internet, a permissionless innovation environment in which email, the World Wide Web, Napster, Skype, and Uber were built.

How this operates?

- The technology allows transactions to be simultaneously anonymous and secure, peer-to-peer, instant and frictionless. It does this by distributing trust from powerful intermediaries to a large global network, which through mass collaboration, clever code and cryptography, enables a tamper-proof public ledger of every transaction that's ever happened on the network.
- A block is the “current” part of a blockchain which records some or all of the recent transactions, and once completed, goes into the blockchain as permanent database. Each time a block gets completed, a new block is generated. Blocks are linked to each other (like a chain) in proper linear, chronological order with every block containing a hash of the previous block.

Benefits of blockchain technology:

- As a public ledger system, blockchain records and validate each and every transaction made, which makes it secure and reliable.
- All the transactions made are authorized by miners, which makes the transactions immutable and prevent it from the threat of hacking.
- Blockchain technology discards the need of any third-party or central authority for peer-to-peer transactions.
- It allows decentralization of the technology.

Sources: the hindu.

Paper 3 Topic: Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

1. TRANSITING EXOPLANET SURVEY SATELLITE (TESS)

What to study?

- **For Prelims:** TESS- key features.
- **For Mains:** Scientific objectives and significance of the mission.
- **Context:** **TESS (Transiting Exoplanet Survey Satellite)** has officially started its science operations. Its first observations will be transmitted back to Earth at some point in August, after which it will continue to send in new information for the next two years, at least.

Background:

- TESS was launched on April 18th with the help of a SpaceX Falcon 9 rocket which sent the satellite into an elliptical orbit around Earth.

About TESS mission:

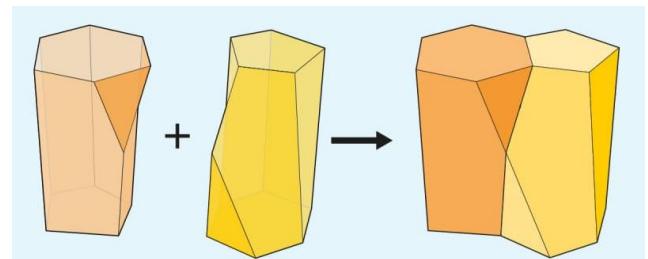
- The Transiting Exoplanet Survey Satellite (TESS) is a NASA mission that will look for planets orbiting the brightest stars in Earth's sky. It was led by the Massachusetts Institute of Technology with seed funding from Google.
- **Mission:** The mission will monitor at least 200,000 stars for signs of exoplanets, ranging from Earth-sized rocky worlds to huge gas giant planets. TESS, however, will focus on stars that are 30 to 100 times brighter than those Kepler examined. This will help astronomers better understand the structure of solar systems outside of our Earth, and provide insights into how our own solar system formed.
- **Orbit:** TESS will occupy a never-before-used orbit high above Earth. The elliptical orbit, called P/2, is exactly half of the moon's orbital period; this means that TESS will orbit Earth every 13.7 days. Its closest point to Earth (67,000 miles or 108,000 kilometers) is about triple the distance of geosynchronous orbit, where most communications satellites operate.
- **How it works?** It will use transit method to detect exoplanets. It watches distant stars for small dips in brightness, which can indicate that planet has passed in front of them. Repeated dips will indicate planet passing in front of its star. This data has to be validated by repeated observations and verified by scientists.

Sources: the hindu.

2. SCUTOID: A NEW SHAPE DISCOVERED

What to study?

- **For Prelims and Mains:** Scutoid and its features, significance of the discovery.
- **Context:** Scientists have identified a new shape called the scutoid while studying epithelial cells.



What is Scutoid?

- A scutoid is a solid geometric shape, like a cube or a pyramid, which had not been described until now. The epithelial cells adopt this form when the tissue curves, giving it a more stable structure. It could be said that they look like 'twisted prisms'.
- These new and beautiful shapes are the solution that nature has found to fold and curve the epithelia, which lines the outer surfaces of organs.

What are epithelial cells?

- The epithelial cells are the construction blocks with which an organism is formed. They are like 'pieces of Tente or Lego from which animals are made.
 - The epithelial cells form structures with multiple functions like forming a barrier against infections or absorbing nutrients.

- During the development of an embryo, it changes from a simple structure formed from only a handful of cells to an animal with very complex organs. This process doesn't only occur because of the growth of the organism, but also because the epithelial cells start 'moving and joining together' to organise themselves correctly and give the organs their final shape.

Significance of the discovery:

- This study opens the door to understanding how organs are formed during their development and what might be missing in some diseases in which this process is altered.

Sources: [toi](#).

3. INDIA UNVEils GEOGRAPHICAL INDICATION LOGO, TAGLINE

What to study?

- **For Prelims:** GI- features, who assigns? Tagline and important GI tags.
- **For Mains:** Significance of GI tag and recent controversies related.
- **Context:** India has unveiled a tagline and a tricolour logo for geographical indication (GI) certified products. From now on, the GI-registered goods will sport the logo and the tagline to make them more attractive.
- **Tagline:** "Invaluable Treasures of Incredible India".

Key facts:

- A total of 320 products have been conferred the GI status in India so far.
- Karnataka comes first with 38 GI products, followed by Maharashtra which has 32 products.
- Tamil Nadu comes third with 25 GI products.

About GI tag:

What is it?

- A GI is primarily an agricultural, natural or a manufactured product (handicrafts and industrial goods) originating from a definite geographical territory.

Significance of a GI tag:

- Typically, such a name conveys an assurance of quality and distinctiveness, which is essentially attributable to the place of its origin.

Security:

- Once the GI protection is granted, no other producer can misuse the name to market similar products. It also provides comfort to customers about the authenticity of that product.

Provisions in this regard:

- GI is covered as element of intellectual property rights (IPRs) under **Paris Convention for Protection of Industrial Property**.
- At international level, **GI is governed by WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)**.
- In India, **Geographical Indications of Goods (Registration and Protection Act), 1999** governs it.

Sources: [the hindu](#).



4. GAOFEN-11

- **What is it?** It is an optical remote sensing satellite, launched by China as part of its high-resolution Earth observation project. It will aid in the Belt and Road Initiative. It was the 282nd flight mission by a Long March carrier rocket.

- **Applications:** The satellite can be used for land survey, urban planning, road network design, agriculture, and disaster relief.
- **Part of CHEOS:** Gaofen-11 will become part of the China High-resolution Earth Observation System (CHEOS), initiated in 2010 to provide all-weather, all-day coverage by 2020 with optical and synthetic aperture radar satellites, and could also include airborne and near-space systems such as stratospheric balloons.

5. KADAKNATH CHICKEN MEAT FROM JHABUA GETS GI TAG

What to study?

- For Prelims: Kadaknath chicken.
- For Mains: All about GI tag.
- **Context:** The famous Kadaknath chicken meat from Jhabua district of Madhya Pradesh has now got a Geographical Indication (GI) tag. GI registration is valid up to a period of around five years till February 7, 2022.

Kadaknath:

- Kadaknath is famous for its delicious black meat ('kali-masi'), which is supposed to be invigorating and full of medicinal properties.
- The Indian poultry breed is famous for its unique black colour of feathers as well as black meat, which is claimed to contain low cholesterol level as compared to the routine table chicken.
- **Kadaknath is found mainly in the tribal district of Jhabua. This poultry is reared mainly by the tribal community of Bhil & Bhilala** in the districts of Jhabua and Dhar.
- **It is locally known as Kalamasi** and is used for treatment of many diseases, besides being considered an aphrodisiac.



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Sources: the hindu.

6. RISECREEK

What to study?

- For Prelims and Mains: RISECREEK and its significance, Project Shakti.
- **What are they?** They are industry-standard microprocessors developed by scientists from IIT- Madras. They are produced under Project Shakti and have been fabricated free at Intel's facility at Oregon, U.S., to run the Linux operating system.

Key features:

- These microprocessors can be adapted by others, as the design is open source. They optimise power use and compete with international units such as the Cortex A5 from Advanced RISC Machines (ARM).
- At a frequency of 350 MHz, RISECREEK can meet the demands of defence and strategic equipment such as NAVIC (Indian Regional Navigation Satellite) and Internet of Things (IoT) electronics.

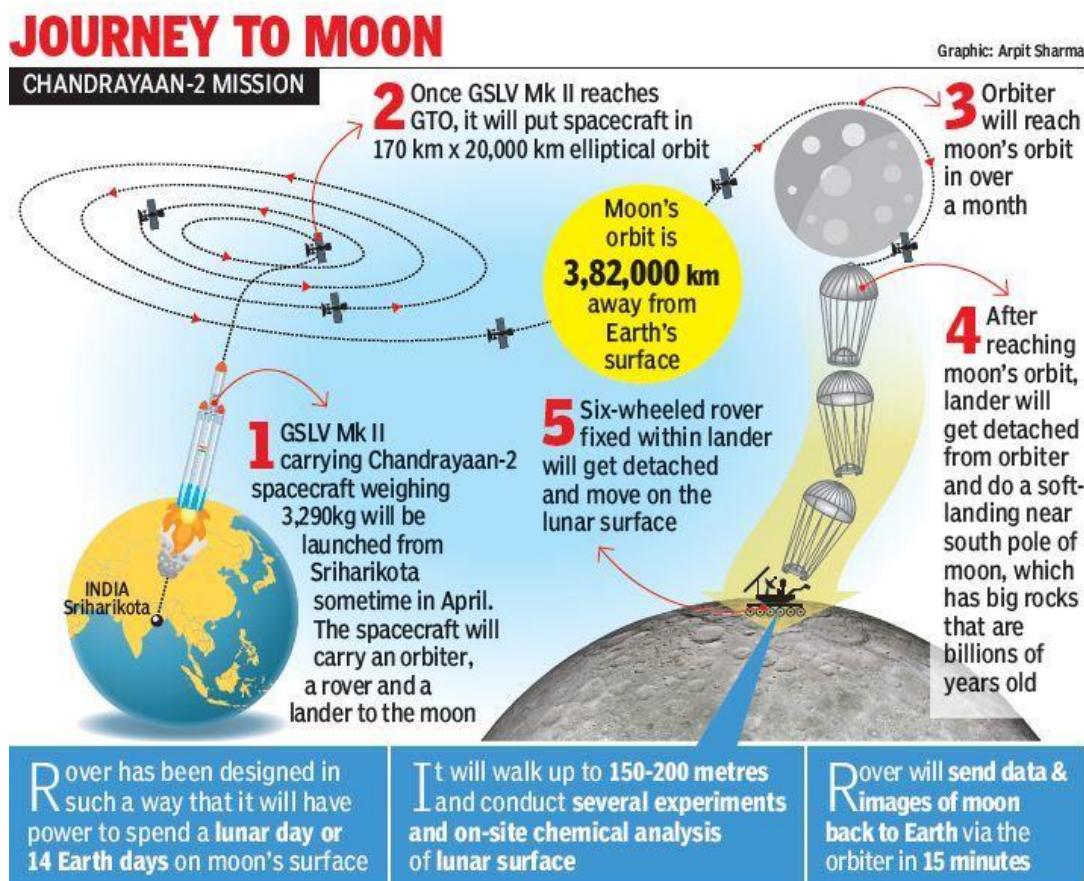
Project Shakti:

- The Shakti plan started in 2014 as an IIT-M initiative. Last year, the Union Ministry of Electronics and Information Technology funded a part of the project.
- The Shakti project is not aimed at only building processors. It also aims to build high speed interconnects for servers and supercomputers based on variants of the RapidIO and GenZ standards. These are key to build large clusters of processors to get Petaflop and Exaflop level supercomputers.

Sources: the hindu.

7. CHANDRAYAAN-2**What to study?**

- For Prelims and Mains: The mission, its features and the significance.
- **Context:** The mission, Chandrayaan 2, has been postponed again from its proposed October launch to January 2019. This time, the delay was caused because the indigenously developed lander was having trouble with rethrottling. The lander has now gone back to the design table for a design change.

**Background- timeline of the mission:**

- Chandrayaan-2's journey has been rather slow so far. Although the mission was envisioned way back in November 2007, as a joint mission between India and Russia, it had faced a series of setbacks.
- As per the tie-up, Russia was supposed to provide the lander for the mission, while India would develop the rover and orbiter. ISRO had its prototype ready for a 2013 launch but Russia delayed delivering the lander. Later, Russia said it would not be able to provide a lander for ISRO.

- India then called off the deal and decided to make the Chandrayaan mission completely indigenous. The development has taken time, and given that it is the first time India is developing a lander, the programme has faced many glitches like the present one.

About Chandrayaan-2:

- Chandrayaan-2 includes soft-landing on Moon and moving a rover on its surface. It is an advanced version of the previous Chandrayaan-1 mission. It consists of an orbiter, lander and rover configuration.
- The Orbiter spacecraft when launched from Sriharikota will travel to the Moon and release the Lander, which will in turn deploy a tiny Rover to roam the lunar surface — all three sending data and pictures to Earth.
- It is planned to be launched as a composite stack into the earth parking orbit (EPO) of 170 X 18,500 km by GSLV-Mk II.

Sources: the hindu.

8. INDIA'S FIRST GENETIC BANK FOR WILDLIFE CONSERVATION

What to study?

- For Prelims: Location of the Bank.
- For Mains: Significance and the need for genetic banks.
- Context:** In a step that would further the cause of conservation of endangered and protected animals, India has got its first scientific and most modern national wildlife genetic resource bank.
- It is located in Hyderabad at the Laboratory for the Conservation of Endangered Species (LaCONES), a research wing of the Centre for Cellular and Molecular Biology (CCMB).

Key facts:

- The state-of-the-art bank is equipped with sophisticated equipment to preserve the genetic resources that could be utilised to virtually resurrect an animal species in case it goes extinct.
- The bank that contains genetic resources of about 250 wildlife species.
- The Genetic Resource Bank will store genetic material of Indian species. It will also help in protecting India's biodiversity and environment.

Achievements of Laboratory for the Conservation of Endangered Species (LaCONES):

- It is India's only research facility engaged in conservation and preservation of wildlife and its resources.** It was established in 1998 with the help of Central Zoo Authority of India, CSIR and the government of Andhra Pradesh.
- LaCONES has helped the Mouse Deer Conservation Breeding Centre at Nehru Zoological Park to increase the population of mouse deer in Telangana forests. Amrabad forest, for instance, ran out of mouse deer and through the efforts of LaCONES, the animal is now reintroduced in Amrabad Tiger Reserve.
- Earlier, LaCONES has developed universal DNA based marker for identification of wild animals from parts and remains. It has a DNA banking of more than 250 species of mammals, birds and reptiles.

Sources: the hindu.

9. PARKER SOLAR PROBE

What to study?

- For Prelims: Features of the probe.
- For Mains: Significance of the mission, why study sun and the Corona?
- Context:** NASA has launched the Parker Solar Probe – the space agency's first mission to the sun – that will explore the sun's atmosphere and its outermost atmosphere, the corona. The project, with a \$1.5 billion price tag, is the first major mission under NASA's Living With a Star program.

About the mission:

- What is it?** NASA's historic Parker Solar Probe mission will revolutionize our understanding of the sun, where changing conditions can propagate out into the solar system, affecting Earth and other worlds. Parker Solar

Probe will travel through the sun's atmosphere, closer to the surface than any spacecraft before it, facing brutal heat and radiation conditions — and ultimately providing humanity with the closest-ever observations of a star.

- **Journey:** In order to unlock the mysteries of the sun's atmosphere, Parker Solar Probe will use Venus' gravity during seven flybys over nearly seven years to gradually bring its orbit closer to the sun. The spacecraft will fly through the sun's atmosphere as close as 3.9 million miles to our star's surface, well within the orbit of Mercury and more than seven times closer than any spacecraft has come before.
- **Goals:** The primary science goals for the mission are to trace how energy and heat move through the solar corona and to explore what accelerates the solar wind as well as solar energetic particles.

Parker Solar Probe has three detailed science objectives:

1. Trace the flow of energy that heats and accelerates the solar corona and solar wind.
2. Determine the structure and dynamics of the plasma and magnetic fields at the sources of the solar wind.
3. Explore mechanisms that accelerate and transport energetic particles.

Why study corona?

- The corona is hotter than the surface of the sun. The corona gives rise to the solar wind, a continuous flow of charged particles that permeates the solar system. Unpredictable solar winds cause disturbances in our planet's magnetic field and can play havoc with communications technology on Earth.
- NASA hopes the findings will enable scientists to forecast changes in Earth's space environment.

Why do we study the sun and the solar wind?

- The sun is the only star we can study up close. By studying this star we live with, we learn more about stars throughout the universe.
- The sun is a source of light and heat for life on Earth. The more we know about it, the more we can understand how life on Earth developed.
- The sun also affects Earth in less familiar ways. It is the source of the solar wind; a flow of ionized gases from the sun that streams past Earth at speeds of more than 500 km per second (a million miles per hour).
- Disturbances in the solar wind shake Earth's magnetic field and pump energy into the radiation belts, part of a set of changes in near-Earth space known as space weather.
- Space weather can change the orbits of satellites, shorten their lifetimes, or interfere with onboard electronics. The more we learn about what causes space weather – and how to predict it – the more we can protect the satellites we depend on.
- The solar wind also fills up much of the solar system, dominating the space environment far past Earth. As we send spacecraft and astronauts further and further from home, we must understand this space environment just as early seafarers needed to understand the ocean.

Facts for Prelims:

- The previous closest pass to the Sun was by a probe called Helios 2, which in 1976 came within 27 million miles (43 million km).
- By way of comparison, the average distance from the Sun for Earth is 93 million miles (150 million km).

Sources: the hindu.

10. NASA'S NEW HORIZONS MISSION

What to study?

- For Prelims and Mains: Features and significance of the mission.
- **Context:** Scientific data sent back by National Aeronautics and Space Administration's (NASA) New Horizons spacecraft suggests that there could be a hydrogen wall at the end of our solar system.

What does the presence of Hydrogen wall indicate?

- It is believed that this hydrogen wall is a "signature of the furthest reaches of sun's energy".
- Technically speaking, the charged particles which the sun sends outwards causes hydrogen to release characteristic ultraviolet light. But as one keeps going away from the sun its influence wanes, which might create a pileup of interstellar hydrogen.

About New Horizons Mission:

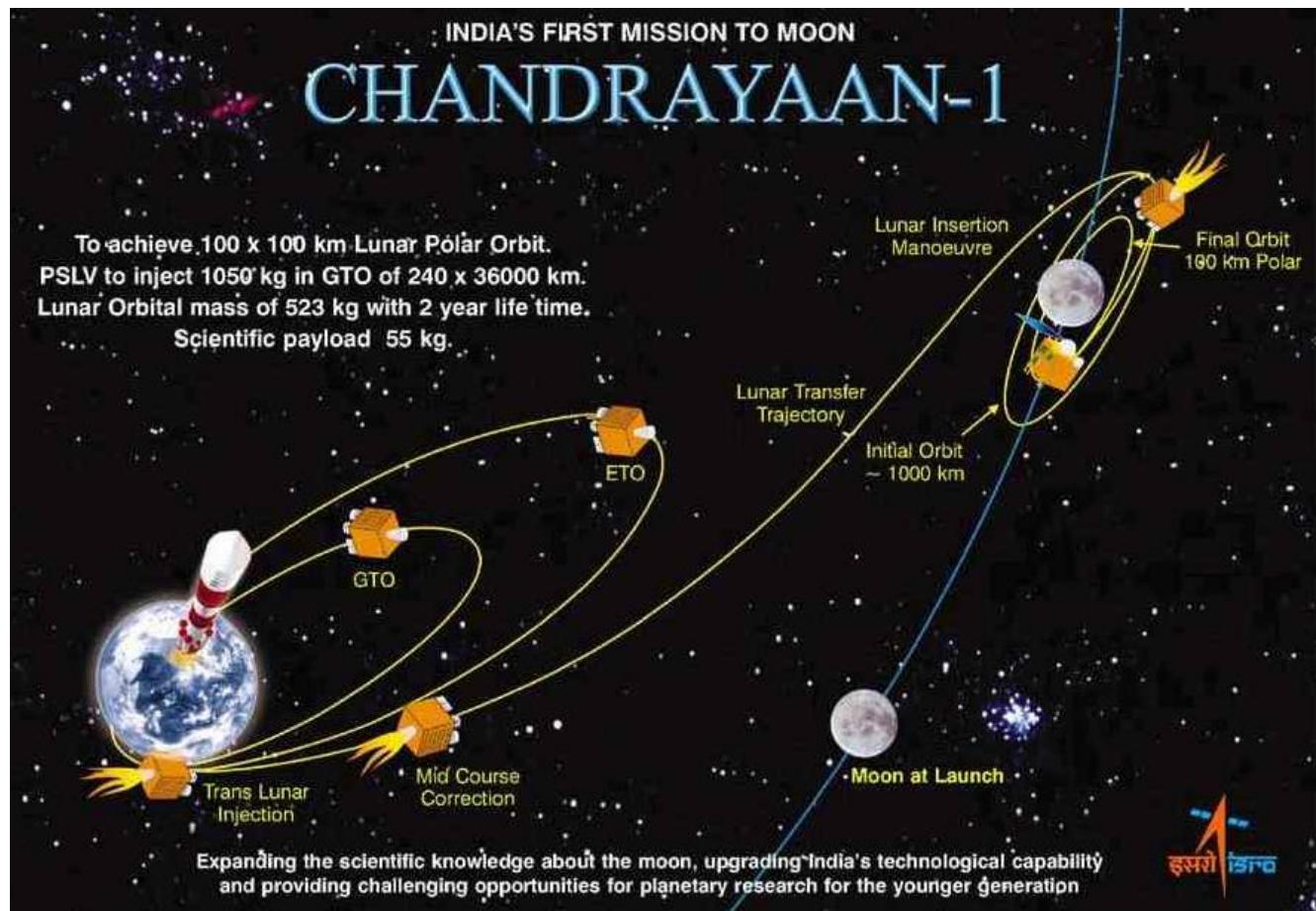
- New Horizons was launched on 19 January 2006, and has been travelling through space for the past nine years.
- Just over a year after launch, it passed Jupiter and used the giant world's gravity to boost its velocity, as well as making scientific observations. This boost shortened the time to reach Pluto by years.
- The mission will complete what NASA calls the reconnaissance of the classical solar system, and it makes the U.S. the first nation to send a space probe to every planet from Mercury to Pluto. The probe has traveled more than 3 billion miles to reach Pluto.
- New Horizons' core science mission is to map the surfaces of Pluto and Charon, to study Pluto's atmosphere and to take temperature readings.
- The spacecraft was launched in 2006, before the big debate started over Pluto's status as a planet. In August of that same year, the International Astronomical Union reclassified Pluto as a dwarf planet.

Sources: the hindu.

11. CHANDRAYAAN- 1

What to study?

- For Prelims: Features of Chandrayaan- 1 mission.
- For Mains: Significance and findings of the mission.
- **Context:** Scientists have found frozen water deposits in the darkest and coldest parts of the Moon's polar regions using data from the Chandrayaan-1 spacecraft, that was launched by India 10 years ago.
- Scientists used data from NASA's Moon Mineralogy Mapper (M3) instrument to identify three specific signatures that definitively prove there is water ice at the surface of the Moon.



What is Moon Mineralogy Mapper (M3) instrument?

- M3, aboard the Chandrayaan-1 spacecraft, launched in 2008 by the Indian Space Research Organisation (ISRO), was uniquely equipped to confirm the presence of solid ice on the Moon.

- It collected data that not only picked up the reflective properties we would expect from ice, but was able to directly measure the distinctive way its molecules absorb infrared light, so it can differentiate between liquid water or vapour and solid ice.

Highlights of the findings:

- With enough ice sitting at the surface — within the top few millimetres — water would possibly be accessible as a resource for future expeditions to explore and even stay on the Moon, and potentially easier to access than the water detected beneath the Moon's surface.
- The ice deposits are patchily distributed and could possibly be ancient. At the southern pole, most of the ice is concentrated at lunar craters, while the northern pole's ice is more widely, but sparsely spread.
- Most of the new-found water ice lies in the shadows of craters near the poles, where the warmest temperatures never reach above minus 156 degrees Celsius. Due to the very small tilt of the Moon's rotation axis, sunlight never reaches these regions.

Way ahead:

- Learning more about this ice, how it got there, and how it interacts with the larger lunar environment will be a key mission focus for NASA and commercial partners, as humans endeavour to return to and explore the Moon.

About Chandrayaan-1:

- Indian Space Research Organisation (ISRO) lost communication with Chandrayaan-1 on August 29, 2009, barely a year after it was launched on October 22, 2008.
- The Chandrayaan-1 mission performed high-resolution remote sensing of the moon in visible, near infrared (NIR), low energy X-rays and high-energy X-ray regions.
- One of the objectives was to prepare a three-dimensional atlas (with high spatial and altitude resolution) of both near and far side of the moon.
- It aimed at conducting chemical and mineralogical mapping of the entire lunar surface for distribution of mineral and chemical elements such as Magnesium, Aluminium, Silicon, Calcium, Iron and Titanium as well as high atomic number elements such as Radon, Uranium and Thorium with high spatial resolution.

Sources: the hindu.

12. INTERIOR EXPLORATION USING SEISMIC INVESTIGATIONS, GEODESY AND HEAT TRANSPORT (INSIGHT)

What to study?

- For Prelims and Mains: Features and significance of the mission, Why study Mars?
- Context:** NASA's *InSight spacecraft*, en route to land on Mars this November, has passed the halfway mark, covering 277 million kilometres since its launch 107 days ago. In another 98 days, it will travel another 208 million kilometres and touch down in Mars' Elysium Planitia region, where it will be the first mission to study the Red Planet's deep interior.

About InSight Mission:

- InSight is part of **NASA's Discovery Program**, managed by the agency's Marshall Space Flight Center in Huntsville, Alabama.
 - It will be the first mission to peer deep beneath the Martian surface***, studying the planet's interior by measuring its heat output and listening for marsquakes, which are seismic events similar to earthquakes on Earth.
 - It will use the seismic waves generated by marsquakes*** to develop a map of the planet's deep interior.

Significance of the mission:

- The findings of Mars' formation will help better understand how other rocky planets, including Earth, were and are created. But InSight is more than a Mars mission – it is a terrestrial planet explorer that would address one of the most fundamental issues of planetary and solar system science – understanding the processes that shaped the rocky planets of the inner solar system (including Earth) more than four billion years ago.

- By using sophisticated geophysical instruments, InSight would delve deep beneath the surface of Mars, detecting the fingerprints of the processes of terrestrial planet formation, as well as measuring the planet's "vital signs": Its "pulse" (seismology), "temperature" (heat flow probe), and "reflexes" (precision tracking).
- InSight seeks to answer one of science's most fundamental questions: How did the terrestrial planets form?

Why Mars?

- Previous missions to Mars have investigated the surface history of the Red Planet by examining features like canyons, volcanoes, rocks and soil. However, signatures of the planet's formation can only be found by sensing and studying its "vital signs" far below the surface.
- In comparison to the other terrestrial planets, Mars is neither too big nor too small. This means that it preserves the record of its formation and can give us insight into how the terrestrial planets formed. It is the perfect laboratory from which to study the formation and evolution of rocky planets. Scientists know that Mars has low levels of geological activity. But a lander like InSight can also reveal just how active Mars really is.

Sources: the hindu.

13. OSIRIS-REX SPACECRAFT

What to study?

- For Prelims and Mains: OSIRIS-Rex mission and facts on asteroid bennu.
- **Context:** The ***OSIRIS-REx spacecraft has begun its final approach toward the big near-Earth asteroid Bennu.*** The milestone also marks the official start of OSIRIS-REx's "asteroid operations" mission phase.
- OSIRIS-REx is still about 1.2 million miles (2 million kilometers) from Bennu and won't arrive in orbit around the 1,650-foot-wide (500 meters) space rock until Dec. 3.

About the mission:

- OSIRIS-Rex stands for Origins, Spectral Interpretation, Resource Identification, Security-Regolith Explorer.
- OSIRIS-REx is the third mission in NASA's New Frontiers program, which previously sent the New Horizons spacecraft zooming by Pluto and the Juno spacecraft into orbit around Jupiter.

What will the OSIRIS-Rex do?

- OSIRIS-REx will spend two years travelling towards Bennu, arriving at the asteroid in August 2018.
- The probe will orbit the asteroid for 3 years, conducting several scientific experiments, before returning to Earth, with the sample capsule expected to land in Utah, USA in September 2023.

Scientific Mission Goals:

- During its three year orbit of Bennu, OSIRIS-REx will be conducting a range of scientific experiments in order to better understand the asteroid.
- As part of this, the asteroid will be mapped using instruments on the probe, in order to select a suitable site for samples to be collected from.
- The aim of the mission is to collect a sample of regolith- the loose, soil-like material which covers the surface of the asteroid.
- In July 2020, the probe will move to within a few metres of Bennu, extending its robotic arm to touch the asteroid's surface. The arm will make contact with the surface for just 5 seconds, during which a blast of nitrogen gas will be used to stir up the regolith, allowing it to be sucked into the sample collector.
- OSIRIS-REx has enough nitrogen on board for 3 sample collection attempts, and NASA are hoping to collect between 60 and 2000g of regolith material to bring back to Earth.

Why was Bennu chosen?

- Bennu was selected for the OSIRIS-REx mission from over 500,000 known asteroids, due to it fitting a number of key criteria. These include:
 - **Proximity to Earth:** In order for OSIRIS-REx to reach its destination in a reasonable timeframe, NASA needed to find an asteroid which had a similar orbit to Earth. Around 7000 asteroids are 'Near-Earth Objects' (NEOs), meaning they travel within around ~30million miles of the Earth. Out of these, just under 200 have orbits similar to Earth, with Bennu being one of these.

- **Size:** Small asteroids, those less than 200m in diameter, typically spin much faster than larger asteroids, meaning the regolith material can be ejected into space. Bennu is around 500m in diameter, so rotates slowly enough to ensure that the regolith stays on its surface.
- **Composition:** Bennu is a primitive asteroid, meaning it hasn't significantly changed since the beginning of the Solar System (over 4 billion years ago). It is also very carbon-rich, meaning it may contain organic molecules, which could have been precursors to life on Earth.
- **Additionally, Bennu is of interest as it is a Potentially Hazardous Asteroid (PHA).** Every 6 years, Bennu's orbit brings it within 200,000 miles of the Earth, which means it has a high probability of impacting Earth in the late 22nd Century.

Sources: [toi](#).

14. ICESAT-2 SATELLITE

What to study?

- For Prelims and Mains: Features, objectives and significance of ICESat- 2.
- **Context:** NASA will shortly launch the ***Ice, Cloud and Land Elevation Satellite-2 (ICESat-2) mission*** to measure — in unprecedented detail — changes in the heights of Earth's polar ice to understand what is causing ice sheets to melt fast.

About ICESat- 2 mission:

- ICESat-2 will measure the average annual elevation change of land ice covering Greenland and Antarctica to within the width of a pencil, capturing 60,000 measurements every second.
- ICESat-2's ***Advanced Topographic Laser Altimeter System (ATLAS)*** measures height by timing how long it takes individual light photons to travel from the spacecraft to Earth and back.

The satellite mission has four science objectives:

- Measure melting ice sheets and investigate how this effects sea level rise.
- Measure and investigate changes in the mass of ice sheets and glaciers.
- Estimate and study sea ice thickness.
- Measure the height of vegetation in forests and other ecosystems worldwide.

How it works?

- ATLAS will fire 10,000 times each second, sending hundreds of trillions of photons to the ground in six beams of green light. With so many photons returning from multiple beams, ICESat-2 will get a much more detailed view of the ice surface than its predecessor.
- As it circles Earth from pole to pole, ICESat-2 will measure ice heights along the same path in the polar regions four times a year, providing seasonal and annual monitoring of ice elevation changes. Beyond the poles, ICESat-2 will also measure the height of ocean and land surfaces, including forests.

Significance of the mission:

- ICESat-2 will improve upon NASA's 15-year record of monitoring the change in polar ice heights. It started in 2003 with the first ICESat mission and continued in 2009 with NASA's Operation IceBridge, an airborne research campaign that kept track of the accelerating rate of change.
- The new observational technologies of ICESat-2 will advance the knowledge of how the ice sheets of Greenland and Antarctica contribute to sea level rise.

Sources: [toi](#).

15. BIS TO SET STANDARDS FOR THE SERVICES SECTOR

What to study?

- **For Prelims and Mains: All about BSI.**
- **Context:** The Bureau of Indian Standards (BIS) has kicked off the process to set ***new standards to measure quality of services*** offered to consumers across different sectors, including telecom, aviation, e-commerce and healthcare.

- In this regard, BIS had recently called for a meeting of industry bodies to “persuade them to be part of the process and give their inputs.”

Significance of the Service Sector and need for standards:

- Service sector is one of the key sectors of the Indian economy with a huge potential to grow into one of the largest markets of the world. Standards can play a major facilitative role in this regard. It is important that the standardisation needs and priorities of the sector are determined.
- The process was initiated after concerns over lack of standardisation, particularly with regards to after-sales service, in their feedback to the Ministry of Consumer Affairs.

Background:

- An online survey had found that in the absence of defined customer service standards in the country, a majority of consumers were not happy with after-sales services.
- As per the poll, 43% feel that mobile handset and computer manufacturers are the worst in after-sales services, followed by white goods firms (38%) and automobile companies (11%).
- About 93% of respondents said brands should at least acknowledge complaints from users within 72 hours. Many consumers complained that customer service numbers of many companies do not work.

About BIS:

- The Bureau of Indian Standards (BIS) is the national Standards Body of India working under the aegis of **Ministry of Consumer Affairs, Food & Public Distribution**.
- It is established by **the Bureau of Indian Standards Act, 1986**.
- The Minister in charge of the Ministry or Department having administrative control of the BIS is **the ex-officio President of the BIS**.
- **Composition:** As a corporate body, it has 25 members drawn from Central or State Governments, industry, scientific and research institutions, and consumer organisations.
- It also works **as WTO-TBT enquiry point for India**.

Sources: the hindu.

16. AEOLUS SATELLITE

What to study?

- For Prelims and Mains: Mission objectives and key features of Aeolus satellite.
- **Context:** The European Space Agency (ESA) has successfully launched **Aeolus satellite that will measure winds around the globe and help improve weather forecasting**. The Earth Explorer Aeolus satellite was launched into polar orbit on a Vega rocket from Europe's Spaceport in Kourou, French Guiana.

Aeolus satellite:

- **Aeolus is the first satellite mission to acquire profiles of Earth's wind on a global scale.** These near-realtime observations will improve the accuracy of numerical weather and climate prediction and advance our understanding of tropical dynamics and processes relevant to climate variability.
- **Aeolus is the fifth in the family of ESA's Earth Explorer missions**, which address key scientific challenges identified by the science community and demonstrate breakthrough technology in observing techniques.
- Named after Aeolus, who in Greek mythology was appointed ‘keeper of the winds’ by the Gods, this novel mission will not only provide much-needed data to improve the quality of weather forecasts, but also contribute to long-term climate research.
- **The Aeolus satellite carries just one large instrument – a Doppler wind lidar called Aladin** that will probe the lowermost 30 km of the atmosphere to measure the winds sweeping around our planet.

Significance and need for information on wind:

- Many aspects of our lives are influenced by the weather. It goes without saying that accurate forecasts are important for commercial undertakings such as farming, fishing, construction and transport – and in general make it easier to plan the days ahead.

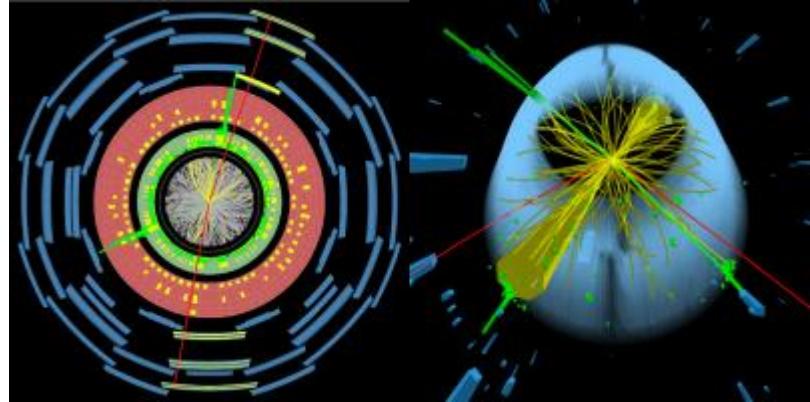
- In extreme circumstances, knowing what the weather will bring can also help save lives and protect property. Although weather forecasts have advanced considerably in recent years, meteorologists urgently need reliable wind-profile data to improve accuracy further.
- Aeolus wind mission will demonstrate that measuring global wind-profiles from space, using laser technology, can meet this requirement.

Sources: the hindu.

17. HIGGS BOSON

What to study?

- For Prelims: Higgs boson- features, LHC- features, location and objectives.
- For Mains: Significance and the need for study of Higgs Boson particles.
- **Context:** Six years after its discovery, the Higgs boson has at last been observed decaying into fundamental particles known as bottom quarks.



Significance:

- The finding, presented by the ATLAS and CMS collaborations at the **Large Hadron Collider (LHC)**, is consistent with the hypothesis that the all-pervading quantum field behind the Higgs boson also gives mass to the bottom quark.
- **The Standard Model of particle physics predicts that about 60% of the time a Higgs boson will decay to a pair of bottom quarks**, the second-heaviest of the six flavours of quarks.
- Testing this prediction is crucial because the result would either lend support to the Standard Model – which is built upon the idea that the Higgs field endows quarks and other fundamental particles with mass – or rock its foundations and point to new physics.

What is Higgs Boson?

- The Higgs boson is an elementary particle in the Standard Model of particle physics, produced by the quantum excitation of the Higgs field, one of the fields in particle physics theory. It is named after physicist Peter Higgs, who in 1964, along with six other scientists, proposed the mechanism, which suggested the existence of such a particle. Its existence was confirmed by the ATLAS and CMS collaborations based on collisions in the LHC at CERN.

What is the Standard model?

- In the world of particle physics, subatomic particles are difficult to observe because of their size. They are smaller than an atom and the wavelength of visible light, so the only way we can detect and observe their behavior is by smashing the atomic nucleus of particles together at intense speeds (close to the speed of light), which generates vast amounts of exotic particles that are only created at high energies. These collisions resemble the conditions physicists believe existed during the time of the big bang.
- Thanks to particle accelerators like the Large Hadron Collider, the Relativistic Heavy Ion Collider and the (now defunct) Tevatron circular particle accelerator, physicists have made a lot of progress in designing a “theory of everything.” This theory postulates how all the subatomic particles in the universe operates and how they interact to comprise the Universe as we know it.
- One of the most complete models that comes anywhere near producing a “theory of everything,” is the Standard Model of Fundamental Particles and Interactions, which describes how particles and forces interact. The standard model also includes an explanation for 3 of the 4 fundamental forces of nature on a subatomic scale.

About Large Hadron Collider (LHC):

- LHC is the world's largest and most powerful particle accelerator situated in a tunnel beneath the France Switzerland border near Geneva.
- **Built by:** European Organization for Nuclear Research (CERN)

- **Aim:** to allow physicists to test the predictions of different theories of particle physics and high-energy physics, and particularly prove or disprove the existence of the theorized Higgs boson and of the large family of new particles predicted by supersymmetric theories.
- The LHC consists of a 27-kilometre ring of superconducting magnets with a number of accelerating structures to boost the energy of the particles along the way.

How it operates?

- Inside the accelerator, two high-energy particle beams travel at close to the speed of light before they are made to collide.
- The beams travel in opposite directions in separate beam pipes – two tubes kept at ultrahigh vacuum. They are guided around the accelerator ring by a strong magnetic field maintained by superconducting electromagnets.
- The electromagnets are built from coils of special electric cable that operates in a superconducting state, efficiently conducting electricity without resistance or loss of energy. This requires chilling the magnets to -3°C – a temperature colder than outer space. For this reason, much of the accelerator is connected to a distribution system of liquid helium, which cools the magnets, as well as to other supply services.
- Just prior to collision, another type of magnet is used to “squeeze” the particles closer together to increase the chances of collisions. The particles are so tiny that the task of making them collide is akin to firing two needles 10 kilometres apart with such precision that they meet halfway.

Sources: the hindu.

18. 'HORIZON 2020'

What to study?

- For Prelims and Mains: Horizon 2020 and its significance.
- **Context:** The European Union and India will collaborate in research and innovation for developing a **next generation influenza vaccine to protect people worldwide**. The EU funding is under its programme for research and innovation 'Horizon 2020'.

Key facts:

- The EU and the Indian government's Department of Biotechnology have committed 15 million Euros each to fund this joint project.
- The aim is to advance the efficacy, safety, duration of immunity, and reactivity against an increased breadth of influenza strains. The joint effort also aims to develop cost-effective and affordable influenza vaccine rapidly without compromising quality.
- There will be multi-disciplinary approach involving stakeholders who can represent any part of the chain from lab to market.

Eligibility:

- The projects require minimum three applicants from Europe (three different EU member states) or countries associated to the EU programme Horizon 2020 and minimum three applicants from India.
- The projects are also 'Open to the World' and thus applicants from other countries can join the EU-India consortia.

Significance:

- Improved influenza vaccines would help the international community to better prepare in the event of an influenza pandemic.
- The outcome of the project is expected to contribute to the achievement of Sustainable Development Goal 3 to ensure health and well-being for all and boost the Indian National Health Mission.
- This joint call is another demonstration of the increased cooperation between the EU and India as committed by the leaders during the Summit in October 2017. In engaging jointly on this topic, India and the EU are contributing to an important global public health challenge.

What is Horizon 2020?

- Horizon 2020 is the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020) – in addition to the private investment that this money will attract. It promises more breakthroughs, discoveries and world-firsts by taking great ideas from the lab to the market.
- The goal is to ensure Europe produces world-class science, removes barriers to innovation and makes it easier for the public and private sectors to work together in delivering innovation.
- Horizon 2020 is open to everyone, with a simple structure that reduces red tape and time so participants can focus on what is really important.

Sources: the hindu.

19. SPITZER TELESCOPE

What to study?

- For Prelims and Mains: Features and objectives of the telescope.
- **Context:** NASA's Spitzer Space Telescope, the youngest member of the "Great Observatory" programme, has completed 15 years in space.

Key achievements:

- Launched into solar orbit on August 25, 2003, Spitzer was initially scheduled for a minimum 2.5-year primary mission. But the space telescope has lasted far beyond its expected lifetime.
- Spitzer's discoveries extend from our own planetary backyard, to planets around other stars, to the far reaches of the universe. And by working in collaboration with NASA's other Great Observatories, Spitzer has helped scientists gain a more complete picture of many cosmic phenomena.
- Spitzer has logged over 106,000 hours of observation time in the past 15 years. It has illuminated some of the oldest galaxies in the universe, revealed a new ring around Saturn, and peered through shrouds of dust to study newborn stars and black holes.
- The space telescope also assisted in the discovery of planets beyond our solar system, including the detection of seven Earth-size planets orbiting the star TRAPPIST-1, among other accomplishments.

About Spitzer:

- NASA's Spitzer Space Telescope was launched in 2003 to study the universe in the infrared. It is the last mission of the NASA Great Observatories program, which saw four specialized telescopes (including the Hubble Space Telescope) launched between 1990 and 2003.
- **The goal** of the Great Observatories is to observe the universe in distinct wavelengths of light. Spitzer focuses on the infrared band, which normally represents heat radiation from objects. The other observatories looked at visible light (Hubble, still operational), gamma-rays (Compton Gamma-Ray Observatory, no longer operational) and X-rays (the Chandra X-Ray Observatory, still operational.)
- **Spitzer's highly sensitive instruments** allow scientists to peer into cosmic regions that are hidden from optical telescopes, including dusty stellar nurseries, the centers of galaxies, and newly forming planetary systems.
- **Spitzer's infrared eyes** also allows astronomers see cooler objects in space, like failed stars (brown dwarfs), extrasolar planets, giant molecular clouds, and organic molecules that may hold the secret to life on other planets.

Sources: the hindu.

Paper 3 Topic: Conservation, environmental pollution and degradation, environmental impact assessment.

1. RAJASTHAN FIRST STATE TO IMPLEMENT BIOFUEL POLICY

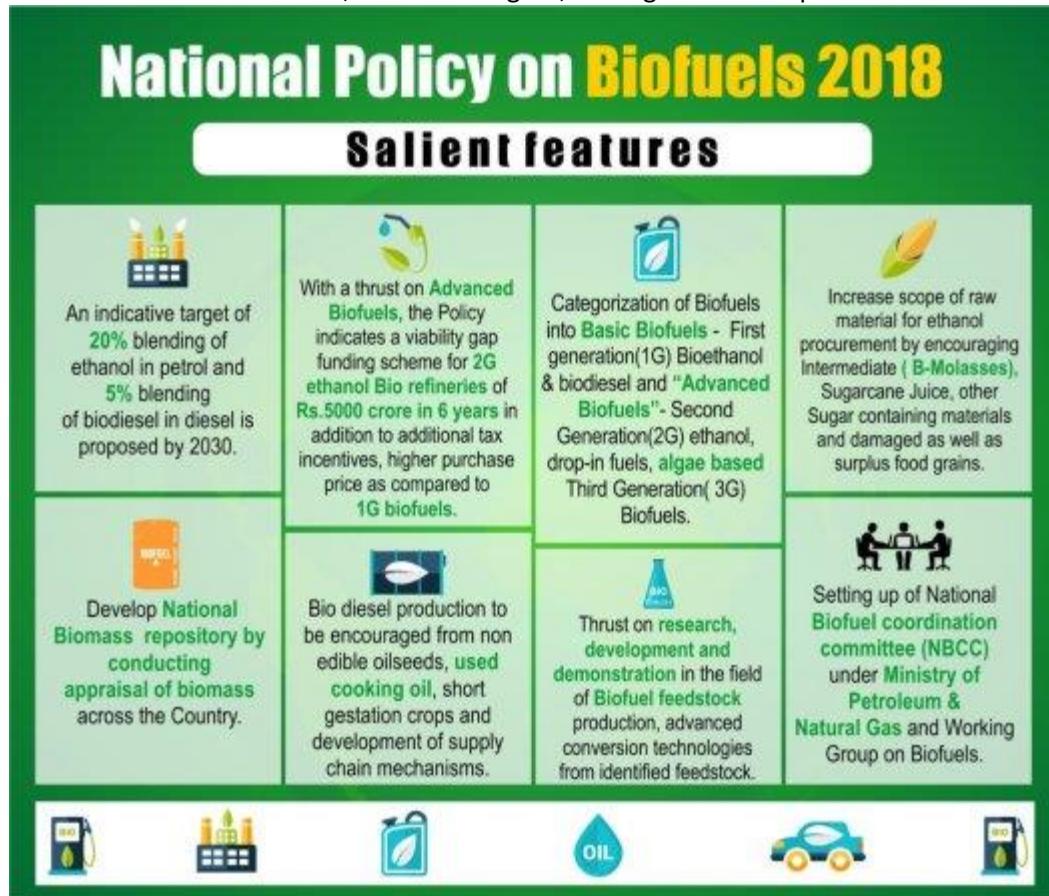
What to study?

- **For Prelims:** Rajasthan Biofuel Policy- key features, classification of biofuels.
- **For Mains:** Biofuels- significance, policies for their promotion and challenges therein.
- **Context:** Rajasthan has become the first State in the country to implement the national policy on biofuels unveiled by the Centre in May this year.

- The policy lays emphasis on increasing production of oilseeds and establish a Centre for Excellence in Udaipur to promote research in the fields of alternative fuels and energy resources.

National Policy on biofuels- salient features:

- Categorization:** The Policy categorises biofuels as “Basic Biofuels” viz. First Generation (1G) bioethanol & biodiesel and “Advanced Biofuels” – Second Generation (2G) ethanol, Municipal Solid Waste (MSW) to drop-in fuels, Third Generation (3G) biofuels, bio-CNG etc. to enable extension of appropriate financial and fiscal incentives under each category.
- Scope of raw materials:** The Policy expands the scope of raw material for ethanol production by allowing use of Sugarcane Juice, Sugar containing materials like Sugar Beet, Sweet Sorghum, Starch containing materials like Corn, Cassava, Damaged food grains like wheat, broken rice, Rotten Potatoes, unfit for human consumption for ethanol production.
- Protection to farmers:** Farmers are at a risk of not getting appropriate price for their produce during the surplus production phase. Taking this into account, the Policy allows use of surplus food grains for production of ethanol for blending with petrol with the approval of National Biofuel Coordination Committee.
- Viability gap funding:** With a thrust on Advanced Biofuels, the Policy indicates a viability gap funding scheme for 2G ethanol Bio refineries of Rs.5000 crore in 6 years in addition to additional tax incentives, higher purchase price as compared to 1G biofuels.
- Boost to biodiesel production:** The Policy encourages setting up of supply chain mechanisms for biodiesel production from non-edible oilseeds, Used Cooking Oil, short gestation crops.



Expected benefits:

- Import dependency:** The policy aims at reducing import dependency.
- Cleaner environment:** By reducing crop burning & conversion of agricultural residues/wastes to biofuels there will be further reduction in Green House Gas emissions.
- Health benefits:** Prolonged reuse of Cooking Oil for preparing food, particularly in deep-frying is a potential health hazard and can lead to many diseases. Used Cooking Oil is a potential feedstock for biodiesel and its use for making biodiesel will prevent diversion of used cooking oil in the food industry.
- Employment Generation:** One 100klpd 2G bio refinery can contribute 1200 jobs in Plant Operations, Village Level Entrepreneurs and Supply Chain Management.

- **Additional Income to Farmers:** By adopting 2G technologies, agricultural residues/waste which otherwise are burnt by the farmers can be converted to ethanol and can fetch a price for these waste if a market is developed for the same.

Significance of Biofuels:

- Globally, biofuels have caught the attention in last decade and it is imperative to keep up with the pace of developments in the field of biofuels.
- Biofuels in India are of strategic importance as it augers well with the ongoing initiatives of the Government such as Make in India, Swachh Bharat Abhiyan, Skill Development and offers great opportunity to integrate with the ambitious targets of doubling of Farmers Income, Import Reduction, Employment Generation, Waste to Wealth Creation.

Classification of Biofuels:

- **1st generation biofuels** are also called conventional biofuels. They are made from things like sugar, starch, or vegetable oil. Note that these are all food products. Any biofuel made from a feedstock that can also be consumed as a human food is considered a first generation biofuel.
- **2nd generation biofuels** are produced from sustainable feedstock. The sustainability of a feedstock is defined by its availability, its impact on greenhouse gas emissions, its impact on land use, and by its potential to threaten the food supply. No second generation biofuel is also a food crop, though certain food products can become second generation fuels when they are no longer useful for consumption. Second generation biofuels are often called “advanced biofuels.”
- **3rd generation biofuels** are biofuel derived from algae. These biofuels are given their own separate class because of their unique production mechanism and their potential to mitigate most of the drawbacks of 1st and 2nd generation biofuels.

Sources: the hindu.

2. WORLD NETWORK OF BIOSPHERE RESERVES

What to study?

- For Prelims: Khangchendzonga BR- key facts, UNESCO MAB programme, BRs in India.
- **Context:** The Khangchendzonga Biosphere Reserve has become the 11th Biosphere Reserve from India to be included in the UNESCO designated World Network of Biosphere Reserves (WNBR).
- This decision was taken at the recently concluded 30th Session of International Coordinating Council (ICC) of Man and Biosphere (MAB) Programme of UNESCO held at Palembang, Indonesia.

Facts:

- India has 18 Biosphere Reserves. With the inclusion of Khangchendzonga, the number of internationally designated World Network of Biosphere Reserves (WNBR) has become 11, with 7 Biosphere Reserves being domestic Biosphere Reserves.

Biosphere reserves:

- Launched in 1971, UNESCO's Man and the Biosphere Programme (MAB) is an Intergovernmental Scientific Programme that aims to establish a scientific basis for the improvement of relationships between people and their environments.
- MAB combines the natural and social sciences, economics and education to improve human livelihoods and the equitable sharing of benefits, and to safeguard natural and managed ecosystems, thus promoting innovative approaches to economic development that are socially and culturally appropriate, and environmentally sustainable.
- Its World Network of Biosphere Reserves currently counts more than 600 sites in 122 countries all over the world, including 20 transboundary sites.
- **The first of India's reserves to make it to UNESCO's list was Tamil Nadu's Nilgiri Biosphere Reserve in 2000.**
- Protection is granted not only to the flora and fauna of the protected region, but also to the human communities who inhabit these regions, and their ways of life.

Key facts on Khangchendzonga Biosphere Reserve:

- **Kanchenjunga Biosphere Reserve is a National Park and a Biosphere Reserve located in Sikkim, India.** The park is named after the mountain Kangchenjunga, which with a height of 8,586 metres (28,169 ft), is the third-highest peak in the world.
- The Biosphere Reserve is one of the highest ecosystems in the world, reaching elevations of 1,220 metres above sea-level. It includes a range of ecolines, varying from sub-tropic to Arctic, as well as natural forests in different biomes, which support an immensely rich diversity of forest types and habitats.
- The core zone – Khangchendzonga National Park was designated as a World Heritage Site in 2016 under the ‘mixed’ category.

BIOSPHERE RESERVES- DEFINITION:

- A Biosphere Reserve is a unique and representative ecosystem of terrestrial and coastal areas which are internationally recognized, within the framework of UNESCO's Man and Biosphere (MAB) programme. The biosphere reserve should fulfill the following three objectives:
 - In-situ conservation of biodiversity of natural and semi-natural ecosystems and landscapes.
 - Contribution to sustainable economic development of the human population living within and around the Biosphere Reserve.
 - Provide facilities for long term ecological studies, environmental education and training and research and monitoring.
- In order to fulfill the above objectives, the Biosphere Reserves are classified into zones like the core area, buffer area. The system of functions is prescribed for each zone.

Sources: the hindu.

3. COMPENSATORY AFFORESTATION FUND ACT

What to study?

- For Prelims: Features of CAF Act.
- For Mains: Significance and the need for afforestation, significance of CAF Act.
- **Context:** The Centre has notified rules for operationalising a Rs 66,000 crore fund collected as compensations under Compensatory Afforestation Fund Act passed in 2016 to promote the green cover in the country.

As per the new rules:

- **13 activities are permitted for funding.** They include plantation, assisted natural regeneration of forests, forest fire prevention, pest and disease control in forests, soil and moisture conservation works and improvement of wildlife habitat.
- **Usage of funds:** 80% of the compensatory afforestation amount will be utilised by states for plantations, assisted natural regeneration of forests, forest fire prevention, pest and disease control in forest, soil and moisture conservation works and improvement of wildlife habitat, among others, in the list of 13 permissible activities. The remaining 20% will be used for 11 listed works to strengthen forest and wildlife protection related infrastructure.
- **Role of gram sabhas:** Besides enlisting the 24 activities which are to be taken up using the fund, the rules also specify that the working plan will be taken up “in consultation with the gram sabha or village forest management committee”.

Significance of the move:

- The move will help India re-green its forest and non-forest areas which have lost trees due to forest diversions — amounting to more than 1.3 million hectares after the Forest (Conservation) Act of 1980 kicked in — for allowing various developmental activities.

Background:

- Over the last ten years, the fund had accumulated the amount as compensations by user agencies for diverting forest land for industries and infrastructure projects. The CAMPA was created as per a Supreme Court ruling in 2009.
- Much of the funds collected under the legislation had been left unspent with an ad hoc Compensatory Afforestation Fund Management and Planning Authority (CAMPA) in absence of enabling rules.

- Until now, the funds were disbursed to states under a temporary and time consuming mechanism. With the relevant rules now in place, the implementation of the act is expected to gather pace.

Way ahead:

- Since the rules for utilisation of the fund have been notified, the unspent amount will now be transferred to the National Compensatory Afforestation Fund at the Centre and the respective State Compensatory Afforestation Funds in a phased manner, depending on its utilisation. The national and state funds — both non-lapsable — can be utilised for only the activities listed under the CAF Act.

Compensatory Afforestation Fund Act 2016:

- This act provides for setting up Compensatory Afforestation Fund Management and Planning Authority (CAMPA) at both central and state level to ensure expeditious and transparent utilization of amounts realized in lieu of forest land diverted for non-forest purpose.
- The act also seeks to establish the National Compensatory Afforestation Fund under the Public Account of India, and a State Compensatory Afforestation Fund under the Public Account of each state. The payments into the funds include compensatory afforestation, NPV, and any project-specific payments.

Sources: the hindu.

4. RUCO (REPURPOSE USED COOKING OIL) INITIATIVE

What to study?

- For Prelims: RUCO- features.
- For Mains: Need for regulation of used cooking oil and uses of used cooking oil.
- Context:** The Food Safety and Standards Authority of India (FSSAI) has launched RUCO (Repurpose Used Cooking Oil), an initiative that will enable collection and conversion of used cooking oil to bio-diesel.
- Under this initiative,** 64 companies at 101 locations have been identified to enable collection of used cooking oil. For instance: McDonald's has already started converting used cooking oil to biodiesel from 100 outlets in Mumbai and Pune.
- FSSAI wants businesses using more than 100 litres of oil for frying, to maintain a stock register and ensure that UCO is handed over to only registered collecting agencies.

Significance of the initiative:

- FSSAI believes India has the potential to recover 220 crore litres of used cooking oil for the production of biodiesel by 2022 through a co-ordinated action.
- While biodiesel produced from used cooking oil is currently very small, but a robust ecosystem for conversion and collection is rapidly growing in India and will soon reach a sizable scale.

Background:

- The initiative has been launched nearly a month after the food safety regulator notified standards for used cooking oil. According to FSSAI regulations, the maximum permissible limits for Total Polar Compounds (TPC) have been set at 25%, beyond which the cooking oil is unsafe for consumption.

What is Total Polar Compounds (TPC)?

- In many countries, TPC is used to measure the quality of oil. The level of TPC increases every time oil is reheated. Some of the studies show that TPC accumulation in oil without food is slower than that in oil frying with food.
- Higher level of TPC in cooking oil leads to health issues like hypertension, atherosclerosis, Alzheimer's disease and liver disease. One of the studies also noticed high levels of glucose, creatinine and cholesterol with declined levels of protein and albumin in cooking oil.

Need for regulation:

- Currently, used cooking oil is either not discarded or disposed of in such a manner that it chokes drains and sewerage systems. Apart from setting quality standards, the new regulation addresses the way this oil is discarded.

- As used cooking oil is considered the most reasonable feedstock for biodiesel production, the FSSAI is planning to redirect the used cooking oil from the food business operators. It has already started collecting used oil in small quantities either through a barter arrangement or at cost.

About FSSAI:

- The Food Safety and Standards Authority of India (FSSAI) has been established ***under Food Safety and Standards Act, 2006*** which consolidates various acts & orders that have hitherto handled food related issues in various Ministries and Departments.
 - It was created for laying down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import to ensure availability of safe and wholesome food for human consumption.
 - Ministry of Health & Family Welfare, Government of India is the Administrative Ministry for the implementation of FSSAI.
 - Composition:** The Chairperson and Chief Executive Officer of Food Safety and Standards Authority of India (FSSAI) are appointed by Government of India. The Chairperson is in the rank of Secretary to Government of India.

Sources: [toi](#).

5. ODISHA TO SHOWCASE ITS BIODIVERSITY

What to study?

- For Prelims: Bhitarkanika sanctuary, Gharials and their conservation.
- Context:** The Odisha government is setting up a ***world-class interpretation centre at Dangamal near Bhitarkanika National Park*** to showcase its efforts in protecting crocodiles and preserving its rich mangrove diversity. The centre will be developed both as a tourist attraction and a place for students to learn about the environment.
- The project, which has been approved under the ***Integrated Coastal Zone Management Project***, will be taken up at an estimated cost of ₹3 crore.

Bhitarkanika and the need for conservation:

- Bhitarkanika, one of the State's finest biodiversity hotspots, receives close to one lakh visitors every year. The tourist inflow has seen an increase lately.
- The park is famous for its green mangroves, migratory birds, turtles, estuarine crocodiles and countless creeks. It is said to house 70% of the country's estuarine or saltwater crocodiles, conservation of which was started way back in 1975.

'BAULA' PROJECT AT DANGAMAL:

- 'Baula' is the Oriya term for Saltwater Crocodile. At Dangmal in Bhitarkanika sanctuary, salt-water crocodile eggs have been collected locally; and young crocodiles have been released in the creeks and the estuaries; and more than 2200 crocodiles have been released in phases since 1977.
- This operation has been reasonably successful and the crocodile population in the Bhitarkanika river system has gradually been built up. Above 50 released female Saltwater Crocodiles have laid eggs in the wild and bred successfully.
- The annual census conducted in the river systems of Bhitarkanika wildlife sanctuary in January 2004 indicated that there were 1308 Saltwater crocodiles and is on increasing trend.

About Gharial:

- Critically Endangered— IUCN Red List.
- Gharial (Gavial or fish eating crocodile).
- The male gharial has a distinctive boss at the end of the snout, which resembles an earthenware pot known in Hindi as Hence the name.
- Habitat — foremost flowing rivers with high sand banks that they use for basking and building nests.
- Gharials once inhabited all the major river systems of the Indian Subcontinent, from the Irrawaddy River in the east to the Indus River in the west. Their distribution is now limited to only 2% of their former range.
- India: Girwa River, Chambal River, Ken River, Son River, Mahanadi River, Ramganga River.

- Nepal: Rapti-Narayani River.

Conservation:

- Schedule 1 species under Indian wildlife act, 1972.
- Project Crocodile began in 1975 (Government of India+ United Nations Development Fund + Food and Agriculture Organization) — intensive captive breeding and rearing program.

Sources: the hindu.

6. BAN ON PETCOKE

What to study?

- For Prelims: Petcoke- features, concerns associated with their use.
- For Mains: Need for ban and efforts by various stakeholders in this regard.
- **Context:** India has banned the import of pet coke for use as fuel, but has allowed shipments for use as feedstock in some industries.
- **What is allowed?** Import of pet coke is allowed for only cement, lime kiln, calcium carbide and gasification industries, when used as the feedstock or in the manufacturing process on actual user condition.

Background:

- As the world's largest consumer of pet coke, India imports over half its annual pet coke consumption of about 27 million tonnes, mainly from the United States. Local producers include Indian Oil Corp, Reliance Industries and Bharat Petroleum Corp.
- India is the world's biggest consumer of petroleum coke, which is a dark solid carbon material that emits 11% more greenhouse gases than coal. Usage of pet coke, a dirtier alternative to coal, in the energy-hungry country has come under scrutiny due to rising pollution levels in major cities.

What is petcoke?

- Petroleum coke, the bottom-of-the-barrel leftover from refining Canadian tar sands crude and other heavy oils, is cheaper and burns hotter than coal. But it also contains more planet-warming carbon and far more heart- and lung-damaging sulphur.

Concerns:

- The petcoke burned in factories and plants is contributing to dangerously filthy air in India, which already has many of the world's most polluted cities.
- It contains 17 times more sulfur than the limit set for coal, and a staggering 1,380 times more than for diesel.

Need for regulation:

- The country has seen a dramatic increase in sulfur dioxide and nitrogen dioxide emissions in recent years, concentrated in areas where power plants and steel factories are clustered. Those pollutants are converted into microscopic particles that lodge deep in the lungs and enter the bloodstream, causing breathing and heart problems.
- Petcoke, critics say, is making a bad situation worse across India. About 1.1 million Indians die prematurely as a result of outdoor air pollution every year, according to the Health Effects Institute, a nonprofit funded by the U.S. Environmental Protection Agency and industry.

Sources: the hindu.

7. WORLD'S LARGEST 3D-PRINTED REEF INSTALLED IN MALDIVES TO HELP SAVE CORALS

- **Context:** *The world's largest 3-D printed reef has been submerged at Summer Island Maldives*, in what is hoped could be a new technology-driven method to help coral reefs survive a warming climate.

- The artificial reef, assembled with hundreds of ceramic and concrete modules, was submerged at **Summer Island's 'Blue Lagoon'** — a sandy part of the lagoon, where the resort hopes to create a new coral reef ecosystem.

About the experiment:

- The experiment was aimed at increasing their resilience and longevity against the ongoing environmental rampage. The ceramic structures built closely resemble the original structures found in the Maldives. Ceramic itself is made of calcium carbonate, the same inert substance that occurs in abundance in corals.

Why it matters?

- Bleaching poses the most potent danger to corals, which used to abound in the Pacific Ocean and colour its waters in different hues. With imminent threats like increasing temperatures of water bodies and disposal of chemical wastes in oceans, 3D printing technology is hoped to offer a safety net for corals, for posterity.
- The technology allows to mimic the complexity of natural reef structures, so as to design artificial reefs that closely resemble those found in nature. This will be a more effective way of growing and restoring corals.

Background:

- The Maldives is one of the world's most climate-vulnerable nations. Rising sea temperatures pose a grave threat to the world's coral reefs, and mass bleaching events are becoming more common and more severe.
- Summer Island Maldives has implemented a number of recent environmental initiatives, including the adoption of solar energy, a ban on the use of plastic straws, phasing out imported drinking water, and coral conservation projects.

Sources: [toi](#).

8. SUSTAINABLE DEVELOPMENT IN INDIAN HIMALAYAN REGION

What to study?

- For Prelims: Key geographical features of Himalayan region.
- For Mains: Need for conservation and highlights of the report by NITI Aayog.
- Context:** NITI Aayog has launched 5 Thematic Reports on Sustainable Development in Indian Himalayan Region. The reports from the five working groups discuss the significance, the challenges, the ongoing actions and a future roadmap.

Background:

- Recognizing the uniqueness of the Himalayas and the challenges for sustainable development, NITI Aayog had set up 5 Working Groups (WGs) in June 2017 to prepare a roadmap for actions in 5 thematic areas.

The themes include:

- Inventory and Revival of Springs in Himalayas for Water Security.
- Sustainable Tourism in Indian Himalayan Region.
- Transformative Approach to Shifting Cultivation.
- Strengthening Skill & Entrepreneurship Landscape in Himalayas.
- Data/Information for Informed Decision Making.

Highlights of the report:

Immediate Challenges:

- Nearly 30% of springs crucial to water security of people are drying and 50% have reported reduced discharge.
- Himalayan Tourism growing annually at 6.8% has created huge challenge related to solid waste, water, traffic, loss of bio-cultural diversity etc.

Important recommendations made:

- Spring Mapping and Revival, using 8 steps protocol be taken up across Himalayan States in phased manner.
- Apply carrying capacity concept to all major tourist destinations; implement and monitor tourism sector Standards and apply performance based incentives for States faring well on the standards.

- Assessment of nature & extent of Shifting Cultivation area, improved policy coherence, strengthened tenurial security & improved access to related programs/schemes are other key recommendations to transform shifting cultivation.
- Strengthening of skill & entrepreneurship will require focus on identified priority sectors where mountains have advantage, investment in trainers, assessors and training centers in industry partnership.
- Having a Central Data Management Agency for Himalayas to provide data with high fidelity scenario while addressing data sharing, access, authenticity and comparability issues will go a long way in addressing data related issues.

The call for actions include:

- Setting up of **a Himalayan Authority** for coordinated and holistic development of entire Himalayan region.
- Launching of "**Himalaya Calling: An Awareness to Action Campaign**" as people's movement.
- Setting up of Mission on Spring Water Management in Himalayas, National Mission/Program on Transforming Shifting Cultivation in North Eastern States, demand driven network of skill and entrepreneurship development Centers in Himalayan States among others.

Other reforms needed?

- With the projected arrival of tourists in IHR States to more than double by 2025, urgent actions will be needed to address critical issues of waste management and water crisis in addition to other environmental and social issues.
- In the north eastern States, thousands of the households continue to practice slash and burn (shifting cultivation) that need to be addressed in view of ecological, food and nutritional security.
- Predominantly unskilled workforce remains a challenge for the mountains as well that need high priority to address migration of youths. Also challenges related to data availability, data authenticity, compatibility, data quality, validation, user charges for Himalayan States need addressal for informed decision making at different levels of governance.

Sources: pib.

9. COMMUTE-RELATED POLLUTION: KOLKATA SHINES AMONG MEGACITIES

What to study?

- For Prelims: Brief overview of rankings.
- For Mains: Highlights of the report.
- **Context:** A report, titled 'The Urban Commute and How it Contributes to Pollution and Energy', compiled by the Centre for Science and Environment (CSE), has been released.
- The report is an analysis of 14 cities in India on how they fare when it comes to pollution and energy consumption from urban commuting.

Basis for ranking of the cities:

- In the study, with an aggregate of toxic emissions from urban commuting practices, such as particulate matter and nitrogen oxides, the cities were ranked based on calculations of heat trapping (CO_2).
- The study took two approaches to rank the cities one based on overall emission and energy consumption and the other on per person trip emissions and energy consumption.

Performance of various cities:

- Kolkata is the top-performing megacity. Bhopal leads the list on the lowest overall emissions.
- Delhi and Hyderabad are the two cities that fare at the bottom of the table in terms of pollution and energy use.
- In terms of overall emissions and energy consumption, Bhopal was followed by Vijayawada, Chandigarh and Lucknow.
- Kolkata, which comes in at the sixth place on overall emissions, won among the six megacities.
- In fact, smaller cities such as Ahmedabad and Pune ranked below Kolkata for overall emissions.
- Delhi ranked at the bottom of the table for overall emission. Hyderabad, Bengaluru and Chennai fared a little better than Delhi.

Concerns and causes:

- Motorization in India is explosive. Initially, it took 60 years (1951-2008) for India to cross the mark of 105 million registered vehicles. Thereafter, the same number of vehicles was added in a mere six years (2009-15).
- According to the report, though metropolitan cities scored better than megacities due to lower population, lower travel volume and lower vehicle numbers, they were at risk due to a much higher share of personal vehicle trips.

Lessons from the study:

- **Importance of public transport:** Kolkata provides a resounding message that despite population growth and rising travel demand, it is possible to contain motorization. This is possible only with a well established public transport culture, compact city design, high street density and restricted availability of land for roads and parking. Both Kolkata and Mumbai have grown with a unique advantage of a public transport spine well integrated with existing land use patterns.
- **Independent of income levels:** Mumbai had the highest GDP but a lower rate of motorization compared with other megacities, proving that income levels were not the only reason for deciding a population's dependence on automobiles.
- **Meanwhile Chennai was the first city to adopt a non-motorized transport (NMT) policy** in 2004 that aims to arrest the decline of walking or cycling by creating a network of footpaths, bicycle tracks and greenways.

Sources: the hindu.

10. CHEETAH REINTRODUCTION PROJECT

What to study?

- For Prelims and Mains: Cheetah reintroduction project and its significance, why Nauradehi sanctuary has been chosen for reintroduction.
- **Context:** The Madhya Pradesh forest department has written to the **National Tiger Conservation Authority** to revive the plan to **reintroduce cheetahs in the State's Nauradehi sanctuary**. The ambitious project, conceived in 2009, had hit a roadblock for want of funds.

Facts:

- The cheetah, Acinonyx jubatus, is one of the oldest of the big cat species, with ancestors that can be traced back more than five million years to the Miocene era.
- The cheetah is also the world's fastest land mammal, an icon of nature. With great speed and dexterity, the cheetah is known for being an excellent hunter, its kills feeding many other animals in its ecosystem—ensuring that multiple species survive.
- The country's last spotted feline died in Chhattisgarh in 1947. Later, the cheetah — which is the fastest land animal — was declared extinct in India in 1952.

Cheetah reintroduction programme in India:

- The Wildlife Institute of India at Dehradun had prepared a ₹260-crore cheetah re-introduction project six years ago. It was estimated that an amount of ₹25 crore to ₹30 crore would be needed to build an enclosure in an area of 150 sq km for the cheetahs in Nauradehi. The proposal was to put the felines in the enclosure with huge boundary walls before being released in the wild, he said.
 - Nauradehi was found to be the most suitable area for the cheetahs as its forests are not very dense to restrict the fast movement of the spotted cat. Besides, the prey base for cheetahs is also in abundance at the sanctuary.
 - According to the earlier action plan, around 20 cheetahs were to be translocated to Nauradehi from Namibia in Africa. The Namibia Cheetah Conservation Fund had then showed its willingness to donate the felines to India. However, the State was not ready to finance the plan contending that it was the Centre's project.

Background:

- The reasons for extinction can all be traced to man's interference. Problems like human-wildlife conflict, loss of habitat and loss of prey, and illegal trafficking, have decimated their numbers. The advent of climate change and growing human populations have only made these problems worse.

- With less available land for wildlife, species that require vast home range like the cheetah are placed in competition with other animals and humans, all fighting over less space.

Significance of reintroduction:

- The reintroduction of cheetahs will help restore India's open forests and grassland ecosystems, which have been suffering. Having cheetahs will result in greater biodiversity, and biodiversity is the hallmark of healthy ecosystems. India is also home to the world's largest free-roaming populations of livestock.
- Bringing back the cheetah will focus attention on pastoralism, and in doing so, help restore India's natural heritage.

About NTCA:

- The National Tiger Conservation Authority is a statutory body under the Ministry of Environment, Forests and Climate Change constituted under enabling provisions of the Wildlife (Protection) Act, 1972, as amended in 2006, for strengthening tiger conservation, as per powers and functions assigned to it under the said Act.
- The National Tiger Conservation Authority has been fulfilling its mandate within the ambit of the Wildlife (Protection) Act, 1972 for strengthening tiger conservation in the country by retaining an oversight through advisories/normative guidelines, based on appraisal of tiger status, ongoing conservation initiatives and recommendations of specially constituted Committees.

Sources: the hindu.

11. CLOSE WATCH ON CLIMATE CHANGE

What to study?

- For Prelims and Mains: Particulars and significance of the project, climate change and disasters.**
- Context:** The Ministry of Earth Sciences (MoES) is considering a Rs. 79-crore proposal to study the impact of climate change on Kerala.
- Proposed by:** The project has been proposed by the National Institute of Science Communication and Information Resources (NISCAIR) under the Council of Scientific Industrial Research (CSIR).

Highlights of the project:

- Objectives:** The Kerala project will analyse the trends in climatic elements, their spatial pattern and its relationship with extreme events such as El Nino, cyclones etc. The objective of the project is to develop a framework and decision support tool to assess the climate change impact on livelihood and developmental processes.
- Focus areas:** The ambitious project, spread over a period of three years, will assess the impact of climate change on agriculture (including plantation crops and spices); fisheries (marine and inland); industries; health; transport — vehicular and inland water transports; tourism; biodiversity; forestry; and landslips.
- The project involves experts** from various scientific institutions across the country. It consists of 25 work packages and covers all the aspects of climate change adaptations for Kerala.
- The experts will study** the spatial and temporal changes in water resources (surface and groundwater — quantity and quality). Researchers will also assess the monsoonal variations and its impact, besides looking at the climate change scenario on the islets of Kerala.

Significance:

- It assumes significance in the wake of devastating floods that ravaged many parts of the State as the research initiative will specifically assess the dynamics of riverine discharge and saline water incursion under the climate change scenario.

Facts for Prelims:

- CSIR-NISCAIR is the nodal institute to develop climate change adaptation programmes for islands and coastal ecosystems as part of the 12th Five Year Plan programme approved by the CSIR.

Sources: the hindu.

12. NTCA TO TAKE OVER CORBETT TIGER RESERVE

What to study?

- For Prelims: NTCA and Corbett tiger reserve.
- For Mains: Conservation of tiger reserves- issues and challenges.
- Context:** Pointing to an “alarming trend” of tiger deaths, the Uttarakhand High Court has asked if the National Tiger Conservation Authority (NTCA) could take over the management of the Corbett Tiger Reserve “as an interim measure”. The court also asked the NTCA if the tigers could be relocated “to save them from poaching”.

Why?

- The court expressed dissatisfaction with the state government’s inaction in dealing with tiger poaching incidents. It said the state government had failed to constitute a Special Tiger Protection Force despite the court’s order.

What next?

- As a last/ extreme measure, the court has sought the response of the NTCA, being the expert body, to take over the management of Corbett Tiger Reserve, as an interim measure, till the state government becomes alive to its duties and starts taking concrete decisions.
- The court has also asked NTCA to suggest “whether few tigers can be relocated/ shifted to save them from poaching/ killing to other well-managed national parks/sanctuaries”.

About Corbett tiger reserve:

- Corbett National Park is situated in the foothills of the Sub- Himalayan belt in Nainital districts of Uttarakhand state in India.
- Established in the year 1936 as Hailey National Park, Corbett has the glory of being India’s oldest and most prestigious National Park. It is also being honored as the place where Project Tiger was first launched in 1973. This unique tiger territory is best known as the father who gave birth of the Project Tiger in India to protect the most endangered species and the Royal of India called Tigers.
- Corbett National Park covers an area of 521 sq. km and together with the **neighboring Sonanadi Wildlife Sanctuary** and Reserve Forest areas, forms the Corbett Tiger Reserve.
- Corbett is one of the richest bird regions of the Country and has been declared as an '**Important Bird Area' (IBA)** by Birdlife International.

About NTCA:

- The National Tiger Conservation Authority is **a statutory body** under the Ministry of Environment, Forests and Climate Change constituted under enabling provisions of the Wildlife (Protection) Act, 1972, as amended in 2006, for strengthening tiger conservation, as per powers and functions assigned to it under the said Act.
- The National Tiger Conservation Authority has been fulfilling its mandate within the ambit of the Wildlife (Protection) Act, 1972 for strengthening tiger conservation in the country by retaining an oversight through advisories/normative guidelines, based on appraisal of tiger status, ongoing conservation initiatives and recommendations of specially constituted Committees.

Sources: the hindu.

13. INDIA’S NATIONAL REDD+ STRATEGY

What to study?

- For Prelims: REDD+ related facts.
- For Mains: Significance and the need for National REDD+ strategy.
- Context:** Complying with the UNFCCC decisions on REDD+, India has prepared its **National REDD+ Strategy**. The Strategy builds upon existing national circumstances which have been updated in line with India’s National Action Plan on Climate Change, Green India Mission and India’s Nationally Determined Contribution (NDC) to UNFCCC.

- **The strategy report has been prepared by Indian Council of Forestry Research & Education (ICFRE), Dehradun.**

Background:

- Paris agreement on climate change recognises role of forests in climate change mitigation and calls upon participating nations to take action to implement and support REDD+.
- Complying with the United Nations Framework Convention on Climate Change (UNFCCC) decisions on REDD+, India has prepared its national REDD+ strategy and soon it will be communicated to UNFCCC.”

About REDD+:

- In simple terms, REDD+ means “Reducing Emissions from Deforestation and forest Degradation”, conservation of forest carbon stocks, sustainable management of forests, and enhancement of forest carbon stocks in developing countries.
 - REDD+ is a mechanism developed by Parties to the United Nations Framework Convention on Climate Change (UNFCCC).
 - It creates a financial value for the carbon stored in forests by offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development.
 - Developing countries would receive results-based payments for results-based actions. REDD+ goes beyond simply deforestation and forest degradation and includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks.

Sources: pib.

Paper 3 Topic: Disaster management.

1. NATIONAL DISASTER RESPONSE FORCE

What to study?

- For Prelims: NDRF- key facts.
- For Mains: Significance and the role of NDRF in disaster management in the country.
- **Context:** Union Cabinet has given approval for raising of four additional battalions of National Disaster Response Force (NDRF) to strengthen the India's disaster response set up.

Key facts:

- The objective of raising four additional battalions is to reduce response time keeping in view vast geographic area of the country.
- These battalions will be placed in Jammu and Kashmir, Himachal Pradesh, Uttarakhand and Delhi National Capital Region based on their disaster vulnerability profile.

About NDRF:

- The Disaster Management Act has made the statutory provisions for constitution of National Disaster Response Force (NDRF) for the purpose of specialized response to natural and man-made disasters.

Background:

- Two national calamities in quick succession in the form of Orissa Super Cyclone (1999) and Gujarat Earthquake (2001) brought about the realization of the need of having a specialist response mechanism at National Level to effectively respond to disasters. This realization led to the enactment of the DM Act on 26 Dec 2005.

ROLE AND MANDATE OF NDRF:

- Specialized response during disasters.
- Proactive deployment during impending disaster situations.
- Acquire and continually upgrade its own training and skills.
- Liaison, Reconnaissance, Rehearsals and Mock Drills.
- Impart basic and operational level training to State Response Forces (Police, Civil Defence and Home Guards).
- Community Capacity Building Programme.
- Organize Public Awareness Campaigns.

Sources: pib.

2. TELANGANA GOVT LAUNCHES DISASTER RESPONSE FORCE

What to study?

- For Prelims and Mains: Features and significance of DRF.
- Context:** Government of Telangana has launched for the first time Disaster Response Force (DRF) vehicles in the Hyderabad city.

Key facts:

- The vehicles will be parked at 24 locations with Greater Hyderabad Municipal Corporation (GHMC) DRF staff and they will reach the emergency spots in no time.
- The main aim to start this DRF is that a state should have its own Disaster force.
- DRF personnel have been trained in tackling of flooding, tree falls, structural collapses and any other site of normal emergencies.
- DRF has been first brought on to the ground with 120 personal with 8 specialised vehicles and other equipment's which are required.

Sources: IE.

3. WHAT IS A 'NATIONAL DISASTER'?

What to study?

- For Prelims: What is a national disaster, how is it classified and what is the funding pattern?
- For Mains: National disaster- management, mitigation and challenges.
- Context:** Following the calls from people in Kerala that the floods be declared a national calamity, the Union government has declared the Kerala floods a "calamity of severe nature".

How does the law define a disaster?

- As per the Disaster Management Act, 2005, "disaster" means** a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or man-made causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property, or damage to, or degradation of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area.
- A natural disaster** includes earthquake, flood, landslide, cyclone, tsunami, urban flood, heatwave; a man-made disaster can be nuclear, biological and chemical.

How can any of these be classified as a national disaster?

- There is no provision, executive or legal, to declare a natural calamity as a national calamity.** The existing guidelines of State Disaster Response Fund (SDRF)/ National Disaster Response Fund (NDRF), do not contemplate declaring a disaster as a 'National Calamity'."

How, then, does the government classify disasters/calamities?

- The 10th Finance Commission (1995-2000) examined a proposal that a disaster be termed "**a national calamity of rarest severity**" if it affects one-third of the population of a state.
- The panel did not define a "calamity of rare severity" but stated that a calamity of rare severity would necessarily have to be adjudged on a case-to-case basis taking into account, inter-alia, the intensity and magnitude of the calamity, level of assistance needed, the capacity of the state to tackle the problem, the alternatives and flexibility available within the plans to provide succour and relief, etc.
- The flash floods in Uttarakhand and Cyclone Hudhud were later classified as calamities of "severe nature".

What happens if a calamity is so declared?

- When a calamity is declared to be of "rare severity"/"severe nature", support to the state government is provided at the national level. The Centre also considers additional assistance from the NDRF. A Calamity Relief Fund (CRF) is set up, with the corpus shared 3:1 between Centre and state.

- When resources in the CRF are inadequate, additional assistance is considered from the National Calamity Contingency Fund (NCCF), funded 100% by the Centre. Relief in repayment of loans or for grant of fresh loans to the persons affected on concessional terms, too, are considered once a calamity is declared "severe".

How is the funding decided?

- As per the National Policy on Disaster Management, 2009, the National Crisis Management Committee headed by the Cabinet Secretary deals with major crises that have serious or national ramifications.
 - For calamities of severe nature, inter-ministerial central teams are deputed to the affected states for assessment of damage and relief assistance required.
 - An inter-ministerial group, headed by the Union Home Secretary, studies the assessment and recommends the quantum of assistance from the NDRF/National Calamity Contingency Fund (NCCF).
 - Based on this, a high-level committee comprising the Finance Minister as chairman and the Home Minister, Agriculture Minister, and Planning Commission Deputy Chairman as members approves the central assistance.

Sources: IE.

Paper 3 Topic: Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security.

1. NATIONAL PAYMENTS CORPORATION OF INDIA (NPCI)

What to study?

- For Prelims: Meaning and types of Malware, NPCI.
- For Mains: Cyber security related issues.
- Context:** The National Payments Corporation of India (NPCI) has said the recent incident of cyber attack in Pune-based Cosmos Cooperative Bank, that has caused an over ₹90-crore loss, is due to a malware attack on the bank's system.

What's the issue?

- Hackers transferred over ₹ 90 crore out on August 11 and 13 through the malware attack on the bank's server by cloning debit cards of the bank's customers. The transactions were carried through automated teller machines (ATMs) in 28 countries, including Canada, Hong Kong and India. Visa and Rupay debit cards were cloned.

What's the Difference Between Malware, Trojan, Virus, and Worm?

- Malware is defined as a software designed to perform an unwanted illegal act via the computer network. It could be also defined as software with malicious intent. Malware can be classified based on how they get executed, how they spread, and/or what they do. Some of them are discussed below.
 - Virus:** A virus is a program that can infect other programs by modifying them to include a possible evolved copy of itself. A virus can spread throughout a computer or network using the authorization of every user using it to infect their program. Every program so infected may also act as a virus and thus the infection grows. Viruses normally affect program files, but in some cases they also affect data files disrupting the use of data and destroying them completely.
 - Worms:** Worms are also disseminated through computer networks, unlike viruses, computer worms are malicious programs that copy themselves from system to system, rather than infiltrating legitimate files. For example, a mass mailing e-mail worm is a worm that sends copies of itself via e-mail. A network worm, on the other hand makes copies of itself throughout a network, thus disrupting an entire network.
 - Trojans:** Trojan is another form of Malware, trojans do things other than what is expected by the user. Trojan or trojan horse is a program that generally impairs the security of a system. Trojans are used to create back-doors (a program that allows outside access into a secure network) on computers belonging to a secure network so that a hacker can have access to the secure network.
- Unlike viruses, Trojan horses do not replicate themselves but they can be just as destructive. One of the most insidious types of Trojan horse is a program that claims to rid your computer of viruses but instead introduces viruses onto your computer.

- (d) **Hoax:** Hoax is an e-mail that warns the user of a certain system that is harming the computer. The message thereafter instructs the user to run a procedure (most often in the form of a download) to correct the harming system. When this program is run, it invades the system and deletes an important file.
- (e) **Spyware:** Spyware invades a computer and, as its name implies, monitors a user's activities without consent. Spywares are usually forwarded through unsuspecting e-mails with bonafide e-mail i.ds. Spyware continues to infect millions of computers globally.

NPCI:

- National Payments Corporation of India (NPCI) is an umbrella organization for all retail payments system in India. It was set up with the guidance and support of the Reserve Bank of India (RBI) and Indian Banks' Association (IBA). NPCI has ten promoter banks.
- Its recent work of developing Unified Payments Interface aims to move India to a cashless society with only digital transactions.
- It has successfully completed the development of a domestic card payment network called RuPay, reducing the dependency on international card schemes.

Sources: the hindu.

2. DATA LOCALISATION

What to study?

- For Prelims: What is data localization, Highlights of Srikrishna panel report.
- For Mains: Data localisation- Why government wants this? Concerns expressed by stakeholders and possible solutions.
- **Context:** US technology giants plan to intensify lobbying efforts against stringent Indian data localisation requirements, which they say will undermine their growth ambitions in India.

Background:

- U.S trade groups, representing companies such as Amazon, American Express and Microsoft, have opposed India's push to store data locally.
- That push comes amid rising global efforts to protect user data but is one that could hit planned investments by the firms in the Indian market, where the companies currently have limited data storage.

Concerns:

- Though a final decision hasn't been made, the deliberations come while the United States and India are locked in a dispute over US tariff increases and on the Indian policy of capping prices of medical devices, which hurts American pharmaceutical companies.
- The issue could further undermine already strained economic relations between India and the United States.

What does Data Localization mean?

- Data localization is the act of storing data on any device that is physically present within the borders of a specific country where the data was generated.
- Free flow of digital data, especially data which could impact government operations or operations in a region, is restricted by some governments.
- Many attempt to protect and promote security across borders, and therefore encourage data localization.

Policy goals:

- **Goals set in the Draft National Digital Communications Policy 2018**, along with various government notifications and guidelines such as Reserve Bank of India's notification on Payment Data Storage 2018, and the Guidelines for Government Departments for Contractual Terms related to Cloud Storage 2017, show signs of data localisation.
- **The rationale behind such mandates has been attributed to various factors, such as:** securing citizen's data, data privacy, data sovereignty, national security, and economic development of the country. The extensive data collection by technology companies, due to their unfettered access and control of user data, has allowed them to freely process and monetise Indian users' data outside the country.

Why technology firms are worried?

- Stricter localisation norms would help India get easier access to data when conducting investigations, but critics say it could lead to increased government demands for data access. Technology firms worry the mandate would hurt their planned investments by raising costs related to setting up new local data centres.

Why government is in favour of data localisation?

- Greater use of digital platforms in India for shopping or social networking have made it a lucrative market for technology companies, but a rising number of data breaches have pushed New Delhi to develop strong data protection rules.
- Also, minimal or deregulated governance on critical data, due to absence of localisation requirements, could be detrimental to India's national security as data would be outside the purview of existing data protection legislation. The ineffectiveness of Mutual Legal Assistance Treaties (MLATs) in this realm aggravates such government fears.
- In addition to these, India also aspires to become a global hub for, among others, cloud computing, data hosting and international data centres, all of which are prompting the government to enact data localisation requirements for accelerating the nation's economic growth, especially in the sphere of digital technologies.

Is data localisation the solution to physical data access and decryption of enciphered data? Can data localisation be conflated with access?

- The proposed law by Srikrishna Committee cannot be a knee-jerk reaction to some events; it has to be in line with the SC judgement, which supports the march of technology, innovations, growth of knowledge, and big data analytics for the growth of economies, and for better services to citizens.
- It recognises the role of data driven innovation (DDI) for the growth of economies, and for job creation. But it emphasises that the data so collected be utilised for legitimate purposes.

Way ahead:

- Though these policy goals are justifiable, a deeper analysis is required to determine the possible adverse spill-over effects on relevant stakeholders in case a faulty roadmap is adopted to achieve them.
- Adequate attention needs to be given to the interests of India's Information Technology Enabled Services (ITeS) and Business Process Outsourcing (BPO) industries, which are thriving on cross-border data flow.

Sources: the hindu.

3. CERT-IN REPORT ON CYBER ATTACKS

What to study?

- For Prelims: About CERT- In.
- For Mains: Trends in the report and safeguard measures needed.
- **Context:** The Indian Computer Emergency Response Team (CERT-In) has prepared a report on cyber attacks in the country.

Highlights of the report:

- It has been observed that China continues to "intrude" Indian cyberspace in a "significant" way. The cyber attacks from China made up 35% of the total number of cyber attacks on official Indian websites, followed by US (17%), Russia (15%), Pakistan (9%), Canada (7%) and Germany (5%).
- There is also the possibility of "malicious actors from Pakistan using German and Canadian cyberspace for intruding into Indian cyberspace and carrying out malicious activities".
- They are targeting by sending spear phishing emails with malware attachments. Phishing attacks are usually in the form of an email from a trusted source where they ask for personal details such as bank details personal details, passwords.

Institutions affected:

- Many of the institutions impacted by the malicious activities have been identified, and they have been advised to take appropriate preventive action.

- These include Oil and Natural Gas Corporation (ONGC), National Informatics Centre (NIC), Indian Railway Catering and Tourism Corporation (IRCTC), Railways, Centre for Railway Information Systems (CRIS) and some banks like Punjab National Bank among others.

About CERT-In:

What is it?

- CERT-In (the Indian Computer Emergency Response Team) is a government-mandated information technology (IT) security organization. CERT-In was created by the Indian Department of Information Technology in 2004 and operates under the auspices of that department.

It's purpose:

- The purpose of CERT-In is to respond to computer security incidents, report on vulnerabilities and promote effective IT security practices throughout the country.
- According to the provisions of the Information Technology Amendment Act 2008, CERT-In is responsible for overseeing administration of the Act.

Sources: [toi](#).

4. GOVERNMENT ANNOUNCES REGULATIONS FOR DRONES

What to study?

- For Prelims: What are drones and overview of Draft regulations.
- For Mains: Significance and the need for drone regulations, challenges and concerns associated with the use of drones.
- **Context:** The government has announced the Drone Regulations 1.0. These regulations will enable the safe, commercial usage of drones starting December 1, 2018. They are intended to enable visual line-of-sight daytime-only and a maximum of 400 ft altitude operations.

Categories:

- As per the regulation, ***there are 5 categories of RPAS categorized by weight***, namely nano, micro, small, medium and large.

Operational/ Procedural Requirements:

- All RPAS except nano and those owned by NTRO, ARC and Central Intelligence Agencies are to be registered and issued with ***Unique Identification Number (UIN)***.
- ***Unmanned Aircraft Operator Permit (UAOP)*** shall be required for RPA operators except for nano RPAS operating below 50 ft., micro RPAS operating below 200 ft., and those owned by NTRO, ARC and Central Intelligence Agencies.
- ***The mandatory equipment required for operation of RPAS except nano category are*** (a) GNSS (GPS), (b) Return-To-Home (RTH), (c) Anti-collision light, (d) ID-Plate, (e) Flight controller with flight data logging capability, and (f) RF ID and SIM/ No-Permission No Take off (NPNT).
- ***For flying in controlled Airspace***, filing of flight plan and obtaining Air Defence Clearance (ADC) /Flight Information Centre (FIC) number shall be necessary. Minimum manufacturing standards and training requirements of Remote Pilots of small and above categories of RPAS have been specified in the regulation.

Other highlights:

- ***No Drone Zones:*** The regulation defines “No Drone Zones” around airports; near international border, Vijay Chowk in Delhi; State Secretariat Complex in State Capitals, strategic locations/vital and military installations; etc.
- ***Operations through Digital Platform:*** Operations of Remotely Piloted Aircraft System (RPAS) to be enabled through Digital Sky Platform. The RPAS operations will be based on NPNT (No Permission, No Take off).
- ***There will be different colour zones*** visible to the applicant while applying in the digital sky platform, viz, Red Zone: flying not permitted, Yellow Zone (controlled airspace): permission required before flying, and Green Zone (uncontrolled airspace): automatic permission.
- ***Enforcement Actions:*** The enforcement actions are, (a) suspension/ cancellation of UIN/ UAOP in case of violation of regulatory provisions, (b) actions as per relevant Sections of the Aircraft Act 1934, or Aircraft Rules,

or any statutory provisions, and (c) penalties as per applicable IPCs (such as 287, 336, 337, 338, or any relevant section of IPC).

What next?

- Going forward, the Drone Task Force will provide draft recommendations for Drone Regulations 2.0. These regulations will examine, inter alia, the following issues:
 - Certification of safe and controlled operation of drone hardware and software.
 - Air space management through automated operations linked into overall airspace management framework.
 - Beyond visual-line-of-sight operations.
 - Contribution to establishing global standards.
 - Suggestions for modifications of existing CARs and/or new CARs.

Way ahead:

- Flying drones safely in India will require research and development to understand how they can be best used in India's unique landscape. Such R&D occurs best in a market-oriented environment, which will not happen unless civilian drone use is permitted. Building profitable companies around drone use can be complicated when the core business model is illegal.

Sources: pib.


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Facts for Prelims

1. MUKHYA MANTRI-YUVA NESTHAM

What to study?

- **For Prelims:** Highlights of the scheme.
- **For Mains:** Significance and the need for such schemes.
- **Context:** Andhra Pradesh government has launched 'Mukhya Mantri-Yuva Nestham'.

Highlights of the scheme:

- Under the scheme, ***an allowance of Rs 1000 per month*** will be provided to unemployed youth in the state.
- About 12 lakh youths in the ***age group of 22-35 years*** will get the benefit of the scheme. The registration for the scheme will start mid-August.
- The scheme will be extended to all those eligible even if there are more than one beneficiary in a family.
- The money will be credited directly into the bank accounts through biometric authentication.
- The government will not only provide financial help to the unemployed youth but also ***provide training and help them develop their skills***.
- The data of unemployed youth in the state will be made available for industries and companies searching for young talent.

Sources: the hindu.

2. MOVE HACK, A GLOBAL MOBILITY HACKATHON

- **Context:** NITI Aayog has launched Move Hack, a global mobility hackathon to crowdsource solutions aimed at the future of mobility in India.
- The hackathon has a two-pronged campaign approach:
- **"Just Code It":** aimed at solutions through innovations in technology/product/software and data analysis.
- **"Just Solve It":** innovative business ideas or sustainable solutions to transform mobility infrastructure through technology.

3. FIELDS MEDAL

- **Context:** Akshay Venkatesh, a renowned Indian-Australian mathematician, is one of four winners of mathematics' ***prestigious Fields medal, known as the Nobel prize for math***. He has won the Fields Medal for his profound contributions to an exceptionally broad range of subjects in mathematics.



About Fields Medal:

- The Fields medals are awarded every four years to the most promising mathematicians under the age of 40.
- Each winner receives a 15,000 Canadian-dollar cash prize. At least two, and preferably four people, are always honoured in the award ceremony.
- The prize was inaugurated in 1932 at the request of Canadian mathematician John Charles Fields, who ran the 1924 Mathematics Congress in Toronto.

4. MOSQUITO TERMINATOR

- **What is it?** It is a special train which will help in preventing mosquito breeding along the railway tracks in Delhi. It has been launched jointly by the Delhi Division of Northern Railway and South Delhi Municipal Corporation (SDMC).



- The train has been envisaged to control and mitigate the menace of mosquito breeding in the burrow pits alongside railway tracks, as a measure to contribute towards public health.

and, more importantly, for the health safety of people residing at places adjoining the tracks.

5. MAITREE 2018

- **What is it?** It is an annual joint military training exercise between India and Thailand. The 2018 edition of this exercise is being held in Thailand.
- **Aim:** The aim of this exercise is to build and promote closer relations while exchanging skills and experiences between the two armies.
- Last exercise was held in Himachal Pradesh's Bakloh in 2017.

6. XINGKONG-2

- **What is it?** It is China's hypersonic "waverider" flight vehicle. It is also called Starry Sky-2.

Key features of the aircraft:

- It is capable of flying independently and of carrying nuclear warheads.
- It glides at high speeds using shockwaves generated by its own hypersonic flight with the air.

7. INTERNATIONAL DAY OF THE WORLD'S INDIGENOUS PEOPLES 2018

- **Context:** The International Day of the World's Indigenous Peoples is being observed across the world on August 9, 2018.
- **Aim:** To strengthen international cooperation for solving problems faced by indigenous peoples in areas such as human rights, the environment, education, health and social development.
- **Theme:** 'Indigenous peoples' migration and movement'.
- **Significance of the day:** The United Nations General Assembly on December 23, 1994 proclaimed 9 August as the International Day of the World's Indigenous Peoples. The date marks the day of the first meeting of the UN Working Group on Indigenous Populations of the Sub-Commission on the Promotion and Protection of Human Rights in 1982.

8. TRAIN CAPTAIN SERVICE

- **Context:** In order to introduce the concept of a single person/leader responsible for

coordinating the entire team and facilitating all services during the complete journey of the train, instructions have been issued introducing the concept of Train Captain.

- **How it works?** In trains like Rajdhani/ Shatabdi/ Duronto and other trains where a Train Superintendent (TS) is on end to end basis, TS shall be nominated as "Train Captain" and made responsible for all the facilities on train. In all other trains, where TS is not present, Zonal Railways are to nominate the senior most ticket checking staff as Train Captain.

9. JOINT ISSUE OF POSTAGE STAMP BETWEEN INDIA AND SOUTH AFRICA

- The Union Cabinet was recently apprised of joint issue of Postage Stamps on India-South Africa on the theme, "20 Years of Strategic Partnership between India and South Africa". The joint stamps were released in June 2018.
- **The Commemorative Postage Stamps on India-South Africa:** Joint Issue depicts image of Deendayal Upadhyaya and Oliver Reginald Tambo of South Africa. An MoU was signed to this effect between India and South Africa in May 2018.

10. IN NEWS- PENCIL' PORTAL

- The government has launched a web portal called 'PENCIL' for effective implementation of the National Child Labour Project, (NCLP).
- **PENCIL (Platform for Effective Enforcement for No Child Labour)** — an electronic platform for no child labour in the country has been developed by the Labour Ministry.
- PENCIL portal has five components — Child Tracking System, Complaint Corner, State Government, National Child Labour Project and Convergence.

11. COLOUR FOR REGISTRATION MARK OF BATTERY OPERATED VEHICLES

- **Context:** Transport Ministry Notifies Colour for Registration Mark of Battery Operated Vehicles. The Ministry of Road Transport and Highways has notified amendments to Central Motor Vehicles Rules, 1989 to this effect.

- **As per the rules**, all Battery Operated Vehicles shall now exhibit their registration mark in Yellow colour on Green background for transport vehicles and for all other cases, in White colour on Green background.

12. OPERATION 'MADAD'

- **What is it?** Operation "Madad" has been launched by the Southern Naval Command (SNC) at Kochi since 09 Aug 2018 for assisting the state administration and undertaking disaster relief operations due to the unprecedented flooding experienced in many parts of Kerala, owing to incessant rainfall and release of excess water from Idukki and other dams.

13. IMPORTANT TERMS RELATED TO MUGHAL ADMINISTRATION- USEFUL FOR PRELIMS

- Source: <https://www.thehindu.com/todays-paper/tp-miscellaneous/tp-others/deccan-papers-shine-the-light-on-aurangzeb-rule/article24668654.ece>
- **Context:** The Telangana Archives and Research Institute holds a whopping 1.55 lakh documents — all on handmade paper — including 5,000 from the period of Shah Jahan (1628-1658) and another 1.5 lakh of Aurangzeb (1658-1707). Written in **Persian in Shikasta script, cursive style**, the documents are linked and arranged in chronological order — date, month and regnal year-wise.
 - **Farman**- order of the emperor.
 - **Nishan**- order of a member of the royal family.
 - **Yaddasht-i-ahkam-i-muqaddas**- Memorandum containing imperial orders.
 - **Parwana**- orders issued by higher authorities.
 - **Siyaha huzur**- proceedings of the provincial court.
 - **Roznamcha-i-waqai**- daily news report.
 - **Qabzul wasil**- bill payments.
 - **Andarz-o-chihra**- documents on personnel and horses.
 - **Daftari-Diwani**- the administrative wing of Hyderabad State.
 - **Theyaddasht-i-ahkam-i-muqaddas**- Reports on recommendations of pay hikes for staff sent to the emperor.

14. INDIAN ARMY MOUNTAINEERING EXPEDITION TO MT KAMET AND MT MAKALU

- **Context:** In pursuit of achieving greater heights in the field of mountaineering, Indian Army is planning to attempt Mt Makalu (8485M), the fifth highest mountain peak in the world in 2019. As a precursor to it, an expedition to Mount Kamet (7756M), Joshimath District Chamoli, Uttarakhand is being conducted under the aegis of Army Adventure Wing in August-September 2018.
- **About Mt Makalu:** Among the eight mountains in Nepal above 8000m, Mt. Makalu is the fourth tallest in Nepal and fifth highest Peak on the Earth with its height 8,463m. Mt. Makalu resides in the eastern Himalayas range just 19Km southeast of the giant Mt. Everest in the border of Nepal and China. At the base of Mt. Makalu, there lies a natural wonder: The Barun Valley.
- **MOUNT KAMET:** Mount Kamet is the second most elevated top in the Garhwal district after Nanda Devi. Kamet Peak is the third most astounding mountain crest in India and the twenty-ninth most noteworthy crest on the planet. Kamet is considered as the piece of the Zaskar Range, which lies to the north of the Himalayas between the Suru River and the upper Karnali River. Three huge crests bound Kamet, the Mukut Parbat in the northwest of Kamet, Abi Gamin and Mana, which is in the south-southeast of Kamet.

15. REPORT ON CLEANLINESS OF THE COUNTRY'S RAILWAY STATIONS

- **Context:** Third Party Survey Report on Station Cleanliness has been released. It ranks 407 railway stations including 75 A1 category stations, 332 A category stations on basis of cleanliness performance.
- The survey was conducted by the Quality Council of India (QCI) to increase level of cleanliness under Swachh Bharat Abhiyan by identifying unclean spots, improve cleanliness standards and propel healthy competition among railway stations.

Key facts:

- Top 10 A1 category Stations (out of 75): Jodhpur (1st), Jaipur (2nd), Tirupati (3rd), Vijayawada (4th), Anand Vihar Terminal (5th), Secunderabad Junction (6th), Bandra (7th), Hyderabad (8th), Bhubaneshwar (9th) and Vishakhapatnam (10th).
- Top 10 A category stations (out of 332): Marwar (1st), Phulera (2nd), Warangal (3rd), Udaipur (4th), Jaialmer (5th), Nizamabad (6th), Barmer (7th), Machiryal (8th), Mysore (9th) and Bhilwara (10th).
- Top 10 Zonal Railways Rankings: North Western Railway (1st), South Central Railway (2nd), East Coast Railway (3rd), South East Central Railway (4th), Western Railway (5th), Southern Western Railway (6th), Southern Railway (7th), Central Railway (8th), West Central Railway (9th) and Northeast Frontiers Railway (10th).

16. MAHARSHI BADRAYAN VYAS SAMMAN AWARD

- The Maharshi Badrayan Vyas Samman distinction is conferred on persons once a year on the Independence Day in recognition of their substantial contribution in the field of Sanskrit, Persian, Arabic, Pali, Prakrit, Classical Oriya, Classical Kannada, Classical Telugu and Classical Malayalam.
- The award introduced in the year 2002, is given to selected young scholars in the age group of 30 to 45 years. It carries a certificate of honour and a one time cash prize of Rs.1 lakh.

17. WORLD CONGRESS OF PHILOSOPHY

- **Context:** 24th World Congress of Philosophy will be held in Beijing, China.
- **What is it?** The World Congress of Philosophy is organized every five years by the International Federation of Philosophical Societies (FISP) in collaboration with one of its member societies. It was first organized in 1900.
- Aims of the 2018 Congress include an emphasis on exploring dimensions of the human and inquiring into the challenges facing humanity:
- To globalize philosophical investigations to encompass the diverse forms of philosophizing by past and present thinkers across cultures,

with special attention to critical reflections on philosophy itself and the tasks and functions of philosophy in the contemporary world.

- To open the philosophical area to enable philosophers to address emerging global issues through fruitful interactions with other disciplines in the humanities, social sciences, and natural sciences, with other activities in economic, social, political, and religious spheres, as well as with diverse cultures and traditions.
- To encourage philosophical reflections to become public discourses on recurrent human concerns, such as ecology, justice, and peace.

18. ASIAN GAMES

- The 18th edition of Asian Games is being held in Jakarta, Indonesia.

Key facts:

- For the first time, eSports, a form of competition using video games, and canoe polo will be contested as demonstration sports.
- This will be the second time that Indonesia hosts the Asian Games.
- This will be the first time that the Asian Games will be held in two cities – Jakarta and Palembang.

About Asian Games:

- The Asian Games, also known as Asiad, is a continental multi-sport event held every four years between athletes from all over Asia.
- Since 1982, the Games have been organised by the Olympic Council of Asia (OCA). Prior to that, the Games were regulated by the Asian Games Federation (AGF).
- The Games are the second largest multi-sport event after the Olympic Games.
- The last edition of the Games was hosted by Incheon, South Korea in October 2014.

19. COLOURED STICKERS TO INDICATE NATURE OF FUEL

- The Supreme Court has accepted the Centre's proposal to use hologram-based coloured stickers on vehicles, plying in the Delhi-National Capital Region (NCR), to indicate the nature of the fuel used.

Colour Codes:

- The Hologram-based sticker of light-blue colour will be used for petrol and CNG-run vehicles.
- Sticker of orange colour will be used for diesel-driven vehicles.

20. MAITREE 2018

- **Context:** Exercise Maitree 2018 was held in Thailand.
- **What is it?** The Exercise Maitree is an annual event designed to strengthen the partnership between Royal Thai Army and Indian Army.

21. EXERCISE PITCH BLACK

- **Context:** Exercise Pitch Black 2018 was held at RAAF Base Darwin, Australia. The Indian Air Force for the first time participated with fighter aircraft in Exercise.
- **What is it?** It is a biennial multi-national large force employment warfare exercise hosted by the Royal Australian Air Force (RAAF). The aim of the exercise is to practice Offensive Counter Air (OCA) and Defensive Counter Air (DCA) combat, in a simulated war environment.

22. HELINA

- **What is it?** It is indigenously developed Helicopter launched Anti-Tank Guided Missile. The Missile is guided by an Infrared Imaging Seeker (IIR) operating in the Lock on Before Launch mode. It is one of the most advanced Anti-Tank Weapons in the world.
- **Why in News?** It was successfully flight tested from Army Helicopter recently.

23. DECODING COMPLEX WHEAT GENOME

- **Context:** In a major scientific breakthrough, a team of international researchers, including 18 from India decoded the wheat genome, considered insurmountable so far.
- **Significance:** The information generated will help to identify genes controlling complex agronomic traits such as yield, grain quality, resistance to diseases and pests, as well as tolerance to drought, heat, water logging and salinity.

24. PANINI LANGUAGE LAB IN MAURITIUS

- **Context:** 'Panini Language Laboratory' has been set up at Mahatma Gandhi Institute (MGI) in Mauritius.
- **Significance:** The lab, gifted by the Indian government, will help MGI in teaching Indian languages in Mauritius. It aims to promote reading and writing Hindi amongst young generation and its further development. It will serve as medium to generate more interest in learning Hindi amongst youngsters thereby strengthening language.

25. WHAT IS LEMONS PROBLEM IN ECONOMICS?

- The idea was first proposed by American economist **George Akerlof** in his popular 1970 paper, "The market for lemons: Quality uncertainty and the market mechanism".
- It refers to a form of adverse selection wherein there is a degradation in the quality of products sold in the marketplace due to asymmetry in the amount of information available to buyers and sellers.
- Since sellers typically know more about any defects in the products that they sell to buyers, there is an opportunity for the sellers in the marketplace to sell low-quality products to unaware buyers.

26. KOWSAR

- **What is it?** It is a new domestically-produced fighter jet unveiled recently by **Iran**.
- **Significance:** Designed and manufactured solely by Iranian military experts, the Kowsar is described as a fourth-generation fighter jet, which classifies it among military fighters in service from approximately 1980 to the present day.



- **Implications:** Iran is currently under economic and diplomatic pressure from a raft of sanctions reimposed by the United States earlier this month, and the unveiling could be seen as a bid to show self-sufficiency and military might in the face of that pressure.

27. INTERNATIONAL BUDDHIST CONCLAVE 2018

- **Context:** With an aim to encourage the prominent Buddhist heritage and pilgrim sites in the state of Maharashtra, Maharashtra Tourism Development Corporation in association with Ministry of Tourism recently organized the 6th International Buddhist Conclave 2018 in Aurangabad. The Conclave will highlight the traditional and historical facets of Buddhism across the world.
- **Theme:** ‘Buddha Path – The Living Heritage’.
- **Significance:** The International Buddhist Conclave is testament of the **Ministry of Tourism** and **Maharashtra Tourism Development Corporation** towards its commitment to advance the experience of travellers as well as tourists looking to experience the spirit of Buddhist inheritance of our country.

28. RELIANCE INDUSTRIES LTD (RIL) BECOMES THE FIRST INDIAN COMPANY TO CROSS ₹ 8 TRILLION MARKET CAPITALIZATION

- The Mukesh Ambani-led Reliance Industries Ltd (RIL) has become the first Indian company to cross ₹ 8 trillion market capitalization after its shares surged nearly 37% this year.

29. INDIA'S FIRST BIOFUEL-POWERED PLANE

- **What?** India has now joined the small league of nations with the US and Australia to have flown a biofuel-powered aircraft.
- **Who?** SpiceJet flew the Bombardier Q400 (VT-SUI) on biofuel from Dehradun to Delhi.
- **Significance:** Biofuel flights could make air travel cleaner and more efficient, thus drastically reducing the cost of airline operations by reducing the dependency on aviation turbine fuel. The biofuel is made

partially from renewable resources such as agricultural residues, non-edible oils and biodegradable fractions of industrial and municipal wastes.

30. LAKHWAR MULTIPURPOSE PROJECT

- **Context:** The Centre has signed MOU with Uttarakhand, UP, HP, Rajasthan, Haryana and Delhi for Construction of Lakhwar Multipurpose Project on Yamuna Near Dehradun.

Key facts:

- Project Will Generate 300 MW of Power Create 33,780 Hectare Irrigation Potential and 78.83 MCM Water Availability.
- Uttarakhand Will Bear the Cost of Power Component, Get the Total Benefit of Power Generation.
- Centre will Fund 90% of Irrigation Component, the Six States to the Fund Remaining 10% and Share Water Proportionately.

Lakhwar Multi-Purpose Project:

- Lakhwar Project is a multipurpose scheme, primarily a peaking power station, on river Yamuna in the district of Dehradun in Uttarakhand.
- The scheme envisages construction of 204 m high concrete dam on river Yamuna near Lohari village. The Multipurpose scheme also envisages construction of Vyasi HEP (2x60 MW) (Hathiari power station) downstream of Lakhwar HEP.
- The scheme also includes construction of a barrage at Katapathar about 3 Km downstream of Hathiari power station (Vyasi HEP) on river Yamuna.

Beneficiary States:

- Uttarakhand, Uttar Pradesh, Himachal Pradesh, Haryana, Rajasthan and Delhi are the six Upper Yamuna Basin states.
- Upper Yamuna refers to the stretch of River Yamuna from its origin to the Okhla Barrage in Delhi.

Sources: pib.

31. VOSTOK-2018 (EAST-2018)

- **What is it?** It is a military exercise that will be held in the month of September by Russia.



- **Significance:** It will be Russia's biggest war games since at least the 1980s. Vostok demonstrates Russia's focus on exercising large-scale conflict. It fits into a pattern we have seen over some time: a more assertive Russia, significantly increasing its defence budget and its military presence.

32. PRIME MINISTER'S SCIENCE, TECHNOLOGY AND INNOVATION ADVISORY COUNCIL (PM-STIAC)

- **What?** Union Government has constituted a new 21-member advisory panel on science, technology and innovation called Prime Minister's Science, Technology and Innovation Advisory Council (PM-STIAC). It will replace earlier Scientific Advisory Committee to Prime Minister and to Cabinet.
- **Composition:** It will be headed by Principal Scientific Advisor to the government of India. It has nine members, including Chairperson. Apart from nine members, it will also have twelve special invitees — eleven ex officio secretaries 10 central ministries, related to science, technology, energy and education, are special invitees to the panel.

Roles and functions:

- Advise PM on science, technology, as well as innovation.
- Coordinate implementation of PMs scientific vision.
- Aid in formulation and timely implementation of major science and technology missions and evolve interdisciplinary technology development programmes.
- Advise government on developing 'Clusters of Excellence' in science including city-based R&D clusters.
- Bring together all science and technology partners from academia and institutes to industries near such centres or cities.

33. NILGIRI TAHR

- **Context:** In a heartening development for conservationists, a recent census has revealed

that the population of the Nilgiri tahr (an endangered mountain goat) at the Mukurthi National Park has grown by an impressive 18% in the last two years, from 480 to 568.

- **Threats:** The population also faces several threats. Researchers point to the continuing spread of invasive species of flora, such as wattle and pine, and exotic weeds like scotch broom (*Cytisus scoparius*) and gorse, which end up diminishing grazing land.

Nilgiri Tahr- Key facts:

- IUCN status- Endangered.
- It is listed in Schedule I of the Indian Wildlife (Protection) Act 1972.
- Endemic to the Nilgiri Hills and the southern portion of the Western Ghats in the states of Tamil Nadu and Kerala in Southern India.
- It is the State animal of Tamil Nadu.

34. 'CALL FOR CODE' INITIATIVE

- **What is it?** It is an initiative launched by Global IT giant IBM in partnership with Indian IT companies.
- **Aim:** The aim is to build global solutions for disaster management. It also aims to bring startup, academic and enterprise developers together to respond to and recover from natural disasters.

